

May 9, 2014

Mr. Jacob Evans
Noble Energy Inc.
1625 Broadway, Suite 2000
Denver, CO 80202

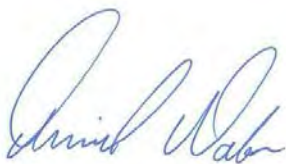
Subject: **Form 27 & Site Assessment Report**
Former FRI 2-18 Tank battery
API # 05-001-08259, Release Tracking # 2147193
Adams County, Colorado

Dear Mr. Evans:

Please find the enclosed copies of the above-referenced Form 27 and Site Assessment Report for the Former FRI 2-18 Tank Battery site in Adams County, Colorado. The enclosed report describes soil and groundwater sampling activities conducted in accordance with the previously submitted Form 19. Please contact me at (303) 912-2625 if you require additional information.

Tasman appreciates the opportunity to provide this service.

Sincerely,
Tasman Geosciences, LLC



Daniel Wade P.G.
Senior Geologist – Assessment & Remediation

Enclosure: Form 27 Site Investigation and Remediation Workplan
 Site Assessment Report

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109



#8440

FOR OGCC USE ONLY

RECEIVED
5/9/2014

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

☒ Spill or Release ☐ Plug & Abandon ☐ Central Facility Closure ☐ Site/Facility Closure ☐ Other (describe): _____

OGCC Employee:

☒ Spill ☐ Complaint
☐ Inspection ☐ NOAV

Tracking No: 2147193

OGCC Operator Number: 100322

Name of Operator: Noble Energy, Inc.

Address: 1625 Broadway, Suite 2200

City: Denver State: CO Zip: 80202

Contact Name and Telephone:

Jacob Evans

No: 720-587-2026

Fax: 303-228-4286

API Number: 05-001-08259

County: Adams

Facility Name: FRI-61S67W18CSE

Facility Number: 376820

Well Name: FRI

Well Number: 2-18

Location: (QtrQtr, Sec, Twp, Rng, Meridian): CSE, 18, 1S, 67W, 6 Latitude: 39.960732 Longitude: -104.926776

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Condensate

Site Conditions: Is location within a sensitive area (according to Rule 901e)? ☒ Y ☐ N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Agricultural

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Platner Loam 0-3 percent slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Surface water 640 ft. E, water well 836 ft. N

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):



Soils

Extent of Impact:

Approximately 367,500 cubic feet

How Determined:

Defined extent of TPH impacts in Soil via POC borings



Vegetation



Groundwater

Approximately 53,500 square feet

Defined extent of benzene impacts in groundwater via POC wells



Surface Water

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

See Form 19, COGCC Document #2147193

Describe how source is to be removed:

Impacted soils were removed during site decommissioning activities in 2005, as described in COGCC Document # 1139858. Interim remedial actions currently underway consist of LNAPL recovery using automated and manual recovery techniques. Automated LNAPL recovery pumps are currently installed in four site monitoring wells (PR01, PR02, SB05, and SB30). Additional recovery wells will be installed to optimize LNAPL recovery at the site. Following the conclusion of source removal activities, dissolved impacts will be addressed as described below.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

Following removal of LNAPL as described above, remaining impacts will be addressed through a combination of AS/SVE technology. At the conclusion of remediation activities, soil confirmation samples will be collected in the vadose zone to ensure impacted soils over Table 910-1 standards have been remediated.

REMEDATION WORKPLAN (Cont.)

State of Colorado
Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801, Denver, Colorado 80203
(303)894-2100 Fax: (303)894-2109



Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____ FRI 2-18
Facility Name & No: _____ FRI-61S67W18CSE 376820

Page 2

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Source area and point of compliance (POC) wells were installed at the site to assess the extent of groundwater impacts. These wells will be monitored quarterly until acceptable closure levels have been achieved. A total of 49 monitoring wells were installed at the site to delineate soil and groundwater impacts. The next quarterly groundwater event will take place on May 19, 2014 and will include monitoring wells SB01 through SB42. Groundwater samples will not be collected from SB16, SB20R, SB22, SB24, SB25, SB27, SB28, and SB33 due to lithology and the absence of water. These wells will be gauged to see if water is present, but not added to the monitoring program. Groundwater will be analyzed using analytical method USEPA Method 8260B.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

Final reclamation activities will be developed in conjunction with the property owner based on use or anticipated use at the time of final reclamation. In addition, subsequent to receipt of a no further action (NFA) designation, the monitoring wells and remediation wells will be properly plugged and abandoned per Colorado Division of Water Resources standards.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? ☐ Y ☒ N If yes, describe:

Point of compliance samples collected to date are in compliance with COGCC regulations. Point of compliance has been achieved on the upgradient, down gradient, and cross gradient areas of the site. Additional groundwater sampling will be conducted as described above.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

Fluids recovered from the subsurface are transported off-site by Northern Plains Trucking, Inc. and disposed of at High Sierra Water Services, LLC.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 11/4/2013 Date Site Investigation Completed: 4/21/2014 Date Remediation Plan Submitted: 5/9/2014
Remediation Start Date: 11/12/2013 Anticipated Completion Date: TBD Actual Completion Date: TBD

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Jacob Evans Signed: _____

Title: Senior Environmental Specialist Date: 5/9/2014

OGCC Approved: _____ Title: _____ Date: _____

PLUGGED AND ABANDONED FRI 2-18 TANK BATTERY AND WELL HEAD LOCATION

SITE ASSESSMENT REPORT



May 9, 2014

PREPARED ON BEHALF OF:

Noble Energy, Inc.
1625 Broadway, Suite 2000
Denver, CO 80202



PREPARED BY:

Tasman Geosciences, LLC
6899 Pecos Street, Unit C
Denver, Co 80221



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Table 5 – Summary of LNAPL Recovery Operations

FIGURES

Figure 1 – Site Location Map
Figure 2 – Site Map
Figure 3 – TPH in Soil Map
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Figure 5 – Groundwater Potentiometric Surface Contour Map (April 21, 2014)
Figure 6 – Benzene in Groundwater, Isoconcentration Contour Map

ATTACHMENTS

Attachment A – LT Environmental, Inc. Environmental Assessment Results
Attachment B – Boring Logs
Attachment C – Laboratory Analytical Data Reports

1.0 INTRODUCTION

This Site Assessment Report (Report) presents the results of soil sampling, groundwater sampling, and light non-aqueous phase liquid (LNAPL) recovery activities performed at the Former FRI 2-18 Tank Battery (Site). Field activities were performed from October 2013 through April 2014, on behalf of Noble Energy, Inc. (Noble), pursuant to Colorado Oil and Gas Conservation Commission (COGCC) guidance.

Initial Site investigation activities were conducted from October 2013 through January 2014 by LT Environmental Inc. (LTE). A summary of the activities and sampling results compiled by LTE is attached in Attachment A.

Additional field activities described in this Report were conducted by Tasman Geosciences, LLC (Tasman) to further evaluate soil conditions, groundwater flow, and groundwater quality at the Site. The data collected were used to develop the analytical summary tables, groundwater and LNAPL elevation maps, and chemical concentration maps presented herein.

1.1 Site Background

The Site is located in Section 18, Township 1 South, Range 67 West, of the 6th Principal Meridian, on 144th Avenue, in the town of Thornton in Adams County, Colorado as illustrated in Figure 1. Site sampling and remediation activities are being performed in response to a suspected release identified during a third party due diligence investigation. The release materials included hydrocarbons associated with natural gas condensate.

On November 4, 2013 the Noble Land Department was informed of the suspected release. Subsequently, Noble filed a Form 19 Spill/Release Report (Form 19) with the COGCC for the incident. On November 13, 2013 the Form 19 was received by COGCC and the incident was designated Spill/Release Tracking Number 2147193.

Based on conditions established via the Form 19 process, Noble requested that LTE conduct a subsurface Site investigation to define the vertical and lateral extents of petroleum hydrocarbon impacts at the Site. From October 2013 through January 2014, LTE installed 28 groundwater monitoring wells and two LNAPL recovery wells. Data collected during the installation of the aforementioned monitoring points is presented in the Environmental Assessment Results document (Attachment A).

Following Noble's engagement of LTE, Tasman was retained by Noble to conduct LNAPL recovery operations at two Site monitoring wells exhibiting detectable levels of LNAPL. Tasman installed automated LNAPL recovery pumps at the Site and initiated LNAPL recovery on November 12, 2013. In January 2014, Tasman assumed responsibility for ongoing Site assessment activities in conjunction with the ongoing LNAPL recovery activities at the Site. From January 2014 through April 2014, Tasman installed twenty-one (21) additional groundwater monitoring wells at the Site. Locations of groundwater monitoring wells installed at the Site to-date are illustrated in Figure 2. Soil and groundwater sampling activities were conducted throughout the various monitoring well installation phases. Summaries detailing the results of the soil and

groundwater sampling activities as well as ongoing LNAPL removal operations are provided in this Report.

1.2 Site Topography, Geology, and Hydrogeology

The Site is situated approximately 5,246 feet above mean sea level (amsl). Surface topography slopes gradually in a northerly direction across the Site with minor depressions evident across the ground surface. Regional elevation trends slope to the north and northwest from an elevated area approximately 2,000 feet south of 144th Avenue. Surface drainage features are evident to the north and east of the Site and follow a general northeast – southwest trend.

Site assessment borings indicate that the subsurface geology immediately beneath the Site is composed of unconsolidated alluvial sediments and evaporite deposits overlying consolidated sedimentary rock. The upper unconsolidated unit is observed from the ground surface to approximately 35 feet below ground surface (bgs) and consists of interbedded clays (CL), fine, medium, and coarse grained sands (SC, SP, SW), and zones of accreted caliche. The alluvial and precipitated sediments are underlain by interbedded sandstone and claystone observed at approximately 35 feet bgs. Depth of the competent bedrock surface observed in a select number of monitoring wells, varies from approximately 25 to 40 feet bgs across the Site and is generally characterized by a poorly cemented fractured sandstone layer approximately 10 to 15 feet thick underlain by claystone. Claystone dominates the consolidated interval in the southeastern and eastern portions of the Site, while sandstone is the predominate lithology noted across the central and western regions. Thickening of the sandstone layer appears to follow a north - south trend across the area of concern. Boring logs for monitoring wells SB01 through SB28 are included in Attachment A and boring logs for monitoring wells SB16R through SB42 are included in Attachment B.

The groundwater table is generally encountered between 40 and 50 feet bgs within the consolidated sedimentary rock units. Groundwater flow appears preferential to the poorly cemented sandstone layer and appears to be preferentially bound to the central and western portions of the Site. This preferential flow and accumulation is further evidenced by dry and yield retarded wells in the southeast and eastern portions of the Site (predominated by the lower permeability claystone lithology). Well yields across the majority of the Site are relatively low, consistent with a consolidated bedrock aquifer; however, higher flow rates have been observed, suggesting secondary flow pathways and geologic structures may be a contributing factor in groundwater transport.

2.0 SOIL SAMPLING ACTIVITIES

This section summarizes the soil sampling activities that were performed and the protocols followed during various phases of the Site assessment conducted by Tasman. Boring logs summarizing the geologic characterization and sample collection completed for each of the borings listed below are included in Attachment B.

2.1 Soil Sample Locations

From January 2014 through April 2014, 21 soil borings were advanced across the Site:

- Soil borings SB16R, SB20R, SB22R, SB24R, SB25R, SB27R, and SB28R were advanced and completed as groundwater monitoring wells in order to replace existing dry monitoring wells SB16, SB20, SB22, SB24, SB25, SB27, and SB28, respectively.
- Soil borings SB30, SB31, SB32, and SB37 were advanced in order to delineate the vertical distribution of impacts in the saturated and unsaturated zones. The borings were completed as groundwater monitoring wells intended to better define the extent and lateral distribution of LNAPL within the subsurface.
- Soil borings SB26, SB29, and SB42 were advanced in order to define the northwestern extent of the impacted area and completed as groundwater monitoring wells to provide point of compliance (POC) monitoring in the aforementioned region of the Site.
- Soil borings SB33 and SB34 were advanced and completed as groundwater monitoring wells in order to provide POC monitoring in the southeast and southwest boundaries of the Site, respectively.
- Soil borings SB36, SB38, SB39, SB40, and SB41 were advanced and completed as groundwater monitoring wells in order to delineate dissolved phase impacts around the former wellhead and provide POC monitoring in the northern portion of the Site.

2.2 Soil Sample Collection

A combination of direct push and hollow-stem auger drilling equipment, as dictated by the Site geologic conditions, was used to advance borings into the subsurface and retrieve soil samples from the desired intervals. A variety of sample collection techniques were used to obtain samples from the subsurface, including: Geoprobe Macro-Core sampler, CME Continuous-Core sampler, and split spoon sampler.

Once samples were obtained from the subsurface, the Site field geologist characterized the samples by: soil/rock type, grain size, color, texture, cohesiveness, sedimentary structure, moisture content, density/hardness, consolidation, and petroleum hydrocarbon impacts. The presence of petroleum hydrocarbons was assessed by using a combination of visual, physical, and instrument-lead characterization techniques. Composite soil samples were obtained approximately every two feet and analyzed on-Site using a photo-ionization detector (PID). Samples exhibiting the highest PID reading from each boring were submitted for laboratory analysis. In cases where elevated PID readings were not observed, a sample was collected from an interval determined to be at or near the groundwater interface as determined by the field geologist.

Soil samples submitted for laboratory analysis were analyzed for the presence of benzene, toluene, ethylbenzene, total xylenes (collectively referred to as BTEX), naphthalene, and total petroleum hydrocarbons as gasoline range organics (TPH-GRO) by United States Environmental Protection

Agency (USEPA) Method 8260B, and total petroleum hydrocarbons as diesel range organics (TPH-DRO) by USEPA Method 8015.

3.0 SOIL SAMPLING RESULTS

This section summarizes the results of soil sampling activities that were performed during various phases of the Site assessment conducted by Tasman. Soil sample laboratory analytical results are summarized in Table 1. Spatial distribution of total petroleum hydrocarbon (TPH) values is illustrated in Figure 3. Soil sampling results produced by LT environmental are summarized in Attachment A.

3.1 Laboratory Analytical Results

- Benzene was detected above the COGCC Table 910-1 standard of 0.17 milligrams per kilogram (mg/Kg) in three of the 21 soil borings sampled by Tasman. SB16R exhibited a benzene concentration of 0.515 mg/Kg, SB30 exhibited a benzene concentration 1.00 mg/Kg, and SB32 exhibited a benzene concentration of 1.20 mg/Kg.
- Toluene was not detected above the COGCC Table 910-1 standard of 85 mg/Kg in any of the 21 soil borings sampled by Tasman.
- Ethylbenzene was not detected above the COGCC Table 910-1 standard of 100 mg/Kg in any of the 21 soil borings sampled by Tasman.
- Naphthalene was not detected above the COGCC Table 910-1 standard of 23 mg/Kg in any of the 21 soil borings sampled by Tasman.
- Ethylbenzene was not detected above the COGCC Table 910-1 standard of 100 mg/Kg in any of the 21 soil borings sampled by Tasman.
- TPH (TPH-GRO + TPH-DRO) was detected above the COGCC Table 910-1 standard of 500 mg/Kg in three of the 21 soil borings sampled by Tasman. SB30 exhibited a TPH concentration of 1,510 mg/Kg, SB32 exhibited a TPH concentration 1,859 mg/Kg, and SB37 exhibited a TPH concentration of 727 mg/Kg.

4.0 GROUNDWATER SAMPLING ACTIVITIES

Groundwater sampling activities were performed at the Site progressively as monitoring well installation and development activities were completed. Sampling activities included measurement of groundwater/LNAPL depths, measurement of groundwater quality parameters, and collection of groundwater samples from Site monitoring wells. In order to achieve POC surrounding the dissolved phase groundwater plume, the samples were collected progressively over time. Future groundwater sampling will be conducted on a quarterly basis.

4.1 Groundwater Sample Locations

Five unique groundwater sampling events were conducted in 2014. The following sections discuss the laboratory results from these events. Additional groundwater sampling events conducted in 2013 are included in Attachment A:

- On February 24, 2014 groundwater samples were collected from monitoring wells SB01 through SB34 and submitted for laboratory analysis. Following sample collection, field groundwater quality parameters were gauged in-situ at the well locations.
- On March 7, 2014 groundwater samples were collected from monitoring wells which exhibited detectable LNAPL levels during the February 24, 2014 event (PR01, PR02, SB05, SB08, SB09, SB10, SB16R, SB23, SB30, and SB31) for analysis via field instruments. The field groundwater quality parameters were gauged ex-situ.
- On March 31, 2014 groundwater samples were collected from monitoring wells SB32, SB35, SB36, and SB38 and submitted for laboratory analysis. Following sample collection, field groundwater quality parameters were gauged in-situ at the well locations.
- On April 18, 2014 groundwater samples were collected from monitoring wells SB39, SB40, SB41, and SB42 and submitted for laboratory analysis. Following sample collection, field groundwater quality parameters were gauged in-situ at the well locations.
- On April 21, 2014 a site-wide fluid level gauging event was conducted. Groundwater and LNAPL measurements were collected from the Site monitoring wells.

Laboratory analytical samples were not collected from groundwater monitoring wells SB20 and SB37, as the wells did not contain sufficient water column during the sample collection dates listed above. Well development at these locations is ongoing and samples are expected to be collected during the first quarterly monitoring event. Throughout the Site assessment, monitoring wells SB16, SB20R, SB22, SB24, SB25, SB27, SB28, and SB33 did not produce sufficient water for well development or sampling activities. Review of the boring logs shows that construction of these wells was either too shallow or completed in an area of low permeability.

4.2 Groundwater and LNAPL Gauging

Groundwater levels are measured (i.e. gauged) in order to evaluate hydraulic characteristics and to provide information regarding seasonal and annual fluctuations in groundwater elevations at the Site. Groundwater and LNAPL levels were measured on the north side of the well casing to the nearest 0.01-foot using a float driven oil-water interface probe (IP). Groundwater and LNAPL level data were subsequently converted to elevations (feet amsl) by subtracting the measured depth from the well's top-of-casing (TOC) elevation survey datum. Groundwater elevations for wells exhibiting detectable LNAPL levels were corrected for the effects of LNAPL depression of the potentiometric surface.

Groundwater quality measurements were collected in the field following groundwater sample collection using a YSI 556 multi-parameter instrument. Field measurements for temperature, electrical conductivity (EC), pH, oxidation reduction potential (ORP), and dissolved oxygen (DO) were measure in-situ at monitoring wells with sufficient groundwater column. Measurements collected from sample locations exhibiting detectable levels of LNAPL were gauged ex-situ from groundwater samples collected below the groundwater-LNAPL interface.

4.3 Groundwater Sample Collection

Prior to collecting groundwater laboratory analytical samples, groundwater and LNAPL levels were measured at each of the Site monitoring wells, as previously described. The presence of LNAPL was evaluated and wells exhibiting detectable levels of LNAPL were removed from the laboratory analytical sample collection list.

Groundwater monitoring wells were sampled using individual, disposable, HydraSleeve sample collection devices. Evaluation of the water column height within the well was performed prior to sampler placement in order to maintain sample consistency from well to well and between subsequent sample collection events. HydraSleeves were deployed in a manner limiting sample collection to the top four feet of the water column by restricting the length of the HydraSleeve retrieval tether to no more than four feet longer than the measured depth to water:

- Samples collected from monitoring wells with a water column height greater than or equal to seven feet were sampled using a standard two inch HydraSleeve (2.5" [W] x 30" [L]) with five ounce (oz.) (2.5" [L]) bottom weights attached via a 2-inch stainless steel clip.
- Samples collected from monitoring wells with a water column height less than seven feet and greater than two feet were sampled using a standard two inch HydraSleeve (2.5" [W] x 30" [L]) with five oz. (2.5" [L]) bottom weights attached via a 2-inch stainless steel clip. Due to the reduced water column height, HydraSleeves were deployed with a 16 oz. top weight, intended to keep the valve inlet positioned four feet below the water table.
- Monitoring wells with a water column height less than 2 feet were not sampled as per the Site standard operating procedures. Groundwater present within the lower portion of the screened interval is more susceptible to a "skin function" across the bottom of the drilling zone. The aquifer volume is insufficient to effectively develop the wells, seat the well gravel, and remove the skin factor to the same level as the other well screens. This causes the water quality to be more affected by solids in the water sample and inconsistent with wells that contain greater water column thickness.

Retrieval of the HydraSleeves and collection of the laboratory samples was performed no earlier than 48 hours and no later than 96 hours subsequent to HydraSleeve deployment. Clean sample containers (40-milliliter [ml] volatile organic analysis [VOA] vials) supplied by the analytical laboratory were used to contain liquid for subsequent analyses. VOA vials were overfilled and capped to reduce the potential for any headspace and to prevent the loss of volatile analytes. Sample bottles were then labeled with corresponding date, time and well identification, and subsequently placed in an ice-filled cooler and maintained at approximately 4 degrees Celsius (°C)

for transportation. The groundwater samples were packed and shipped for analysis under chain-of-custody procedures to the contract laboratory.

Field duplicate samples for BTEX analysis were collected at a frequency of one duplicate for every 20 samples (5%) collected. The duplicate sampling location was determined randomly. Groundwater samples were submitted for analysis of BTEX using USEPA Method 8260B.

Quality assurance, quality control (QA/QC) procedures were performed through a three step process. Laboratory QA/QC was performed in accordance with the laboratories standard internal QA/QC program. Following receipt of laboratory analytical data reports, Tasman performed an internal QA/QC evaluation. Subsequent to acceptance of the laboratory data by Tasman, data was evaluated by a third party technical reviewer.

5.0 GROUNDWATER SAMPLING RESULTS

This section presents the results of the groundwater sampling activities described above. Data was generated progressively throughout Site assessment activities in order to maintain POC.

5.1 Fluid Level Measurements

Fluid elevation data generated from the Site-wide groundwater and LNAPL gauging event conducted on April 21, 2014 was processed and converted to piezometric elevation in feet amsl. The data collected from this event were then used for Site hydrogeologic evaluation purposes. This evaluation was particularly focused on delineation of the LNAPL plume present across the central region of the Site as well as the flow characteristics of groundwater and dissolved phase contaminant migration. Groundwater and LNAPL elevation measurements are presented in Table 2 and illustrated in Figure 4. Groundwater elevation measurements collected during HydraSleeve deployment are not included with this Report. During future quarterly groundwater monitoring events, Site-wide gauging will be conducted contemporaneously with HydraSleeve sampler deployment.

Measurable LNAPL has been detected in eight Site monitoring wells (SB05, SB08, SB09, SB16, SB21, SB23, SB30, and SB31) and two Site remediation wells (PR01 and PR02). Static product thickness in these wells ranges from 0.05 feet at SB23 to 4.25 feet at SB05. LNAPL thickness is greatest in the vicinity of SB05 and the LNAPL recovery wells PR01 and PR02 and tapers laterally to the southeast towards SB21 as illustrated in Figure 4. The southern boundary of the LNAPL plume is defined at POC wells SB25R, SB27R, and SB35. This southeasterly migration trend is substantiated by the hydraulic gradient discussed below.

During the April 21, 2014 gauging event, groundwater elevations ranged from a low of 5,185.69 feet amsl in well SB40 to a high of 5,204.85 feet amsl in monitoring well SB18. Hydraulic analysis of the groundwater elevation data generated for the Site was used to create a groundwater potentiometric surface contour map. These contours show a general hydraulic gradient to the south and southeast; however, there is a radial component to groundwater flow and it should be noted that a gradient to the northeast is present in the northern portion of the Site. Groundwater

potentiometric surface contours are illustrated in Figure 5. Groundwater monitoring wells SB01 and SB02 were not used for contouring purposes due to submerged well screens.

5.2 Groundwater Quality Parameter Measurements

Field groundwater quality parameters (temperature, EC, pH, ORP, and DO) were measured throughout Site assessment activities. A summary of field groundwater quality parameter measurements collected by Tasman is presented below and in Table 3. Additional information regarding LTs groundwater sampling events is included in Attachment A:

- Groundwater temperature measurements at the Site ranged from 9.15 °C at SB31 to 13.52 °C at SB39, with an average temperature of 12.07 °C.
- Groundwater EC measurements at the Site ranged from 1.941 millisiemens per centimeter (mS/cm) at SB03 to 8.344 mS/cm at SB10, with an average EC of 3.807 mS/cm.
- Groundwater pH measurements at the Site ranged from 6.29 at SB08 to 7.98 at SB13, with an average pH of 7.07.
- Groundwater ORP measurements at the Site ranged from -204.4 millivolts (mV) at SB15 to 205.9 mV at SB42, with an average ORP of 35.5 mV.
- Groundwater DO measurements at the Site ranged from 0.15 milligrams per liter (mg/L) at SB14 to 15.51 mg/L at SB30, with an average DO of 1.14 mg/L. It should be noted that uncharacteristically high DO readings were generated from samples collected on March 7, 2014. These samples (PR01, PR02, SB05, SB08, SB09, SB10, SB16R, SB23, SB30, and SB31) were measured ex-situ due to the presence of LNAPL within the wells being gauged. The reason for the data inconsistency is unknown; however, as a result of this inconsistency the DO measurements for these wells were not used in generating the average DO value listed above.

5.3 Laboratory Analytical Results

Groundwater samples were collected by Tasman on February 24, March 31, and April 18 2014. Groundwater laboratory analytical data is presented in Table 4. The laboratory analytical reports are provided in Attachment C. A summary of the groundwater laboratory analytical data collected by Tasman is presented below:

- Benzene was detected above the COGCC Table 910-1 standard of 5 micrograms per liter (µg/L) in nine of the 31 Site monitoring wells sampled. Benzene concentrations associated with the nine wells ranged from 14 µg/L in well SB38 to 8,600 µg/L in well SB07. Benzene concentrations collected during the Site assessment and a benzene isoconcentration contour are illustrated in Figure 6.

- Toluene was detected above the COGCC Table 910-1 standard of 560 µg/L in three of the 31 Site monitoring wells sampled. SB07 exhibited a toluene concentration of 9,910 µg/L, SB15 exhibited a toluene concentration 8,690 µg/L, and SB22R exhibited a toluene concentration of 1,190 µg/L.
- Ethylbenzene was not detected above the COGCC Table 910-1 standard of 700 µg/L in any of the 31 Site monitoring wells sampled.
- Total xylenes were detected above the COGCC Table 910-1 standard of 1,400 µg/L in two of the 31 Site monitoring wells sampled. SB07 exhibited a total xylenes concentration of 1,800 µg/L and SB15 exhibited a total xylenes concentration 10,900 µg/L.

6.0 INTERIM CORRECTIVE ACTION

This section summarizes remediation activities conducted at the Site from November 2013 through March 2014. LNAPL recovery operations were temporarily suspended during the months of April and May while remediation feasibility and pilot testing was being conducted at the Site.

6.1 Automated LNAPL Recovery

Currently, four Magnum Spill Buster automated LNAPL pumping systems are installed at the Site. The pumps are specifically designed to remove LNAPL from the water table and may be deployed in 2" or larger diameter wells. The unit's "auto-seeking sensor" allows the pump intake to automatically follow the elevation of the oil/water interface as it fluctuates in the well.

Due to the lack of electrical service at the Site, Spill Buster pumps are operated through the use of solar power. Recovered LNAPL is pumped into 250 gallon polyethylene tanks dedicated to each pumping unit. Liquid levels within the tanks are monitored independently and automatically cease the system operation before an overflow level is reached. The tanks are all secondarily contained within high-density polyethylene containment units. Extraction and disposal of the LNAPL occurs on an as needed basis, determined by field personnel. Operation and maintenance of the LNAPL recovery operation occurs on a semiweekly schedule.

Spill Buster systems are currently installed at the Site in LNAPL recovery wells PR01 and PR02 and monitoring wells SB05 and SB30. Since initiation of the Spill Buster recovery units in November 2013, approximately 1,215 gallons of LNAPL have been recovered. Due to the ease of operation and the system performance, it is anticipated that they will stay in operation until and potentially subsequent to the initiation of full-scale remedial activities. A summary of LNAPL volumes recovered via automated pumping and passive bailers is included in Table 5.

6.2 Passive LNAPL Recovery

Five Petrobailer passive LNAPL skimmers are currently deployed at the Site. The LNAPL skimmers work through utilization of a hydrophobic filter which separates floating LNAPL from

the groundwater and stores recovered LNAPL in a plastic recovery bailer prior to manual recovery from the well. The Petrobailer's ballast enables it to float on top of the water table, keeping the recovery filter in constant contact with the groundwater interface. To date approximately 43 gallons of LNAPL have been recovered from Site wells via LNAPL skimmers and manual bailing.

7.0 UPCOMING SITE ACTIVITIES

Anticipated upcoming Site activities include the following:

- Continue LNAPL recovery operations.
- Initiate quarterly monitoring of the Site groundwater monitoring well network.
- Design and install full-scale Site remediation system.

TABLES

Table 1
Summary of Soil Analytical Results

Sample ID	Date	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Naphthalene (mg/Kg)	TPH GRO (mg/Kg)	TPH DRO (mg/Kg)
COGCC Table 910-1 Standard		0.17	85	100	175	23	500	
SB16R-45'	01/29/14	0.515	6.69	0.587	8.87	<0.200	110	<50.0
SB20R-49'	02/07/14	<0.0020	<0.0020	<0.0020	<0.0020	<0.0080	<0.200	<50.0
SB22R-48'	02/03/14	<0.0020	0.0234	<0.0020	0.113	<0.0040	1.30	<50.0
SB24R-54'	02/07/14	<0.0020	<0.0020	<0.0020	<0.0020	<0.0080	<0.200	<50.0
SB25R-53'	01/30/14	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	0.304	<50.0
SB27R-53'	01/30/14	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	<0.200	<50.0
SB28R-53'	02/07/14	<0.0020	<0.0020	<0.0020	<0.0020	<0.0080	<0.200	<50.0
SB29-43'	02/06/14	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.100	<50.0
SB30-43'	01/30/14	1.00	29.9	<0.200	111	2.30	1110	400
SB31-36'	01/30/14	0.0028	0.0250	<0.0020	0.0743	0.0142	2.32	<50.0
SB32-47'	02/05/14	1.20	35.6	6.48	88.6	2.03	1040	819
SB33-51'	02/10/14	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.100	<50.0
SB34-38'	02/08/14	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.100	<50.0
SB35-50'	03/06/14	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.100	<50.0
SB36-36'	03/19/14	0.0041	<0.0020	0.0219	0.565	0.0570	10.4	<50.0
SB37-40'	03/20/14	<0.100	2.00	0.496	10.1	<0.400	524	203
SB38-45'	03/21/14	0.0078	<0.0010	0.0018	<0.0010	<0.0040	<0.100	<50.0
SB39-52'	04/07/14	<0.0050	<0.025	<0.0050	<0.015	<0.025	<2.5	<4.0
SB40-47'	04/08/14	<0.0050	<0.025	<0.0050	<0.015	<0.025	<2.5	<4.0
SB41-41'	04/09/14	<0.0050	<0.025	<0.0050	<0.015	<0.025	<2.5	<4.0
SB42-48'	04/09/14	<0.0050	<0.025	<0.0050	<0.015	<0.025	<2.5	<4.0

Notes:

TPH-GRO Total petroleum hydrocarbons-gasoline range organics

TPH-DRO Total petroleum hydrocarbons-diesel range organics

(mg/Kg) Milligrams per kilogram

COGCC Colorado Oil and Gas Conservation Commission

< Result is less than the indicated laboratory reporting limit

Bold text indicates value in excess of the applicable COGCC Table 910-1 standard

Table 2
Summary of Groundwater and LNAPL Elevations

Well ID	Date	DTW (ft. BTOC)	DTP (ft. BTOC)	LNAPL Thickness (ft.)	TD (ft. BTOC)	Top of Casing Elevation (ft. AMSL)	Groundwater Elevation* (ft. AMSL)
PR01	04/21/14	45.55	42.20	3.35	50.34	5244.87	5201.83
PR02	04/21/14	45.25	41.40	3.85	51.10	5244.36	5201.99
SB01	04/21/14	41.68	ND	0.00	60.35	5245.29	5203.61
SB02	04/21/14	39.80	ND	0.00	59.95	5243.53	5203.73
SB03	04/21/14	42.01	ND	0.00	51.38	5245.57	5203.56
SB04	04/21/14	39.24	ND	0.00	50.35	5242.85	5203.61
SB05	04/21/14	45.35	41.10	4.25	49.10	5244.11	5201.94
SB06	04/21/14	39.86	ND	0.00	49.52	5243.55	5203.69
SB07	04/21/14	42.73	ND	0.00	50.40	5245.62	5202.89
SB08	04/21/14	44.46	ND	0.00	50.41	5246.57	5202.11
SB09	04/21/14	45.80	43.00	2.80	50.55	5245.53	5201.83
SB10	04/21/14	41.71	ND	0.00	50.49	5245.24	5203.53
SB11	04/21/14	40.03	ND	0.00	50.35	5244.09	5204.06
SB12	04/21/14	39.44	ND	0.00	50.50	5243.18	5203.74
SB13	04/21/14	42.93	ND	0.00	50.48	5244.13	5201.20
SB14	04/21/14	41.04	ND	0.00	50.39	5244.82	5203.78
SB15	04/21/14	40.67	ND	0.00	45.40	5244.25	5203.58
SB16	04/21/14	42.53	ND	0.00	42.78	5247.56	DRY
SB16R	04/21/14	46.69	46.16	0.53	63.30	5247.81	5201.51
SB17	04/21/14	43.97	ND	0.00	50.40	5244.55	5200.58
SB18	04/21/14	40.95	ND	0.00	50.38	5245.80	5204.85
SB19	04/21/14	43.53	ND	0.00	50.41	5246.58	5203.05
SB20	04/21/14	47.62	ND	0.00	50.33	5247.52	5199.90
SB20R	04/21/14	DRY	ND	0.00	61.05	5247.80	DRY
SB21	04/21/14	47.54	46.21	1.33	49.30	5248.31	5201.77
SB22	04/21/14	50.07	ND	0.00	50.30	5250.64	DRY
SB22R	04/21/14	50.03	ND	0.00	63.07	5250.65	5200.62
SB23	04/21/14	48.75	48.70	0.05	50.61	5249.95	5201.24
SB24	04/21/14	48.47	ND	0.00	49.82	5249.46	5200.99
SB24R	04/21/14	49.08	ND	0.00	62.22	5250.04	5200.96
SB25	04/21/14	50.19	ND	0.00	50.41	5249.20	DRY
SB25R	04/21/14	51.75	ND	0.00	67.30	5249.39	5197.64

Table 2
Summary of Groundwater and LNAPL Elevations

Well ID	Date	DTW (ft. BTOC)	DTP (ft. BTOC)	LNAPL Thickness (ft.)	TD (ft. BTOC)	Top of Casing Elevation (ft. AMSL)	Groundwater Elevation* (ft. AMSL)
SB26	04/21/14	43.87	ND	0.00	50.35	5246.92	5203.05
SB27	04/21/14	50.27	ND	0.00	50.52	5250.91	DRY
SB27R	04/21/14	53.59	ND	0.00	67.51	5251.23	5197.64
SB28	04/21/14	50.34	ND	0.00	50.56	5251.71	DRY
SB28R	04/21/14	50.98	ND	0.00	63.10	5251.40	5200.42
SB29	04/21/14	45.24	ND	0.00	60.46	5248.09	5202.85
SB30	04/21/14	47.77	44.80	2.97	61.00	5246.27	5200.73
SB31	04/21/14	50.11	48.01	2.10	64.30	5249.60	5201.06
SB32	04/21/14	48.27	ND	0.00	62.39	5249.31	5201.04
SB33	04/21/14	62.26	ND	0.00	62.55	5246.16	DRY
SB34	04/21/14	54.88	ND	0.00	62.80	5252.59	5197.71
SB35	04/21/14	53.18	ND	0.00	63.40	5250.71	5197.53
SB36	04/21/14	42.65	ND	0.00	63.05	5243.07	5200.42
SB37	04/21/14	63.00	ND	0.00	66.40	5249.25	5186.25
SB38	04/21/14	40.48	ND	0.00	63.58	5243.61	5203.13
SB39	04/21/14	50.54	ND	0.00	61.57	5241.88	5191.34
SB40	04/21/14	54.94	ND	0.00	62.83	5240.63	5185.69
SB41	04/21/14	39.90	ND	0.00	62.96	5242.91	5203.01
SB42	04/21/14	41.20	ND	0.00	60.60	5244.36	5203.16

Notes:

DTW	Depth to Water
DTP	Depth to LNAPL
ft. BTOC	Feet below top of well casing
ft. AMSL	Feet above mean sea level
LNAPL	Light non-aqueous phase liquid
TD	Total depth of well below top of well casing (based on the most recent measurement)
ND	Not detected
NM	Not measured
DRY	Well contained less than 0.5 feet of water

* Groundwater elevation was corrected for product thickness when present using the following calculation:

Groundwater elevation = (TOC Elevation - Measured Depth to Water)+(LNAPL Thickness in Well x LNAPL Relative Density)

LNAPL relative density was assumed to be approximately 0.75

Table 3
Summary of Groundwater Quality Parameters

Well ID	Date	Temp (°C)	EC (mS/cm)	pH	ORP (mV)	DO (mg/L)
PR01	03/07/14*	10.98	6.960	6.63	-132.0	14.60
PR02	03/07/14*	10.09	5.560	6.71	-72.9	11.56
SB01	02/24/14	12.41	5.240	7.16	92.2	0.56
SB02	02/24/14	12.52	3.222	7.25	47.1	0.25
SB03	02/24/14	12.55	1.941	7.44	70.0	0.21
SB04	02/24/14	12.65	3.138	7.29	71.3	0.16
SB05	03/07/14*	11.20	6.192	6.43	-152.9	3.55
SB06	02/24/14	12.57	3.446	7.20	144.4	0.34
SB07	02/24/14	12.85	5.639	6.64	-101.3	0.57
SB08	03/07/14*	11.12	4.866	6.29	-170.9	3.95
SB09	03/07/14*	10.00	4.415	6.64	-123.5	8.81
SB10	03/07/14*	11.48	8.344	6.31	-183.9	5.90
SB11	02/24/14	12.60	2.218	7.38	20.2	0.49
SB12	02/24/14	12.86	5.748	7.17	70.2	2.79
SB13	02/24/14	12.72	3.556	7.98	23.5	0.16
SB14	02/24/14	12.91	2.000	7.29	63.6	0.15
SB15	02/24/14	12.50	3.080	6.97	-204.4	0.33
SB16R	03/07/14*	10.84	3.736	6.84	-97.4	9.04
SB17	02/24/14	12.27	5.859	7.17	49.0	1.01
SB18	02/24/14	12.56	5.622	7.18	59.6	0.50
SB19	02/24/14	12.24	5.457	7.16	19.5	0.91
SB22R	02/24/14	12.29	3.073	7.19	83.1	0.20
SB23	03/07/14*	11.26	1.978	7.07	-162.2	4.18
SB24R	02/24/14	12.29	2.768	7.19	129.5	0.37
SB25R	02/24/14	12.16	3.008	7.22	174.2	2.00
SB26	02/24/14	12.80	2.212	7.60	171.0	0.56
SB27R	02/24/14	11.95	3.014	7.35	152.0	4.99
SB28R	02/24/14	12.41	2.326	7.25	135.9	0.47
SB29	02/24/14	12.59	2.630	7.22	75.8	0.56
SB30	03/07/14*	9.64	3.415	6.83	-57.1	15.51
SB31	03/07/14*	9.15	3.096	6.85	-47.2	14.40
SB32	02/24/14	12.42	2.781	7.15	107.8	0.36

Table 3
Summary of Groundwater Quality Parameters

Well ID	Date	Temp (°C)	EC (mS/cm)	pH	ORP (mV)	DO (mg/L)
SB32	03/31/14	12.54	2.934	6.82	109.5	0.25
SB34	02/24/14	12.36	2.316	7.14	188.9	0.72
SB35	03/31/14	12.42	2.861	6.69	118.3	0.39
SB36	03/31/14	12.56	3.638	6.95	86.3	0.19
SB38	03/31/14	12.49	2.701	7.03	77.0	2.09
SB39	04/18/14	13.52	6.588	6.98	160.8	2.90
SB40	04/18/14	12.58	3.878	7.22	140.1	1.17
SB41	04/18/14	12.92	2.001	7.54	115.8	3.36
SB42	04/18/14	12.61	2.645	7.37	205.9	6.44

Notes:

Temp (°C)	Temperature measured in degrees Celsius (°C)
EC (mS/cm)	Electrical conductivity in millisiemens per centimeter (mS/cm)
pH	Measurement of the acidity or alkalinity of the sample collected in standard units
ORP (mV)	Oxidation reduction potential in millivolts (mV)
DO (mg/L)	Dissolved oxygen concentration in milligrams per liter (mg/L)
LNAPL	Light non-aqueous phase liquid

* Data collected on 3/7/2014 measured ex-situ due to the presence of LNAPL

Table 4
Summary of Groundwater Analytical Results

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Table 910-1 Standard		5	560	700	1400
SB01	02/24/14	1.5	13.5	1.2	33.8
SB02	02/24/14	25.1	<4.0	<4.0	<4.0
SB03	02/24/14	<1.0	<1.0	<1.0	<1.0
SB04	02/24/14	72.3	<1.0	<1.0	<1.0
SB06	02/24/14	<1.0	<1.0	<1.0	<1.0
SB07	02/24/14	8600	9910	54.0	1800
SB11	02/24/14	1550	<1.0	127	<1.0
SB12	02/24/14	<1.0	<1.0	<1.0	<1.0
SB13	02/24/14	<1.0	<1.0	<1.0	1.4
SB14	02/24/14	1220	62.4	88.3	314
SB15	02/24/14	4610	8690	553	10900
SB17	02/24/14	<1.0	<1.0	<1.0	<1.0
SB18	02/24/14	<1.0	<1.0	<1.0	<1.0
SB19	02/24/14	<1.0	<1.0	<1.0	<1.0
SB22R	02/24/14	270	1190	6.9	598
SB24R	02/24/14	<1.0	<1.0	<1.0	<1.0
SB25R	02/24/14	<1.0	<1.0	<1.0	<1.0
SB26	02/24/14	<1.0	<1.0	<1.0	<1.0
SB27R	02/24/14	<1.0	<1.0	<1.0	<1.0
SB28R	02/24/14	<1.0	<1.0	<1.0	<1.0
SB29	02/24/14	<1.0	<1.0	<1.0	<1.0
SB32	02/24/14	1.1	6.2	<1.0	7.3
SB32	03/31/14	3.6	15	<1.0	18
SB34	02/24/14	<1.0	<1.0	<1.0	<1.0
SB35	03/31/14	<1.0	<5.0	<1.0	<3.0
SB36	03/31/14	77	<5.0	3.2	<3.0
SB38	03/31/14	14	10	3.1	32
SB39	04/18/14	<1.0	<5.0	<1.0	<3.0
SB40	04/18/14	<1.0	<5.0	<1.0	<3.0
SB41	04/18/14	<1.0	<5.0	<1.0	<3.0
SB42	04/18/14	<1.0	<5.0	<1.0	<3.0

Table 4
Summary of Groundwater Analytical Results

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Table 910-1 Standard		5	560	700	1400
DUP	02/24/14	<1.0	<1.0	<1.0	<1.0
Trip Blank	02/24/14	<1.0	<1.0	<1.0	<1.0
Trip Blank	04/18/14	<1.0	<5.0	<1.0	<3.0

Notes:

(µg/L) Micrograms per liter

(mg/L) Milligrams per liter

COGCC Colorado Oil and Gas Conservation Commission

NA Not applicable

< Result is less than the indicated laboratory reporting limit

DUP Duplicate sample (SB06 on 2/24/14)

NS Not sampled

NV Not sufficient volume to perform the requested analysis

Bold text indicates value in excess of the applicable COGCC Table 910-1 standard

Groundwater Samples were collected progressively throughout the initial assessment period. Future sampling will occur on a quarterly basis.

Table 5
Summary of LNAPL Recovery Operations

Date	Well ID									Incremental Recovered LNAPL Volume Since Previous*	Daily Recovery Rate Since Previous Reading
	PR01	PR02	SB05	SB30	SB09	SB10	SB16R	SB21	SB31		
	Recovered LNAPL Volume (gal)									(gal)	(gal/day)
11/12/13			7.88							7.88	-
11/13/13			9.85							9.85	9.85
11/14/13			21.67		1.5					23.17	23.17
11/15/13			3.43		0.1					3.53	3.53
11/16/13			28.47		0.1					28.57	28.57
11/17/13			6.60		0.1	0.18				6.88	6.88
11/18/13			9.57		0.3	0.25				10.12	10.12
11/19/13			4.38		0.2	0.1				4.68	4.68
11/20/13			25.57		0.15	0.1				25.82	25.82
11/22/13			9.91		0.6	0.1				10.61	5.31
12/02/13			42.85		0.9	0.9				44.65	4.46
12/04/13			0		1.3	1.3				2.60	1.30
12/06/13			0		0.8	0.25				1.05	0.53
12/11/13			0.40							0.40	0.08
12/12/13			2.90			0.25				3.15	3.15
12/23/13			105.72							105.72	9.61
12/26/13		48.63	6.53			0.25				55.41	18.47
12/27/13		28.06								28.06	28.06
12/31/13		87.82	5.08			1.10				94.00	23.50
01/03/14		42.45	6.53		3.5	0.79				53.27	17.76
01/09/14		56.68								56.68	9.45
01/10/14	10.89	11.61				0.75				23.25	23.25
01/14/14	37.74	40.62				0.59				78.95	19.74
01/17/14	21.77	28.44				0.79				51.01	17.00
01/21/14	27.58	28.24			0.3	0.33				56.45	14.11
01/24/14	15.24	15.34			0.8					31.38	10.46
01/28/14	10.89	15.17	3.5		1.0					30.55	7.64
01/31/14	15.97	28.89			1.0			1.5		47.35	15.78
02/04/14	16.69	17.82			4.0	1.2		0.5		40.22	10.05
02/07/14	14.52	10.99			0.8			0.5		26.76	8.92
02/11/14	13.79	19.80			0.9			0.2		34.71	8.68
02/14/14	10.89	4.69	14.52	7.26	0.5	0.5	0.01	-	0.39	38.75	12.92

Table 5
Summary of LNAPL Recovery Operations

Date	Well ID									Incremental Recovered LNAPL Volume Since Previous*	Daily Recovery Rate Since Previous Reading
	PR01	PR02	SB05	SB30	SB09	SB10	SB16R	SB21	SB31		
	Recovered LNAPL Volume (gal)									(gal)	(gal/day)
02/17/14	12.34	1.50	21.05	2.90	0.3	0.25	0.1	0.1	0.25	38.74	12.91
02/25/14	20.32	6.31	15.00	4.35	0.75		0	0.5	0.25	47.49	5.94
03/04/14	9.44	0.68	14.52	0.02	0.75	0.01	0.01	0.5	0.75	26.67	3.81
03/07/14	2.18	10.32	4.35	1.45	0.75		0.01	0.4	0.75	20.21	6.74
03/11/14	7.98	5.35	0.73	0.71	0.50		0.1	0.1	0.5	15.96	3.99
03/14/14	2.90	3.15	9.44	1.45	0.50		0.01	0.1	0.5	18.06	6.02
03/18/14	5.08	5.42	2.18	3.63	0.50		0.01	0.1	0.5	17.42	4.36
03/26/14	7.98	9.78	5.08	3.63	0.40		0.01	0.2	0.4	27.48	3.44
03/28/14	1.45	1.89	6.53	0.00	0.40		0.01	0.1	0.3	10.64	5.32
Total (gal)	265.64	529.65	394.21	25.40	23.62	9.99	0.27	4.75	4.59	1258.12	
Total (bbl)	6.32	12.61	9.39	0.60	0.56	0.24	0.01	0.11	0.11	29.96	

Notes:

gal Gallons

bbl Barrels

LNAPL Light non-aqueous phase liquid

1) Spill Buster operated at SB-05 from 11/12/13 through 12/26/13.

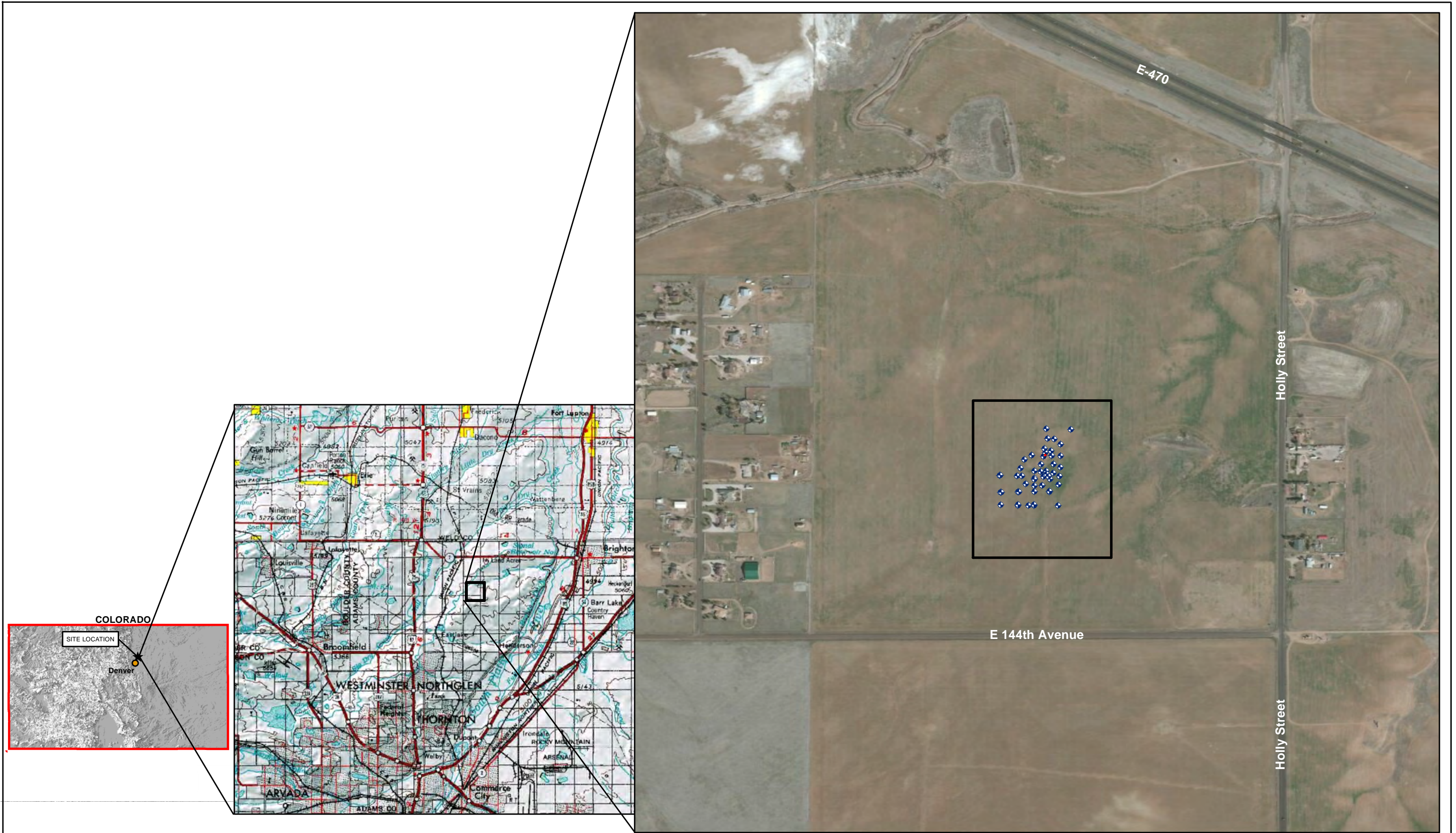
2) Spill Buster unit moved from SB05 to PR02 on 12/26/13.

3) Spill Buster unit installed at PR01 on 1/10/14.

4) Spill Buster units installed at SB05 and SB30 on 2/13/14.

*Calculated by adding the recovered LNAPL volumes from each well for the date range from the previous event.

FIGURES



DATE:	April 2014
DESIGNED BY:	D. Wade
DRAWN BY:	D. Arnold

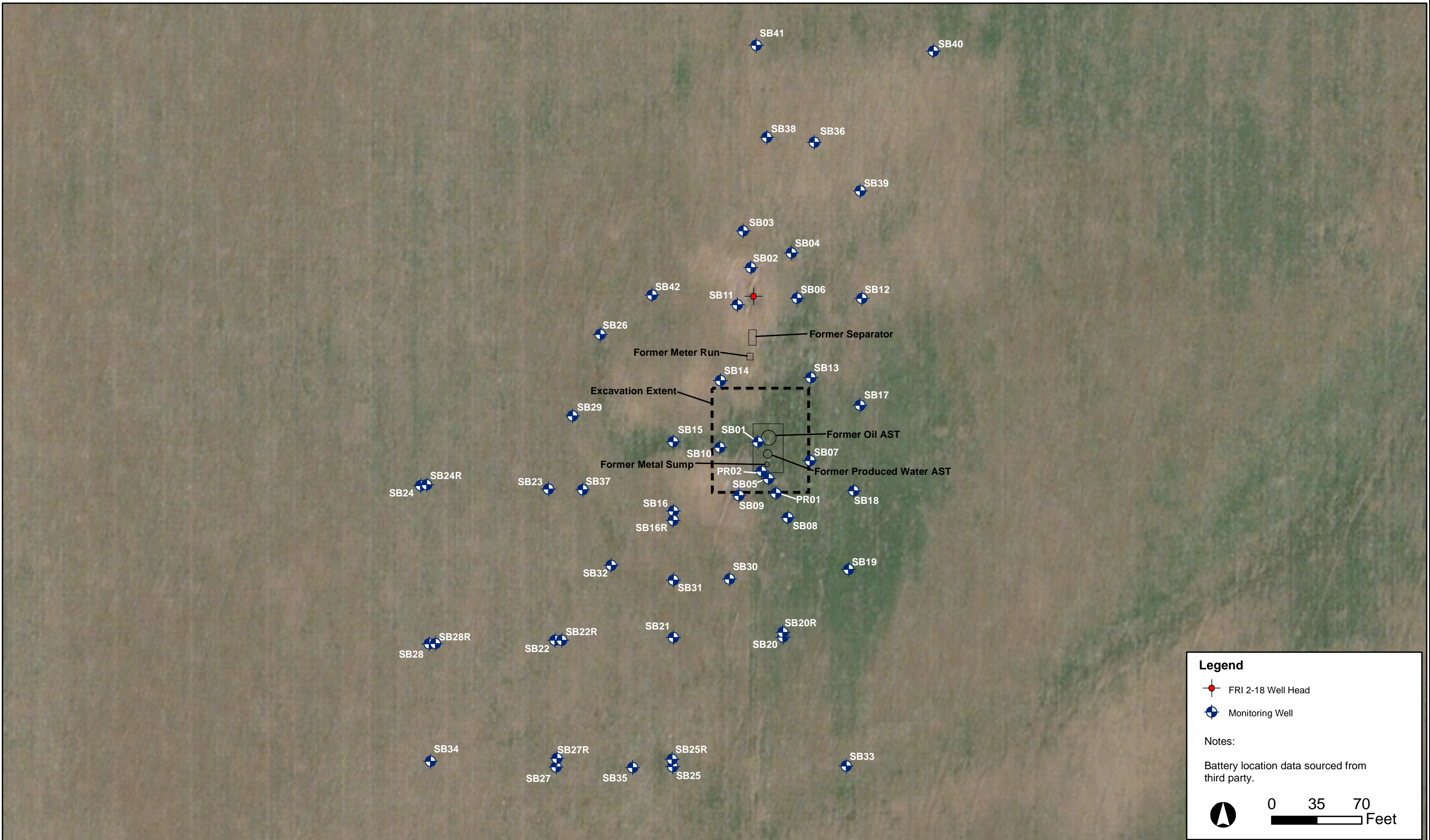


Tasman Geosciences, LLC
6899 Pecos Street - Unit C
Denver, CO 80221

Noble Energy, Inc.
Former Fri 2-18 Tank Battery
Section 18, Township 1 South, Range 67 West
Adams County, Colorado

Site Location
Map

Figure
1



DATE:	April 2014
DESIGNED BY:	D.Wade
DRAWN BY:	D. Arnold

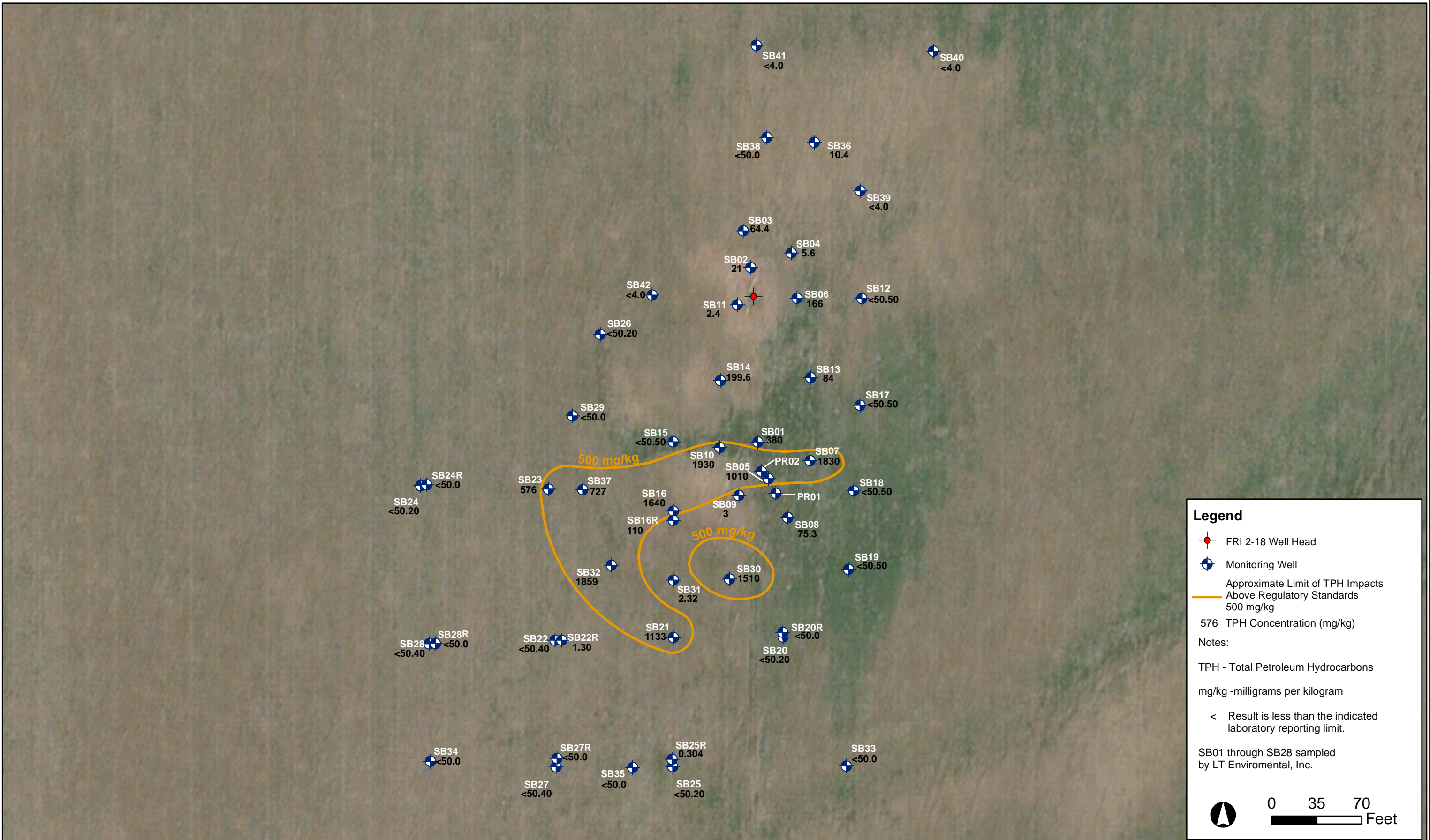


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Denver, CO 80221

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Former Fri 2-18 Tank Battery
Section 18, Township 1 South, Range 67 West
Adams County, Colorado

Site Map

Figure
2



DATE:	April 2014
DESIGNED BY:	D.Wade
DRAWN BY:	D. Arnold

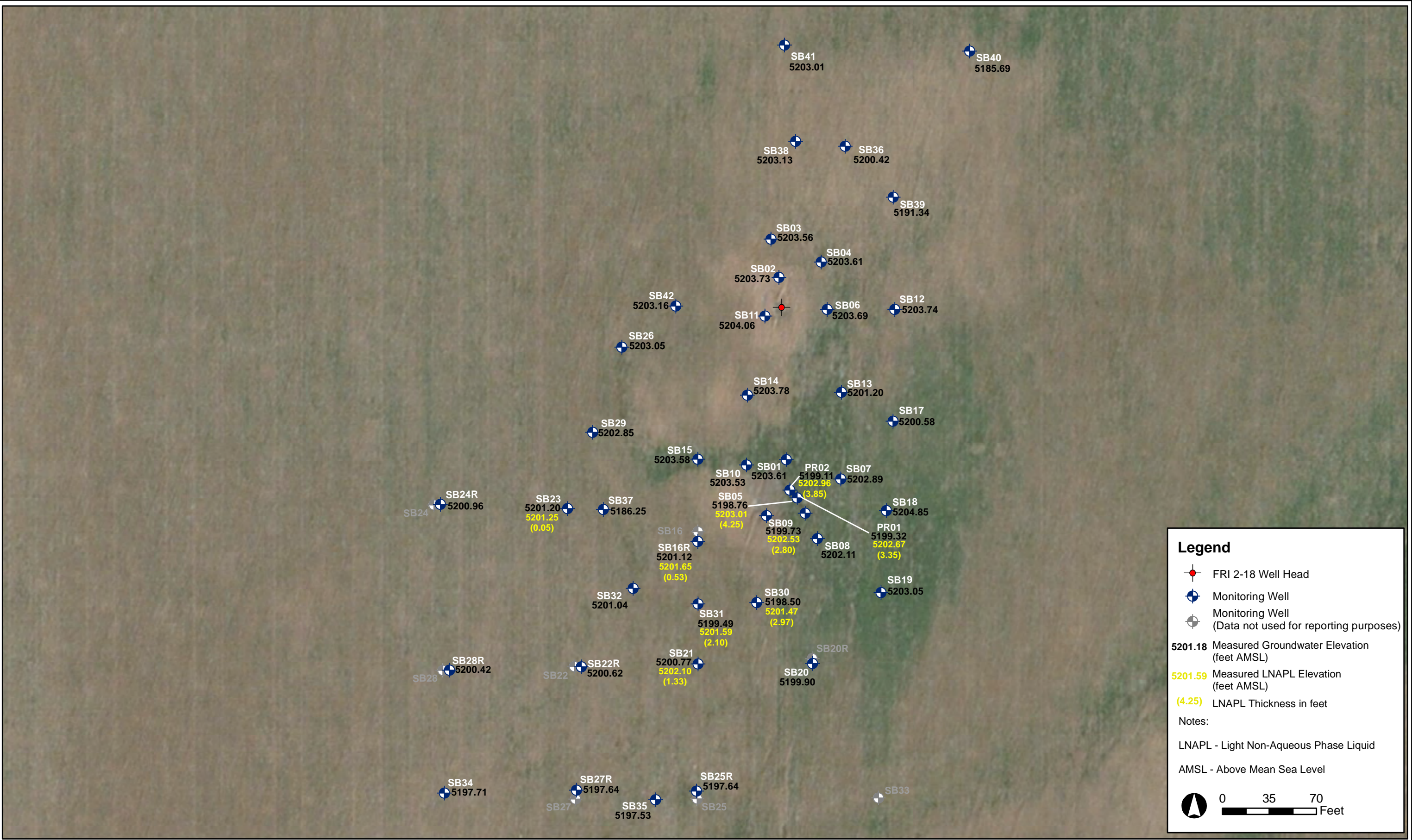


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Adams County, Colorado

TPH in Soil
Map

Figure
3



DATE:	April 2014
DESIGNED BY:	D.Wade
DRAWN BY:	D. Arnold

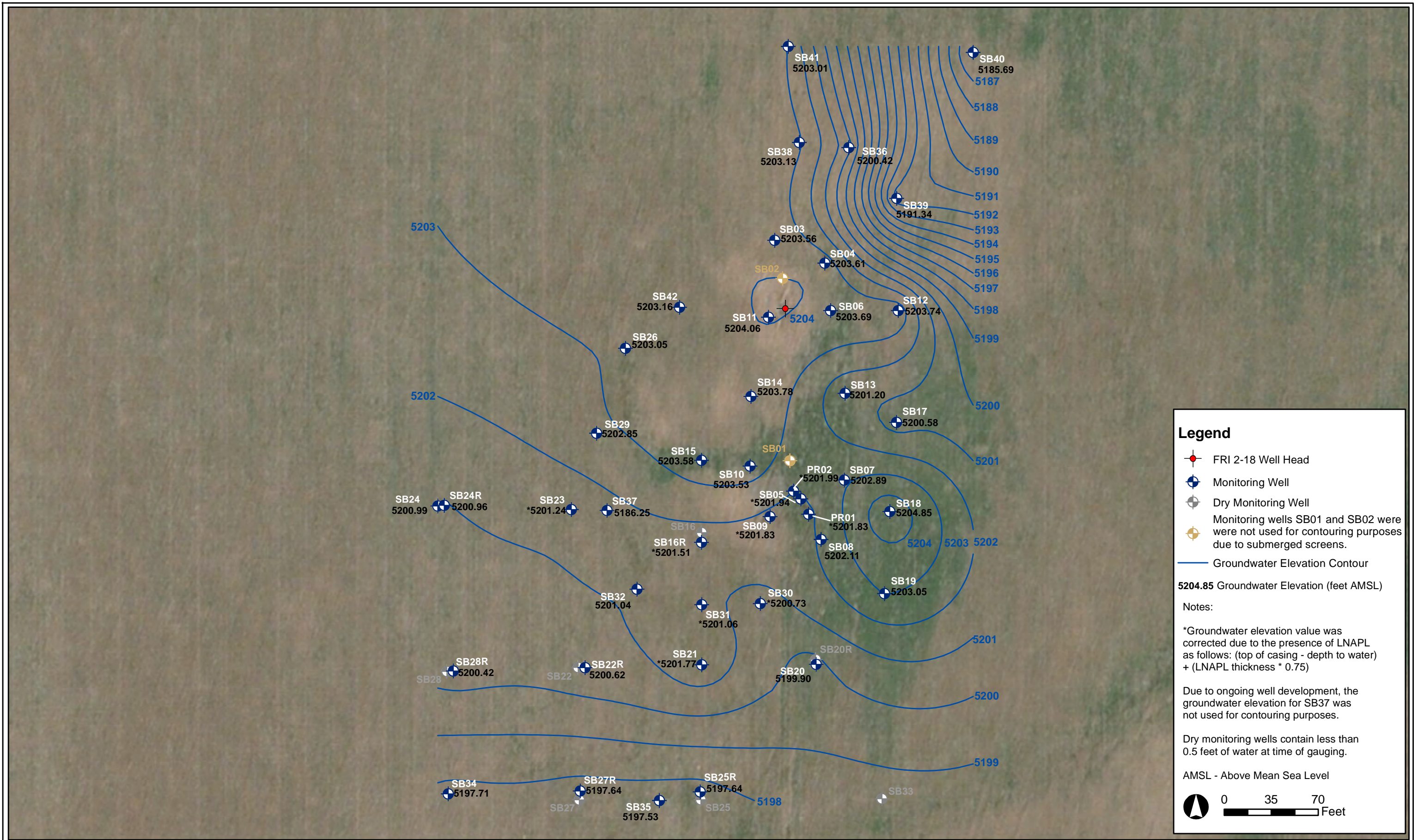


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Noble Energy, Inc.
Former Fri 2-18 Tank Battery
Section 18, Township 1 South, Range 67 West
Adams County, Colorado

Groundwater and LNAPL
Elevation Map
(April 21, 2014)

Figure
4



DATE:	April 2014
DESIGNED BY:	D.Wade
DRAWN BY:	D. Arnold

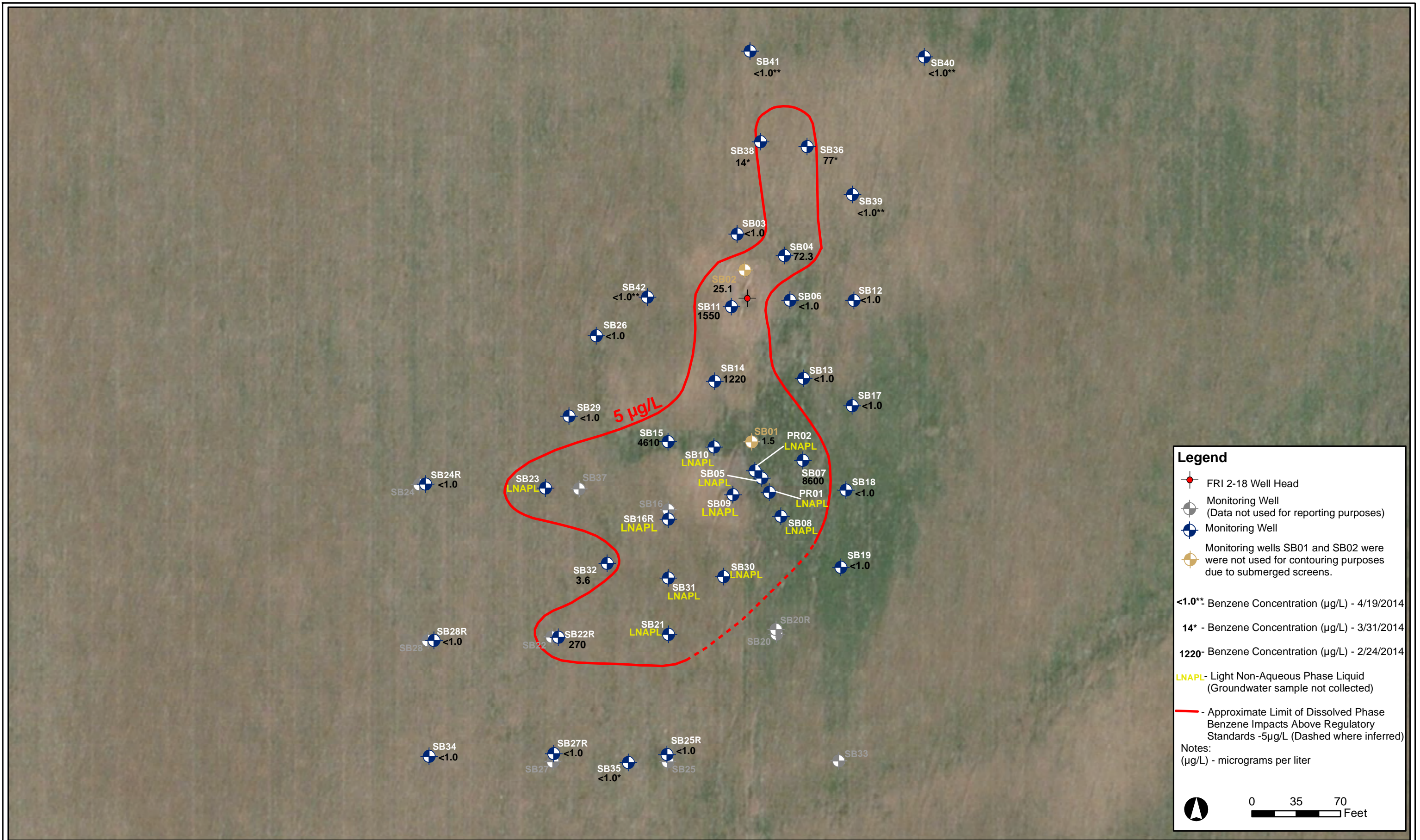


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Denver, CO 80221

Noble Energy, Inc.
Former Fri 2-18 Tank Battery
Section 18, Township 1 South, Range 67 West
Adams County, Colorado

Groundwater Potentiometric
Surface Contour Map
(April 21, 2014)

Figure
5



DATE:	April 2014
DESIGNED BY:	D. Wade
DRAWN BY:	D. Arnold



Tasman Geosciences, LLC
6899 Pecos Street - Unit C
Denver, CO 80221

Noble Energy, Inc.
Fri 2-18
Section 18, Township 1 South, Range 67 West
Adams County, Colorado

Benzene in Groundwater
Isoconcentration Contour
Map

Figure
6

ATTACHMENT A

**LT ENVIRONMENTAL, INC.
ENVIRONMENTAL ASSESSMENT RESULTS**



January 6, 2013

Mr. Jacob Evans
Senior Environmental Specialist
Noble Energy, Inc.
1625 Broadway, Suite 2200
Denver, Colorado 80202

**RE: Environmental Assessment Results
Former Fri 2-18 Tank Battery
Thornton, Adams County, Colorado
COGCC Remediation #3452**

Dear Mr. Evans:

LT Environmental, Inc. (LTE), under the direction of Noble Energy, Inc. (Noble), conducted an environmental assessment at the Former Fri 2-18 Tank Battery (Site). The purpose of the environmental assessment was to define the horizontal and vertical extent of petroleum hydrocarbon impacted soil and groundwater at the Site.

Site History

As identified in the Colorado Oil and Gas Conservation Commission (COGCC) records, a historical excavation was conducted in January and February 2005 and is described in the *Tank Battery and Well Closure Report* dated March 2005. The incident date is recorded as January 24, 2005. The historical release and remediation activities are tracked under COGCC Remediation #3452 and were closed via a No Further Action approval, dated April 27, 2005.

The legal site description is the center of the southeast quarter of Section 18, Township 1 South, Range 67 West, 6th Prime Meridian. The Site is located approximately 0.35 miles northwest of the intersection of East 144th Avenue and Holly Street in Thornton, Adams County, Colorado. The Site Location Map is provided as Figure 1.

On September 19 and 20, 2013, a third-party environmental consulting company (ERO Resources Corporation) conducted a limited site investigation to identify subsurface conditions at the Site. The results of the limited site investigation identified hydrocarbon impacted soil and groundwater. Based on the 2013 work, Noble requested LTE conduct a site assessment to define the horizontal and vertical extent of historical petroleum hydrocarbon impacted soil and groundwater, as presented in this report.

Soil Boring Advancement

LTE, under the direction of Noble, advanced a total of 28 soil borings (SB01 through SB28) on October 28, 2013, through December 31, 2013. Soil borings SB01 through SB28 were installed using a hollow-stem auger rig operated by Site Services, Inc. of Golden, Colorado. Soil borings

SB01 through SB28 were set as temporary monitoring wells to allow for groundwater sampling. The Site Map with soil boring locations is provided as Figure 2.

The soil borings were logged by an LTE geologist and the soil was characterized by visual inspection of the collected soil samples. The total depths of the soil borings ranged from approximately 42 feet to 58 feet below ground surface (bgs). Soil borings were continuously logged from ground surface to the total depth. During drilling operations, groundwater was observed in soil borings SB01, SB04, and SB23 at approximately 53 feet bgs, 45 feet bgs, and 33 feet bgs, respectively. Groundwater was not observed in any of the other soil borings during the time of soil boring installation. The soil borings and well completion diagrams are included as Attachment 1.

Soil identified at the Site was predominantly sandy clay and clayey sand from ground surface to approximately 33.5 feet bgs, followed by alternating layers of claystone and sandstone to total depth. Elevated photo-ionization detector (PID) readings [greater than 10 parts per million (ppm)] were observed in soil borings SB01 through SB11, SB12 through SB16, and SB20 through SB23. The highest PID reading observed was 2,982 ppm in SB16 at 41 feet bgs. Staining ranged from 14.5 feet to 45 feet bgs in soil borings SB01, SB02, SB05, SB06, SB09, SB10, SB11, and SB16. Geologic cross sections are provided as Figures 3, 4, and 5.

Soil Sampling

Soil borings were advanced using hollow-stem auger methods and sampled using a continuous sampler on October 28, 2013, through December 31, 2013. Field measurements and soil samples were collected to identify the vertical extent of soil impact. Soil samples were submitted for analysis based on the sample interval that exhibited visible soil staining or where the highest PID reading was observed above the groundwater saturation zone.

Forty-seven soil samples were collected and submitted to Summit Scientific (Summit) of Golden, Colorado, and Origins Laboratory, Inc. (Origins) of Denver, Colorado. Summit analyzed soil samples for benzene, toluene, ethylbenzene, and total xylenes (BTEX), naphthalene, and total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) by United States Environmental Protection Agency (EPA) Method 8260B and TPH as diesel range organics (DRO) by EPA Method 8015 and Origins analyzed soil samples for BTEX, naphthalene, and TPH as GRO by EPA Method 8260C and TPH as DRO by EPA Method 8015C.

Groundwater Monitoring Well Installation

All soil borings were completed as temporary groundwater monitoring wells. The monitoring wells were constructed of 2-inch diameter polyvinyl chloride (PVC) casing extending from the surface stickups to depths of approximately 42 feet to 58 feet bgs. The lower section of each well consists of 10 to 15 feet of 0.020-inch factory slotted PVC well screen. Silica sand (size 10-20) was placed from the bottom of each monitoring well to approximately 2 feet above the well screen to act as a filter pack for the well. Bentonite chips were placed from the top of the silica

sand to the ground surface at each soil boring to provide a seal against surface contamination and precipitation infiltration.

Groundwater Sampling

Groundwater samples were collected on November 1, 2013 through January 2, 2014. Prior to sampling each monitoring well, depth to static groundwater was measured and recorded for calculating well-specific purge volumes. Monitoring wells SB05 and SB09 contained free phase hydrocarbons; therefore, they were not sampled. Additionally, monitoring wells SB08, SB10, SB15, and SB21 contained free phase hydrocarbons. Monitoring wells SB16, SB20, SB25, SB27, and SB28 contained no groundwater during any of the sampling events; therefore, they were not sampled. Following well development and purging, samples were collected, placed on ice, and delivered with a complete chain of custody form to Summit and Origins. Summit analyzed groundwater samples for BTEX by EPA Method 8260B and Origins analyzed groundwater samples for BTEX by EPA Method 8260C.

Soil Analytical Results

The COGCC Table 910-1 standards for BTEX, naphthalene, and TPH in soil are 0.17 milligrams per kilogram (mg/kg), 85 mg/kg, 100 mg/kg, 175 mg/kg, 23 mg/kg, and 500 mg/kg, respectively.

Soil analytical results indicate that the soil samples SB05@44', SB07@32', SB10@37', SB16@40', SB21@46', and SB23@44' exceed the COGCC standard for TPH at concentrations of 1,010 mg/kg, 1,830 mg/kg, 1,930 mg/kg, 1,640 mg/kg, 1,133 mg/kg, and 576 mg/kg, respectively. Soil sample SB21@46' exceeded the COGCC standard for benzene at a concentration of 0.972 mg/kg. All remaining samples are in compliance with applicable COGCC Table 910-1 standards. The soil analytical results are presented on Figure 6 and summarized in Table 1. Laboratory analytical reports are included as Attachment 2.

Hydrogeology

Following a complete survey of all monitoring wells, depth to static groundwater levels were measured and recorded on December 23, 2013, and used to calculate relative groundwater elevations. The depth to static groundwater level at the Site ranged from 39.41 feet below top of casing (btoc) in SB04 to 50.43 feet btoc in SB22. Groundwater is estimated to flow southeast with an average hydraulic gradient of 0.019 feet per foot. Relative groundwater elevations are presented on Figure 7 and summarized in Table 2.

Groundwater Analytical Results

The Colorado Department of Public Health and Environment-Water Quality Control Commission has established Regulation 41-The Basic Standards for Ground Water (WQCC Reg 41) for BTEX at 5.0 micrograms per liter ($\mu\text{g/L}$), 560 $\mu\text{g/L}$, 700 $\mu\text{g/L}$, and 1,400 $\mu\text{g/L}$, respectively.

Groundwater analytical results indicate groundwater samples SB01, SB02, SB04, SB06, SB07, SB08, SB10, SB14, SB15, SB21, SB22, and SB23 exceeded WQCC Reg 41 for benzene at concentrations of 150 µg/L, 13 µg/L, 16 µg/L, 9.0 µg/L, 4,000 µg/L, 3,700 µg/L, 5,300 µg/L, 6.5 µg/L, 9,000 µg/L, 256,000 µg/L, 23.6 µg/L, and 9,140 µg/L, respectively. Monitoring wells SB07, SB08, SB10, SB15, SB21, and SB23 exceeded WQCC Reg 41 for toluene at concentrations of 8,600 µg/L, 15,000 µg/L, 11,000 µg/L, 24,000 µg/L, 3,580,000 µg/L, and 44,800 µg/L, respectively. Monitoring wells SB15, SB21, and SB23 exceeded WQCC Reg 41 for ethylbenzene at concentrations of 1,300 µg/L, 307,000 µg/L, and 2,160 µg/L, respectively. Monitoring wells SB07, SB08, SB10, SB15, SB21, and SB23 exceeded WQCC Reg 41 for total xylenes at concentrations of 4,600 µg/L, 7,900 µg/L, 8,300 µg/L, 19,000 µg/L, 5,040,000 µg/L, and 51,900 µg/L, respectively. All remaining samples are in compliance with applicable WQCC Reg 41 standards. Groundwater analytical results are presented on Figure 8 and summarized in Table 2. Laboratory analytical reports are included as Attachment 2.

Summary and Conclusions


A total of 28 soil borings (SB01 through SB28) were advanced at the Site. Soil analytical results indicate that applicable COGCC Table 910-1 standards were exceeded in six of the samples collected (SB05@44', SB07@32', SB10@37', SB16@40', SB21@46', and SB23@44'). The current estimated area of TPH impacted soil is approximately 17,600 square feet.

Groundwater analytical results indicate that applicable WQCC Reg 41 standards were exceeded in 12 of the samples collected (SB01, SB02, SB04, SB06, SB07, SB08, SB10, SB14, SB15, and SB21 through SB23). The current estimated area of BTEX impacted groundwater is approximately 36,800 square feet. Free phase hydrocarbons were observed in wells SB05, SB08, SB09, SB10, SB15, and SB21. The current extent of free phase hydrocarbons is 3,700 square feet. Noble will continue quarterly groundwater monitoring of the Site with the next groundwater event occurring in February 2014. Future remediation measures will be discussed in future correspondence.

LTE appreciates the opportunity to provide environmental services to Noble. Please call us at 303-433-9788 if you have any questions or comments regarding this report.

Sincerely,

LT ENVIRONMENTAL, INC.



Rob Rebel, P.E.
Project Manager



Steve Kahn, P.E.
Principal

Attachments:

Figure 1	Site Location Map
Figure 2	Site Map
Figure 3	Geologic Cross Section A-A'
Figure 4	Geologic Cross Section B-B'
Figure 5	Geologic Fence Diagram A-A' and B-B'
Figure 6	Soil Analytical Results
Figure 7	Relative Groundwater Elevation Map
Figure 8	Groundwater Analytical Results
Table 1	Soil Analytical Results
Table 2	Groundwater Analytical Results
Attachment 1	Soil Borings/Well Completion Diagrams
Attachment 2	Laboratory Analytical Reports

FIGURES

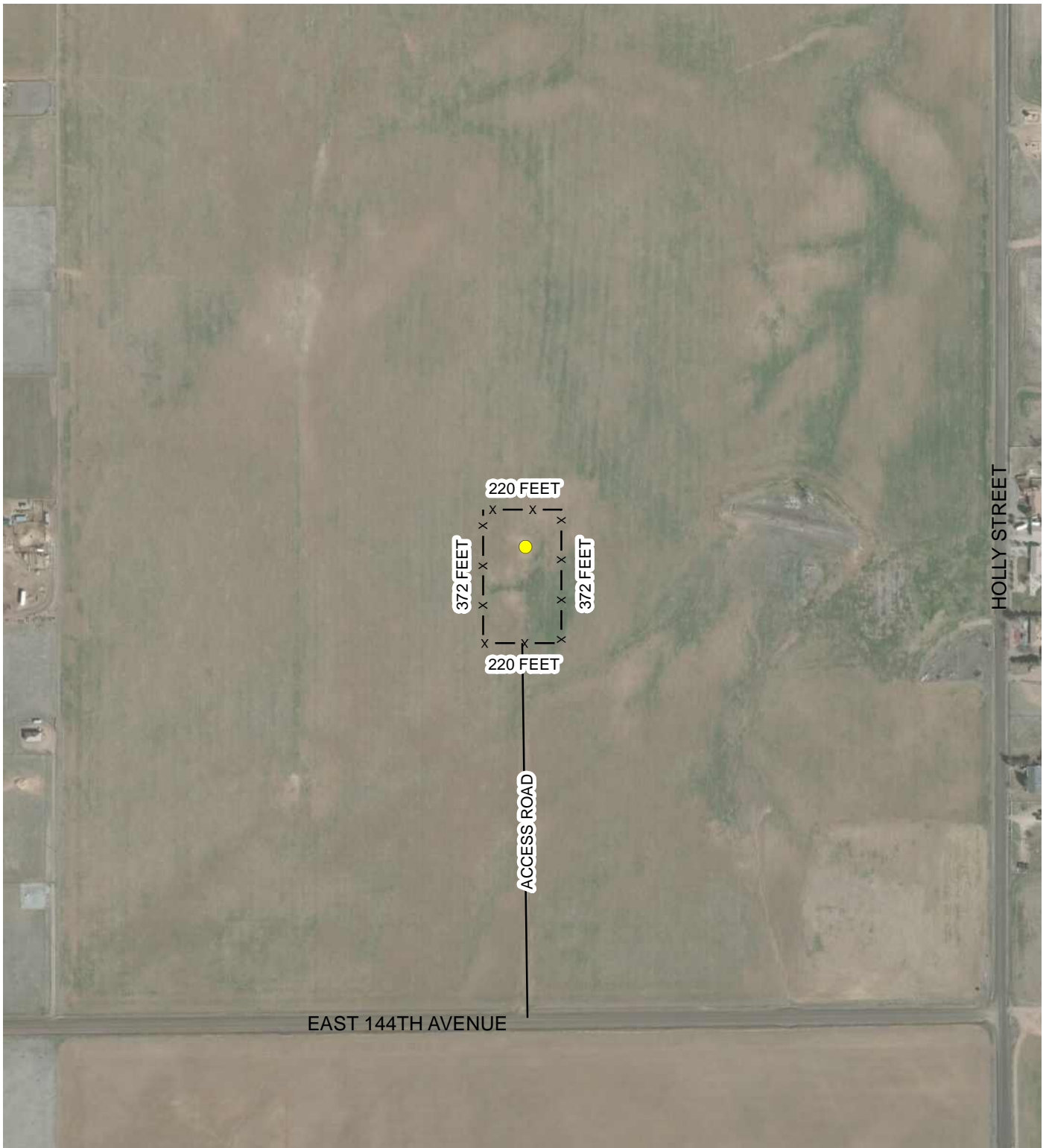


IMAGE COURTESY OF ESRI/BING MAPS

LEGEND

- HISTORICAL WELLHEAD
- x — x FENCE

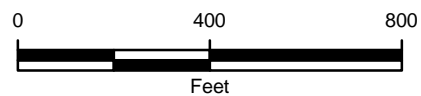


FIGURE 1
SITE LOCATION MAP
FORMER FRI 2-18 TANK BATTERY
ADAMS COUNTY, COLORADO

NOBLE ENERGY, INC.



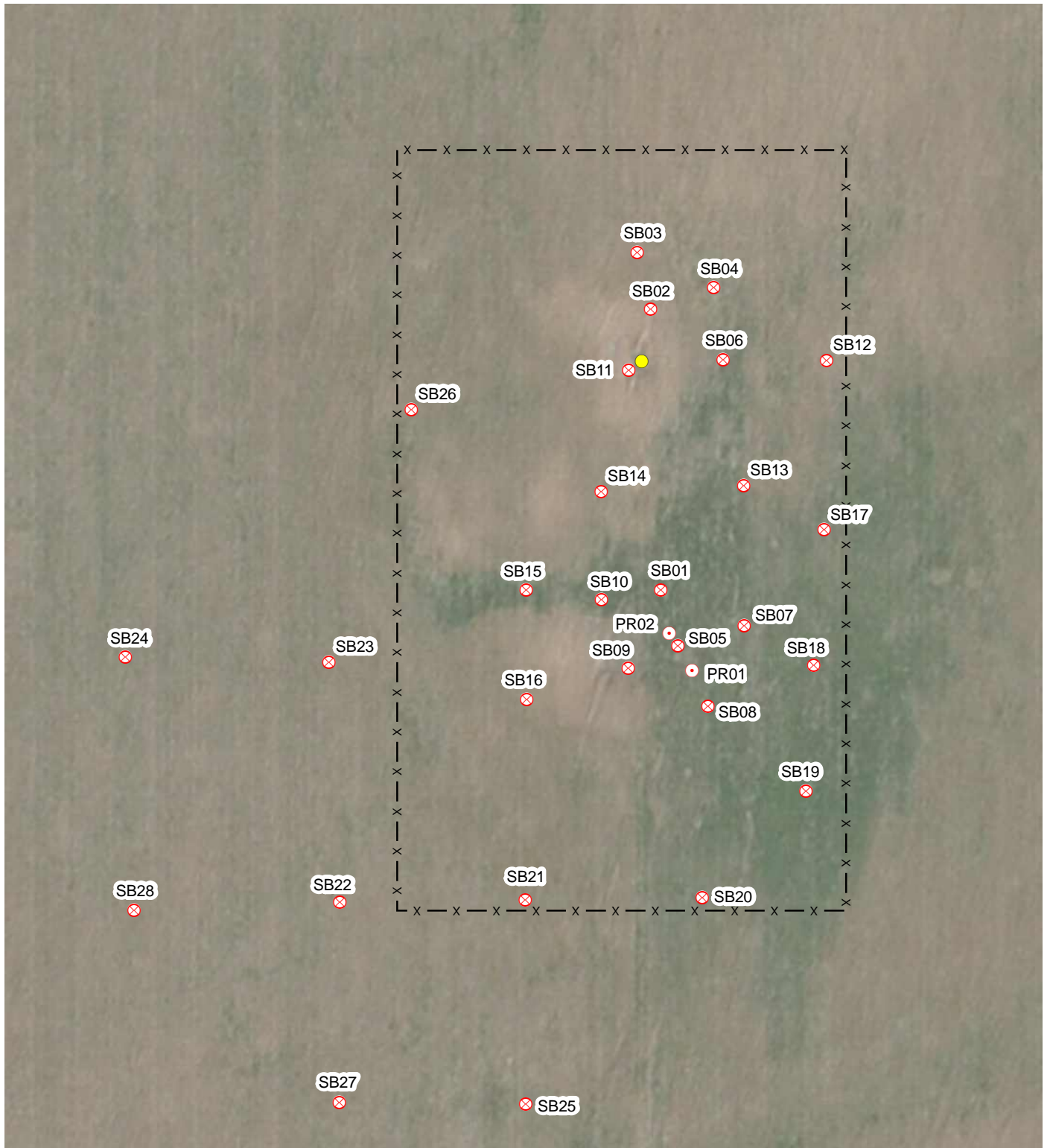


IMAGE COURTESY OF ESRI/BING MAPS

LEGEND

- ⊗ MONITORING WELL
- ⊙ PRODUCT RECOVERY WELL
- HISTORICAL WELLHEAD

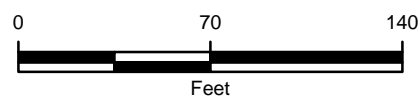
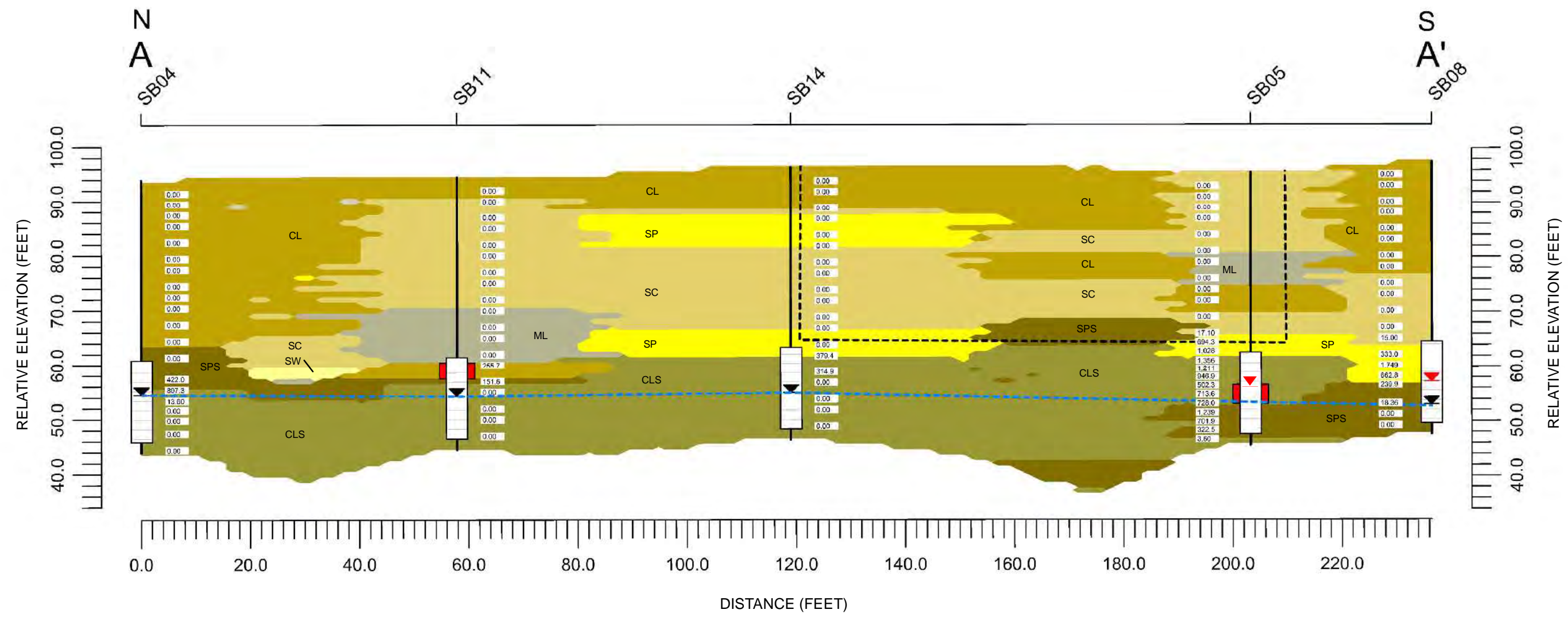


FIGURE 2
SITE MAP
FORMER FRI 2-18 TANK BATTERY
ADAMS COUNTY, COLORADO

NOBLE ENERGY, INC.



GEOLOGIC CROSS SECTION A-A'



LEGEND

- ▼ GROUNDWATER ELEVATION DURING SAMPLING (NOVEMBER 2012)
- ▼ DEPTH TO FREE PHASE HYDROCARBONS
- ☐ SCREENED INTERVAL
- - - APPROXIMATE GROUNDWATER ELEVATION
- - - APPROXIMATE HISTORIC EXCAVATION LOCATION
- PID: PHOTO-IONIZATION DETECTOR READING FROM SOIL SAMPLE
- VERTICAL SCALE: 1" = 20'
- HORIZONTAL SCALE: 1" = 20'
- NOTE: SPS, CLS - ADDITIONAL CLASSIFICATION CATEGORIES CREATED TO REPRESENT BEDROCK COMPETENCY.

- ### LITHOLOGY INDEX
- CLAYEY SAND (SC)
 - INORGANIC CLAYS (CL)
 - SILT (ML)
 - WELL GRADED SAND (SW)
 - POORLY GRADED SANDS (SP)
 - SANDSTONE (SPS)
 - CLAYSTONE (CLS)
 - SOIL STAINING

SITE MAP

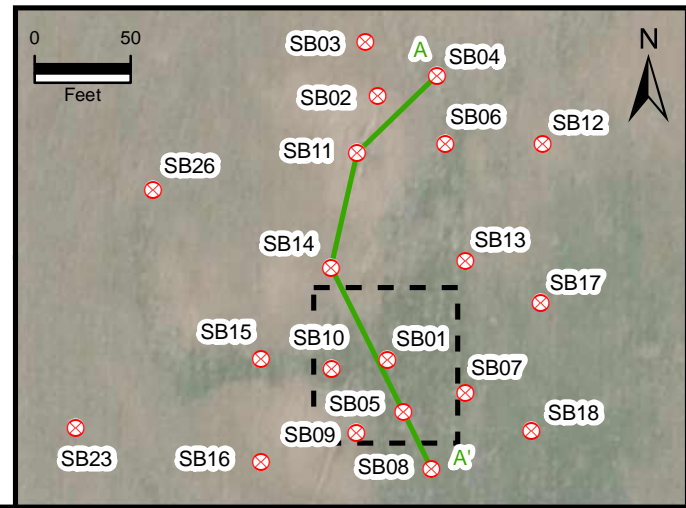
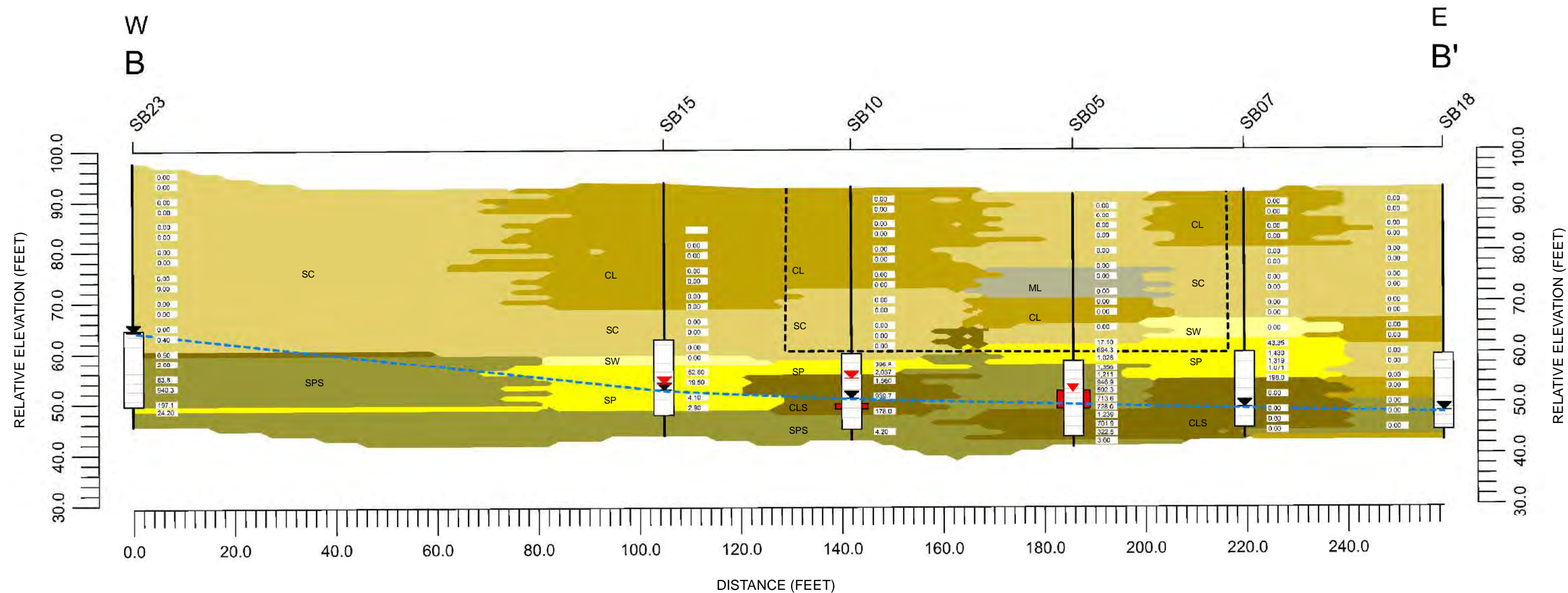


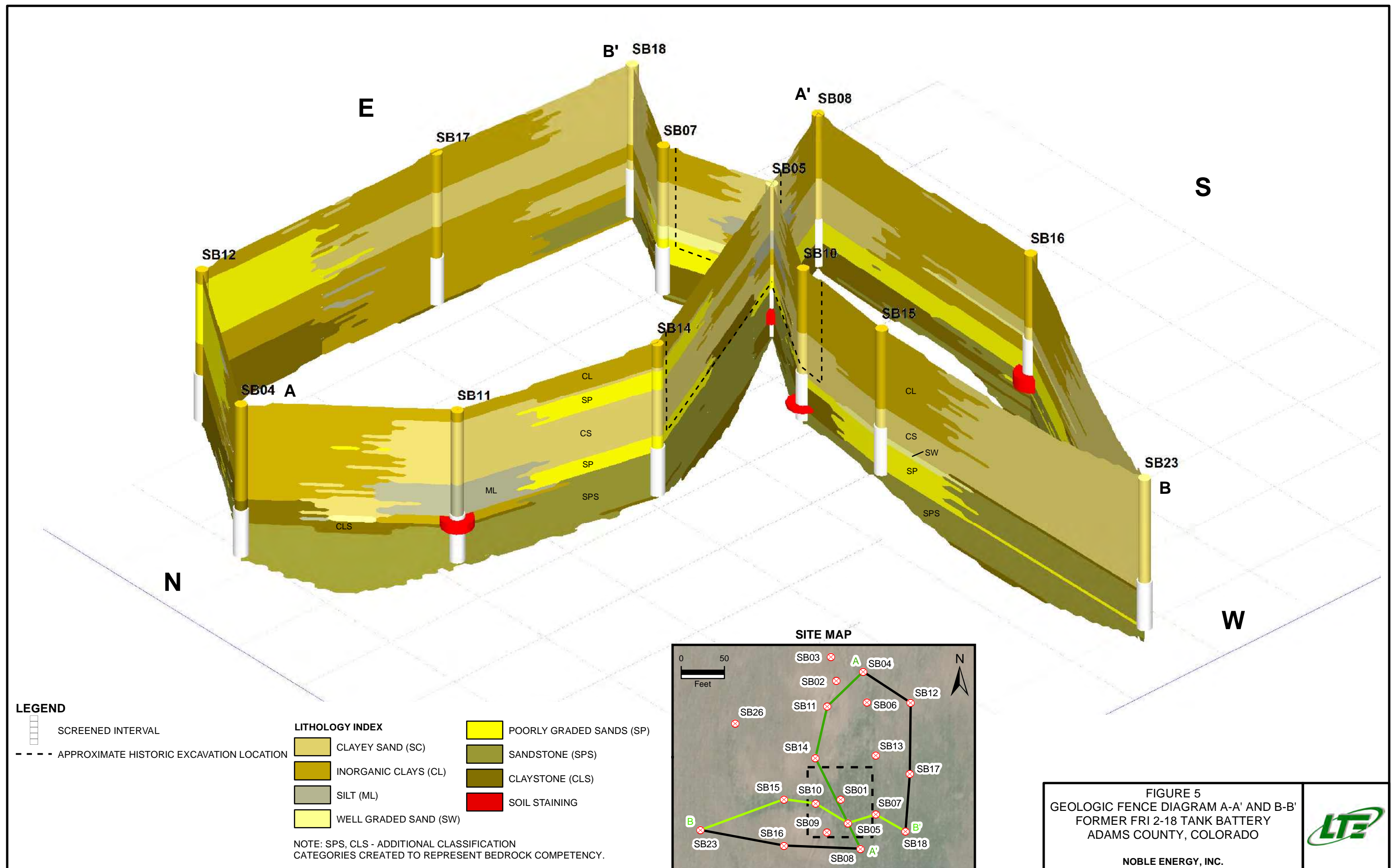
FIGURE 3
GEOLOGIC CROSS SECTION A-A'
FORMER FRI 2-18 TANK BATTERY
ADAMS COUNTY, COLORADO

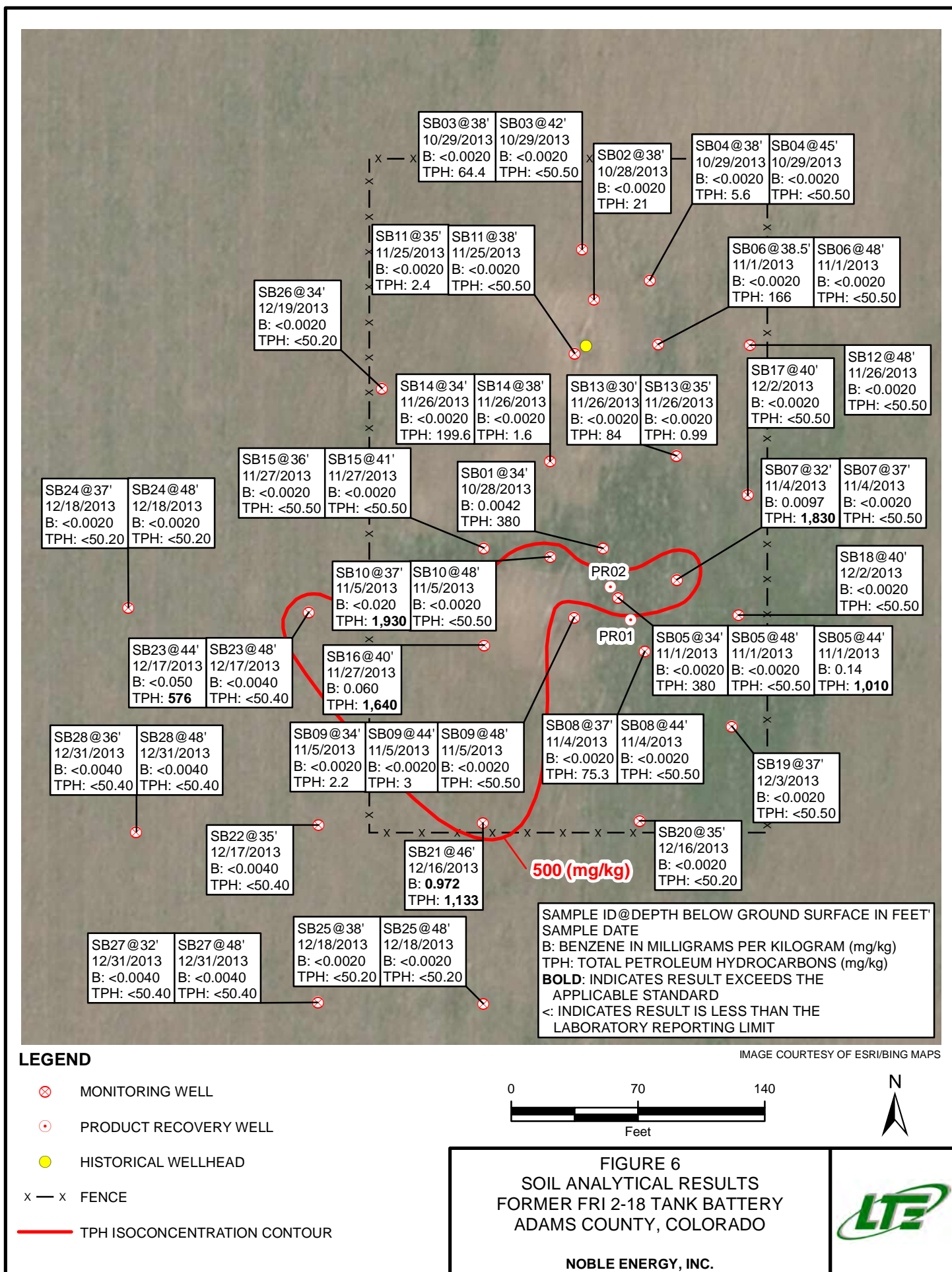
NOBLE ENERGY, INC.

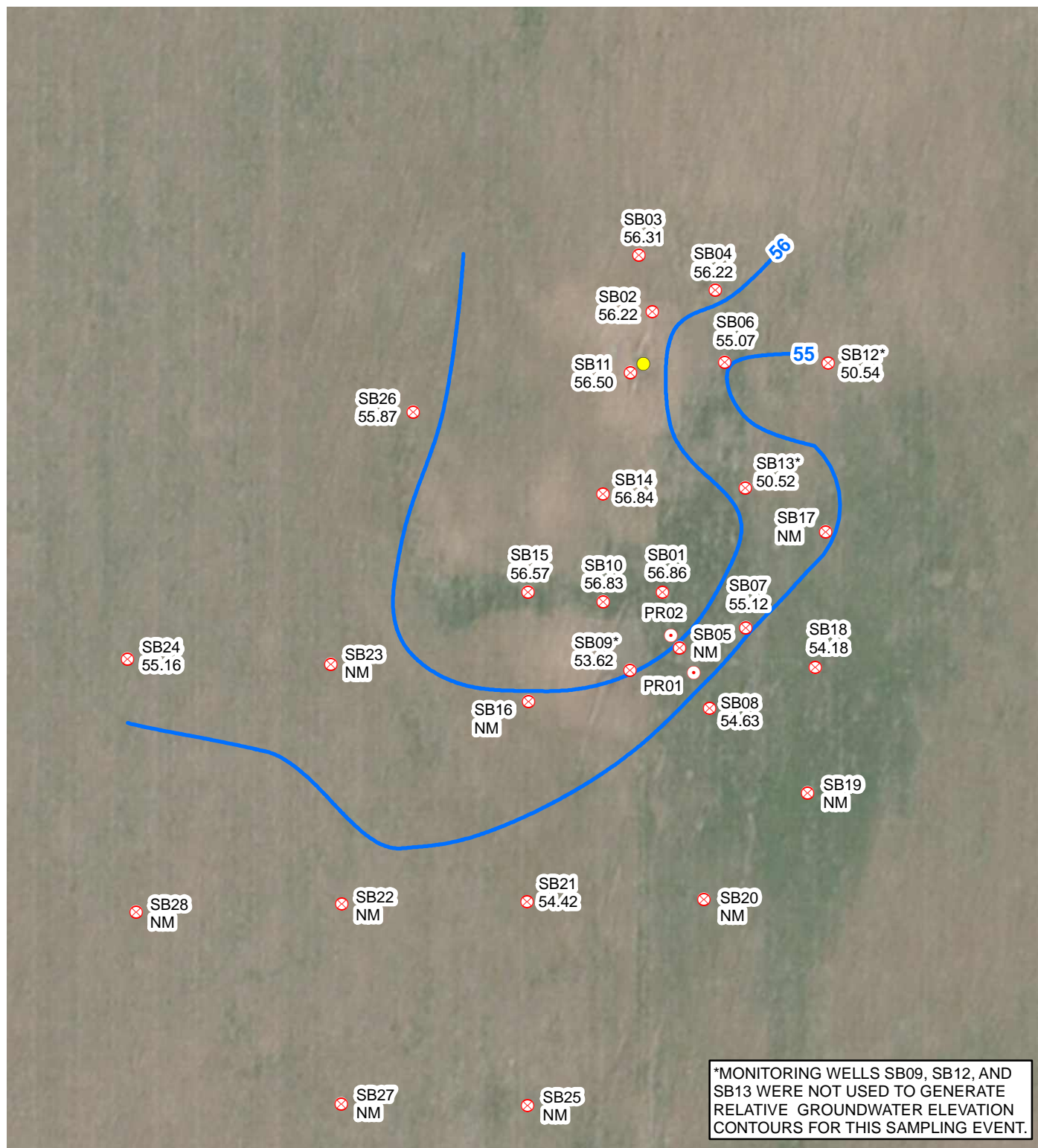


GEOLOGIC CROSS SECTION B-B'









LEGEND

- ⊗ MONITORING WELL
- ⦿ PRODUCT RECOVERY WELL
- HISTORICAL WELLHEAD

— RELATIVE GROUNDWATER ELEVATION CONTOURS FROM DECEMBER 23, 2013, GROUNDWATER ELEVATIONS ARE SUBJECT TO SEASONAL CHANGE THROUGH TIME AND ARE NOT STATIC. CONTOUR INTERVAL = 1 FOOT GRADIENT = 0.019 FEET/FOOT

IMAGE COURTESY OF ESRI/BING MAPS

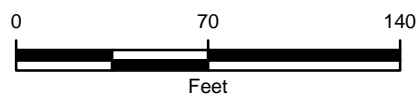
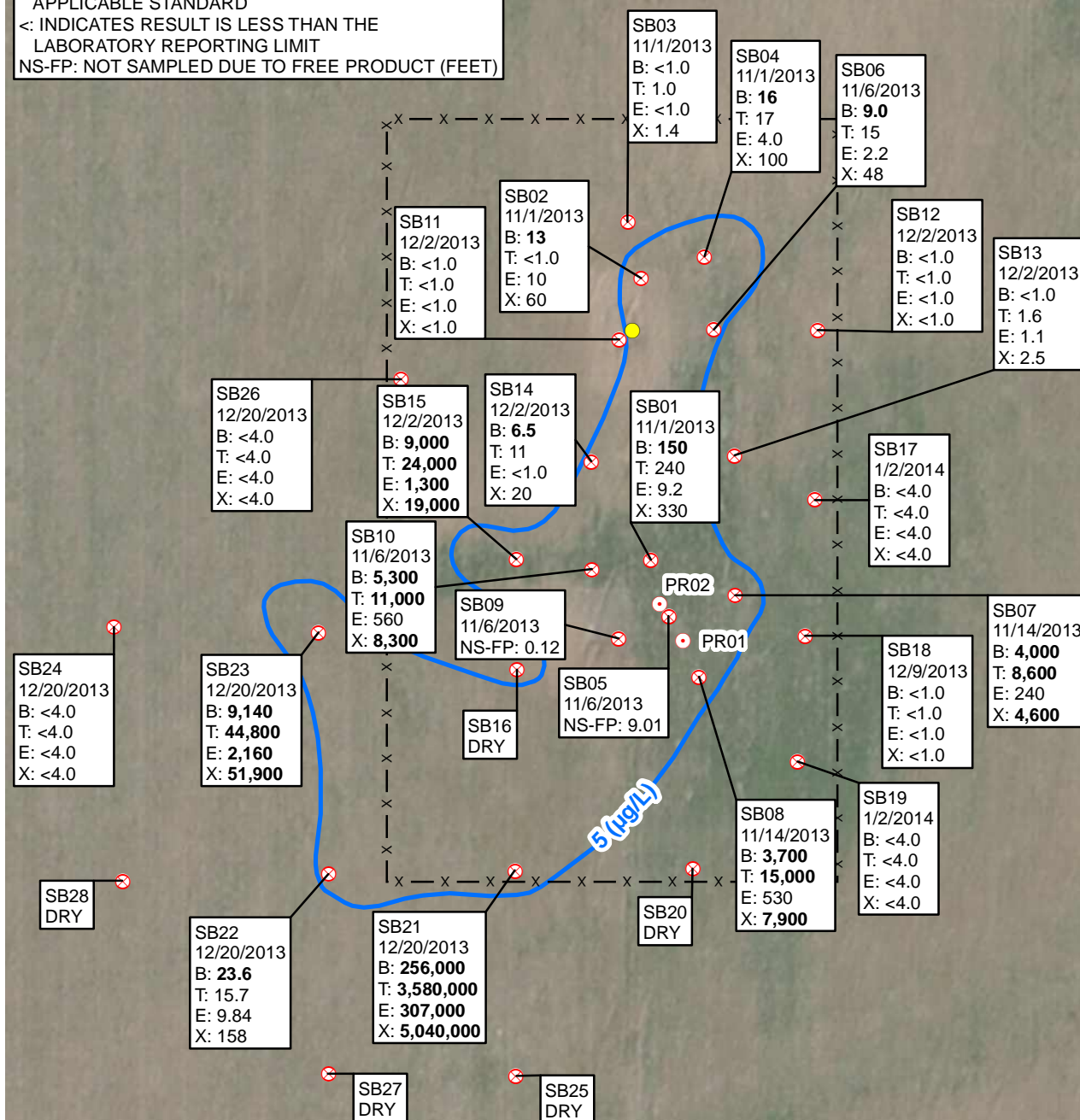


FIGURE 7
RELATIVE GROUNDWATER ELEVATION MAP
DECEMBER 23, 2013
FORMER FRI 2-18 TANK BATTERY
ADAMS COUNTY, COLORADO
NOBLE ENERGY, INC.



SAMPLE ID
SAMPLE DATE
B: BENZENE IN MICROGRAMS PER LITER (µg/L)
T: TOLUENE (µg/L)
E: ETHYLBENZENE (µg/L)
X: TOTAL XYLENES (µg/L)
BOLD: INDICATES RESULT EXCEEDS THE APPLICABLE STANDARD
<: INDICATES RESULT IS LESS THAN THE LABORATORY REPORTING LIMIT
NS-FP: NOT SAMPLED DUE TO FREE PRODUCT (FEET)



LEGEND

- ⊗ MONITORING WELL
- ⊙ PRODUCT RECOVERY WELL
- HISTORICAL WELLHEAD
- BENZENE ISOCONCENTRATION CONTOUR
- x — x FENCE

IMAGE COURTESY OF ESRI/BING MAPS

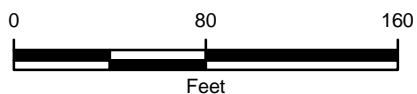


FIGURE 8
GROUNDWATER ANALYTICAL RESULTS
FORMER FRI 2-18 TANK BATTERY
ADAMS COUNTY, COLORADO

NOBLE ENERGY, INC.



TABLES

TABLE 1

**SOIL ANALYTICAL RESULTS
FORMER FRI 2-18 TANK BATTERY
ADAMS COUNTY, COLORADO
NOBLE ENERGY, INC.**

Soil Sample	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	TPH (mg/kg)
SB01@34'	10/28/2013	0.0042	0.15	0.18	4.0	0.36	130	250	380
SB02@38'	10/28/2013	<0.0020	<0.0050	0.016	0.20	0.046	21	<50	21
SB03@38'	10/29/2013	<0.0020	<0.0050	<0.0050	<0.010	0.022	5.4	59	64.4
SB03@42'	10/29/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50.50
SB04@38'	10/29/2013	<0.0020	<0.0050	<0.0050	<0.010	0.024	5.6	<50	5.6
SB04@45'	10/29/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50.50
SB05@34'	11/1/2013	<0.0020	0.67	0.54	10	0.52	150	230	380
SB05@44'	11/1/2013	0.14	10	2.9	44	1.0	790	220	1,010
SB05@48'	11/1/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50.50
SB06@38.5'	11/1/2013	<0.0020	0.017	0.049	1.4	0.13	36	130	166
SB06@48'	11/1/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50.50
SB07@32'	11/4/2013	0.0097	4.0	2.3	68	1.3	1,200	630	1,830
SB07@37'	11/4/2013	<0.0020	0.0058	<0.0050	0.018	<0.010	<0.50	<50	<50.50
SB08@37'	11/4/2013	<0.0020	<0.0050	<0.0050	0.012	0.039	5.3	70	75.3
SB08@44'	11/4/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50.50
SB09@34'	11/5/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	2.2	<50	2.2
SB09@44'	11/5/2013	<0.0020	<0.0050	<0.0050	0.015	<0.010	3.0	<50	3.0
SB09@48'	11/5/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50.50
SB10@37'	11/5/2013	<0.020	1.8	2.6	56	1.3	1,000	930	1,930
SB10@48'	11/5/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50.50
SB11@35'	11/25/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	2.4	<50	2.4
SB11@38'	11/25/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50.50
SB12@48'	11/26/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50.50
SB13@30'	11/26/2013	<0.0020	0.012	0.026	0.64	0.070	20	64	84
SB13@35'	11/26/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	0.99	<50	0.99
SB14@34'	11/26/2013	<0.0020	<0.0050	<0.0050	0.016	<0.010	9.6	190	199.6
SB14@38'	11/26/2013	<0.0020	0.0057	<0.0050	<0.010	<0.010	1.6	<50	1.6
SB15@36'	11/27/2013	<0.0020	0.0096	<0.0050	0.014	<0.010	<0.50	<50	<50.50
SB15@41'	11/27/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50.50
SB16@40'	11/27/2013	0.060	8.6	2.4	33	1.1	1,100	540	1,640
SB17@40'	12/2/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50.50
SB18@40'	12/2/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50.50
SB19@37'	12/3/2013	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50.50

TABLE 1 (Continued)

SOIL ANALYTICAL RESULTS
FORMER FRI 2-18 TANK BATTERY
ADAMS COUNTY, COLORADO
NOBLE ENERGY, INC.

Soil Sample	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	TPH (mg/kg)
SB20@35'	12/16/2013	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	<0.20	<50.0	<50.20
SB21@46'	12/16/2013	0.972	4.93	3.46	12.3	0.852	972	161	1,133
SB22@35'	12/17/2013	<0.0040	<0.0040	<0.0040	<0.0040	<0.0080	<0.40	<50.0	<50.40
SB23@44'	12/17/2013	<0.050	2.18	0.542	10.3	0.646	241	335	576
SB23@48'	12/17/2013	<0.0040	<0.0040	<0.0040	<0.0040	<0.0080	<0.40	<50.0	<50.40
SB24@37'	12/18/2013	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	<0.20	<50.0	<50.20
SB24@48'	12/18/2013	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	<0.20	<50.0	<50.20
SB25@38'	12/18/2013	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	<0.20	<50.0	<50.20
SB25@48'	12/18/2013	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	<0.20	<50.0	<50.20
SB26@34'	12/19/2013	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	<0.20	<50.0	<50.20
SB27@32'	12/31/2013	<0.0040	<0.0040	<0.0040	<0.0040	<0.0080	<0.40	<50.0	<50.40
SB27@48'	12/31/2013	<0.0040	<0.0040	<0.0040	<0.0040	<0.0080	<0.40	<50.0	<50.40
SB28@36'	12/31/2013	<0.0040	<0.0040	<0.0040	<0.0040	<0.0080	<0.40	<50.0	<50.40
SB28@48'	12/31/2013	<0.0040	<0.0040	<0.0040	<0.0040	<0.0080	<0.40	<50.0	<50.40
COGCC Table 910-1 Standard		0.17	85	100	175	23	--	--	500

NOTES:

mg/kg - milligrams per kilogram

GRO - gasoline range organics analyzed by EPA Modified Method 8260B or EPA Method 8260C

DRO - diesel range organics analyzed by EPA Modified Method 8015C or EPA Method 8015

TPH - total petroleum hydrocarbons

TPH is the sum of GRO and DRO

< - indicates result is less than the stated laboratory reporting limit

BOLD indicates result exceeds the applicable standard

COGCC - Colorado Oil and Gas Conservation Commission

Benzene, toluene, ethylbenzene, total xylenes, and naphthalene analyzed by EPA Method 8260B or EPA Method 8260C

-- - not applicable

TABLE 2

**GROUNDWATER ANALYTICAL RESULTS
FORMER FRI 2-18 TANK BATTERY
ADAMS COUNTY, COLORADO
NOBLE ENERGY, INC.**

Monitoring Well	Date	Total Depth (feet btoc)	Depth to Water (feet btoc)	Depth to Product (feet btoc)	Product Thickness (feet)	Relative Groundwater Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
SB01	11/1/2013	60.46	42.65	ND	--	55.33	150	240	9.2	330
	12/23/2013	60.46	42.08	ND	--	56.86	NM	NM	NM	NM
SB02	11/1/2013	60.70	40.23	ND	--	55.96	13	<1.0	10	60
	12/23/2013	60.70	40.03	ND	--	56.22	NM	NM	NM	NM
SB03	11/1/2013	50.45	42.29	ND	--	55.94	<1.0	1.0	<1.0	1.4
	12/23/2013	50.45	42.13	ND	--	56.31	NM	NM	NM	NM
SB04	11/1/2013	49.35	39.62	ND	--	55.91	16	17	4.0	100
	12/23/2013	49.35	39.41	ND	--	56.22	NM	NM	NM	NM
SB05	11/6/2013	49.71	ND	40.70	9.01	--	No sample collected - free product present			
	12/23/2013	49.71	NM	NM	--	NM	NM	NM	NM	NM
	1/2/2014	49.71	NM	NM	--	NM	Monitoring well inaccessible			
SB06	11/6/2013	50.50	39.41	ND	--	56.79	9.0	15	2.2	48
	12/23/2013	50.50	40.08	ND	--	55.07	NM	NM	NM	NM
SB07	11/6/2013	50.60	ND	ND	--	--	No sample collected - no groundwater			
	11/14/2013	50.60	46.35	ND	--	51.94	4,000	8,600	240	4,600
	12/23/2013	50.60	42.98	ND	--	55.12	NM	NM	NM	NM
SB08	11/6/2013	50.90	ND	ND	--	--	No sample collected - no groundwater			
	11/14/2013	50.90	47.83	ND	--	51.40	3,700	15,000	530	7,900
	12/23/2013	50.90	44.60	44.57	0.03	54.63	No sample collected - free product present			
	1/2/2014	50.90	44.62	44.59	0.03	54.61	No sample collected - free product present			
SB09	11/6/2013	50.60	42.30	42.18	0.12	55.99	No sample collected - free product present			
	12/23/2013	50.60	44.51	42.60	1.91	53.62	No sample collected - free product present			
	1/2/2014	50.60	47.94	42.26	5.68	50.19	No sample collected - free product present			
SB10	11/6/2013	49.60	42.45	ND	--	55.47	5,300	11,000	560	8,300
	12/23/2013	49.60	41.90	41.82	0.08	56.83	No sample collected - free product present			
	1/2/2014	49.60	44.03	41.98	2.05	54.70	No sample collected - free product present			
SB11	12/2/2013	50.50	39.81	ND	--	NM	<1.0	<1.0	<1.0	<1.0
	12/23/2013	50.50	40.19	ND	--	56.50	NM	NM	NM	NM
SB12	12/2/2013	50.50	49.86	ND	--	NM	<1.0	<1.0	<1.0	<1.0
	12/23/2013	50.50	45.38	ND	--	50.54	NM	NM	NM	NM
SB13	12/2/2013	50.50	44.59	ND	--	NM	<1.0	1.6	1.1	2.5
	12/23/2013	50.50	45.98	ND	--	50.52	NM	NM	NM	NM
SB14	12/2/2013	50.50	40.92	ND	--	NM	6.5	11	<1.0	20
	12/23/2013	50.50	41.39	ND	--	56.84	NM	NM	NM	NM
SB15	12/2/2013	45.30	40.68	40.67	0.01	NM	9,000	24,000	1,300	19,000
	12/23/2013	45.30	41.04	ND	--	56.57	NM	NM	NM	NM
	1/2/2014	45.30	44.07	41.01	3.06	53.54	No sample collected - free product present			
SB16	12/2/2013	44.00	ND	ND	--	NM	No sample collected - no groundwater			
	12/9/2013	44.00	ND	ND	--	NM	No sample collected - no groundwater			
	12/18/2013	44.00	ND	ND	--	NM	No sample collected - no groundwater			
	12/23/2013	44.00	ND	ND	--	NM	No sample collected - no groundwater			
	1/2/2014	44.00	ND	ND	--	NM	No sample collected - no groundwater			
							No sample collected - no groundwater			

TABLE 2 (Continued)

**GROUNDWATER ANALYTICAL RESULTS
FORMER FRI 2-18 TANK BATTERY
ADAMS COUNTY, COLORADO
NOBLE ENERGY, INC.**

Monitoring Well	Date	Total Depth (feet btoc)	Depth to Water (feet btoc)	Depth to Product (feet btoc)	Product Thickness (feet)	Relative Groundwater Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
SB17	12/9/2013	50.40	ND	ND	--	NM	No sample collected - no groundwater			
	12/18/2013	50.40	ND	ND	--	NM	No sample collected - no groundwater			
	12/23/2013	50.40	ND	ND	--	NM	No sample collected - no groundwater			
	1/2/2014	50.40	49.82	ND	--	47.26	<4.0	<4.0	<4.0	<4.0
SB18	12/9/2013	50.40	48.10	ND	--	NM	<1.0	<1.0	<1.0	<1.0
	12/23/2013	50.40	44.30	ND	--	54.18	NM	NM	NM	NM
SB19	12/9/2013	50.50	ND	ND	--	NM	No sample collected - no groundwater			
	12/18/2013	50.50	ND	ND	--	NM	No sample collected - no groundwater			
	12/23/2013	50.50	ND	ND	--	NM	No sample collected - no groundwater			
	1/2/2014	50.50	49.50	ND	--	49.27	<4.0	<4.0	<4.0	<4.0
SB20	12/20/2013	50.52	ND	ND	--	NM	No sample collected - no groundwater			
	12/23/2013	50.52	ND	ND	--	NM	No sample collected - no groundwater			
	1/2/2014	50.52	ND	ND	--	NM	No sample collected - no groundwater			
SB21	12/20/2013	49.95	49.84	49.55	0.29	NM	256,000	3,580,000	307,000	5,040,000
	12/23/2013	49.95	47.10	47.07	0.03	54.42	No sample collected - free product present			
	1/2/2014	49.95	47.41	46.52	0.89	54.11	No sample collected - free product present			
SB22	12/20/2013	50.63	50.43	ND	--	NM	23.6	15.7	9.84	158
	12/23/2013	50.63	ND	ND	--	NM	No sample collected - no groundwater			
SB23	12/20/2013	50.61	49.20	ND	--	NM	9,140	44,800	2,160	51,900
	12/23/2013	50.61	ND	ND	--	NM	No sample collected - no groundwater			
SB24	12/20/2013	50.52	49.10	ND	--	NM	<4.0	<4.0	<4.0	<4.0
	12/23/2013	50.52	48.47	ND	--	55.16	NM	NM	NM	NM
SB25	12/20/2013	50.52	ND	ND	--	NM	No sample collected - no groundwater			
	12/23/2013	50.52	ND	ND	--	NM	No sample collected - no groundwater			
	1/2/2014	50.52	ND	ND	--	NM	No sample collected - no groundwater			
SB26	12/20/2013	50.50	48.51	ND	--	NM	<4.0	<4.0	<4.0	<4.0
	12/23/2013	50.50	43.96	ND	--	55.87	NM	NM	NM	NM
SB27	1/2/2014	50.62	ND	ND	--	NM	No sample collected - no groundwater			
SB28	1/2/2014	51.05	ND	ND	--	NM	No sample collected - no groundwater			
CDPHE WQCC Reg 41							5.0	560	700	1,400

NOTES:

btoc - below top of casing

ND - not detected

NM - not measured

µg/L - micrograms per liter

-- - not applicable

< - indicates result is less than the stated laboratory reporting limit

Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B or 8260C

CDPHE WQCC Reg 41 - Colorado Department of Public Health and Environment-Water Quality Control

Commission Regulation 41-The Basic Standards for Ground Water

ATTACHMENT 1

SOIL BORINGS/WELL COMPLETION DIAGRAMS



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






















LT Environmental, Inc.

**4600 W. 60th Avenue
Arvada, Colorado 80003**

BORING LOG/MONITORING WELL COMPLETION DIAGRAM LEGEND

UNIFIED SOIL CLASSIFICATION SYSTEM

WELL COMPLETION DIAGRAM

Graphic Symbol	Group Symbol	Well Completion Legend	Well Completion
	Topsoil: Topsoil		
	GW: Well-graded gravel or gravel-sand mixtures, little or no fines	Well Casing 	
	GP: Poorly graded gravels or gravel-sand mixtures, little or no fines	Well Screen 	
	GM: Silty gravels, gravel-sand-silt mixtures	Bentonite Seal 	
	GC: Clayey gravels, gravel-sand-clay mixtures	Gravel Pack 	
	SW: Well-graded sands or gravelly sands, little or no fines		
	SP: Poorly graded sands or gravelly sands, little or no fines		
	SM: Silty sands, sand-silt mixtures		
	SC: Clayey sands, sand-clay mixtures		
	ML: Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity		
	CL: Inorganic clays of low to medium plasticity		
	OL: Organic silts and organic silt-clays of low plasticity		
	MH: Inorganis silts, misaceous or diatomaceous fine sandy or silty soils, elastic silts		
	CH: Inorganic clays of high plasticity, fat clays		
	OH: Organic clays of medium to high plasticity, organic silts		
	SPS: Sandstone, clastic sedimentary rock composed primarily of sand sized particles		
	SCS: Sandstone, clastic sedimentary rock composed primarily of sand with clay sized particles		
	CLS: Claystone, clastic sedimentary rock composed primarily of clay sized particles		
	PT: Peat and other highly organic soils		
	Staining: Staining		

Location Map



BORING/WELL NO.: SB01	PROJECT: Fri 2-18
DATE: 10/28/13	PROJECT NO.: 008313095
LOGGED BY: Dan Hosler	DRILLED BY: Site Services
DRILL MTHD: Hollow Stem Auger	SAMPLE MTHD: Continuous

SCREEN TYPE: PVC

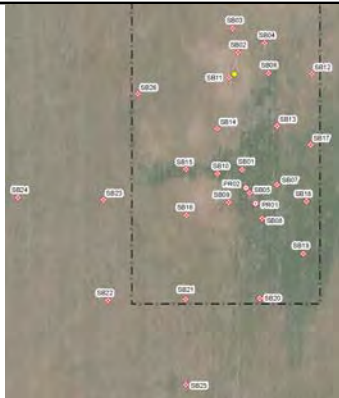
SCREEN SLOT: 0.020"

SAMPLE MTHD: Continuous

SCREEN LENGTH: 10'


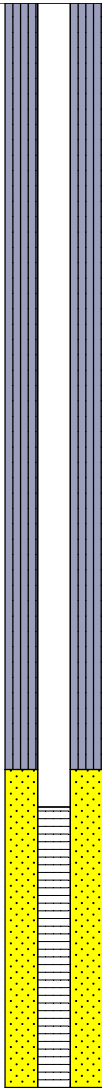


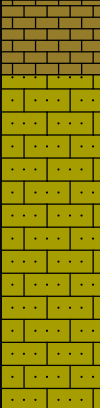
Vapor 0.0 2000.0	(ppm)	Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
						0	CL		CL: Sandy Clay, little gravel, moist, dark brown, low plasticity, low cohesion, no stain, no odor	
						5				
						10	SC		SC: Clayey Sand, fine to coarse grained, some silt and gravel, dry, dark brown, minor stain and odor from 14.5'-15'	
						15	CL		CL: Clay, dry, light brown, hard, crumbly, no stain, no odor	
						20	SC		SC: Clayey Sand, fine to medium grained, dry, light brown, no stain, minor odor from 23'-27'	
						25				
						30	CLS		CLS: Claystone, sandy, fine grained, dry, light brown, hard, crumbly, no stain, no odor	
						35	SCS		SCS: Sandstone, clayey, fine grained, little silt, fine grained, dry, olive to light brown, no stain, moderate odor	
						40	SPS		SPS: Sandstone, medium grained, poorly graded, dry, light brown, no stain, moderate odor	
						45	SCS		SCS: Sandstone, clayey, fine grained, dry, light brown with orange mottles, black stain from 38'-41', moderate odor from 37'-43'	
						50	SPS		SPS: Sandstone, fine to medium grained, dry, light brown, no stain, no odor	
						55	CLS		CLS: Claystone, wet, brown, hard, crumbly, no stain, no odor	
						60			Stickup Height: 24.5"	

Location Map

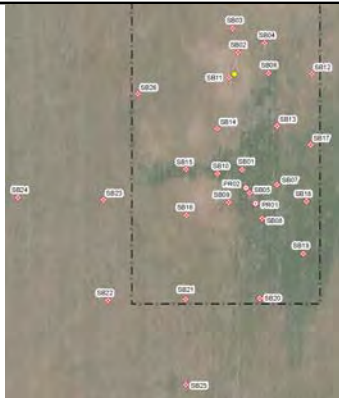


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LT Environmental, Inc.**4600 W. 60th Avenue****Arvada, Colorado 80003****BORING LOG/MONITORING WELL COMPLETION DIAGRAM****BORING/WELL NO.:** SB02**DATE:** 10/28/13**LOGGED BY:** Dan Hosler**DRILL MTHD:** Hollow Stem Auger**PROJECT:** Fri 2-18**PROJECT NO.:** 008313095**DRILLED BY:** Site Services**SAMPLE MTHD:** Continuous**DETECTOR:** UltraRAE 3000**GRAVEL PACK:** Silica Sand**CASING TYPE:** PVC**SCREEN TYPE:** PVC**HOLE DIA.:** 8"**SEAL:** Bentonite**CASING DIA.:** 2"**SCREEN SLOT:** 0.020"**TD:** 58' **DTW:** Not Encountered**GROUT:** NA**CASING LENGTH:** 43'**SCREEN LENGTH:** 15'

Vapor (ppm)		Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0	1000.0									
			Moist	SB02 @38'	3/5	0	CL		CL: Clay, trace to little silt, trace to some sand, moist from 0'-7', dry from 7'-28', medium brown, moderate plasticity, low cohesion, no stain, no odor	
0.00		Dry	5/5		5					
0.00			5/5		10					
0.00			5/5		15					
0.00			5/5		20					
0.00			5/5		25					
0.00			4/5		30	SC		SC: Clayey Sand, fine to medium grained, little gravel, dry, light brown, no stain, no odor		
0.00			2/5		35	SW		SW: Sand, fine to coarse grained, well graded, little clay and gravel, dry, medium brown, no stain, no odor		
347.7			3/5		40	CLS		CLS: Claystone, weathered, some silt, dry, brown with orange mottles, intermittent olive-gray stain, slight odor, hard, blocky		
594.6			3/5		45	SCS			SCS: Sandstone, clayey, fine grained, little silt, partly cemented, dry, light brown, orange mottles from 46'-50', 2" lens of coarse grained sand @49.5', no stain, no odor	
23.98			2/5		50					
0.00			3/5		55					
0.00			2/3							

Location Map



Compliance • Engineering • Remediation

LT Environmental, Inc.**4600 W. 60th Avenue****Arvada, Colorado 80003****BORING LOG/MONITORING WELL COMPLETION DIAGRAM****BORING/WELL NO.:** SB03**DATE:** 10/29/13**LOGGED BY:** Dan Hosler**DRILL MTHD:** Hollow Stem Auger**PROJECT:** Fri 2-18**PROJECT NO.:** 008313095**DRILLED BY:** Site Services**SAMPLE MTHD:** Continuous**DETECTOR:** UltraRAE 3000**GRAVEL PACK:** Silica Sand**CASING TYPE:** PVC**SCREEN TYPE:** PVC**HOLE DIA.:** 8"**SEAL:** Bentonite**CASING DIA.:** 2"**SCREEN SLOT:** 0.020"**TD:** 48' **DTW:** Not Encountered**GROUT:** NA**CASING LENGTH:** 33'**SCREEN LENGTH:** 15'

Vapor (ppm)	Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0 1000.0									
0.00		Moist		4/5	0	CL		CL: Sandy Clay, very fine grained, little silt, moist from 0'-5', dry from 5'-12', medium brown, low plasticity, low cohesion, no stain, no odor	
0.00		Dry		5/5	5				
0.00				5/5	10				
0.00				5/5	15	SC		SC: Clayey Sand, very fine grained, little silt, dry, medium brown, crumbly from 20'-34', sand content and grain size increasing with depth from 25'-34', no stain, no odor	
0.00				5/5	20				
0.00				5/5	25				
0.00				4.5/5	30				
0.00				5/5	35	CLS		CLS: Claystone, some silt, hard, blocky, compacted from 40'-48', dry, brown with orange mottles, no stain, slight odor in 4" lens at 38'	
820.0			SB03 @38'	4/5	40				
14.60				4/5	45				
0.00				3/3	50			Stickup Height: 48.5"	

Location Map



BORING/WELL NO.: SB04
DATE: 10/29/13
LOGGED BY: Dan Hosler
DRILL MTHD: Hollow Stem Auger

PROJECT: Fri 2-18
PROJECT NO.: 008313095
DRILLED BY: Site Services
SAMPLE MTHD: Continuous

TD: 48' **DTW: 45'**

GROUT: NA

CASING LENGTH: 33'

SCREEN LENGTH: 15'

Vapor (ppm)		Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0	1000.0									

Location Map



BORING/WELL NO.: SB05	PROJECT: Fri 2-18
DATE: 11/01/13	PROJECT NO.: 008313095
LOGGED BY: Chris Roy	DRILLED BY: Site Services
DRILL MTHD: Hollow Stem Auger	SAMPLE MTHD: Continuous
HOLE DIA.: 8"	TD: 48' DTW: Not Encountered
SEAL: Bentonite	GROUT: NA
CASING DIA.: 2"	CASING LENGTH: 33'
SCREEN SLOT: 0.020"	SCREEN LENGTH: 15'

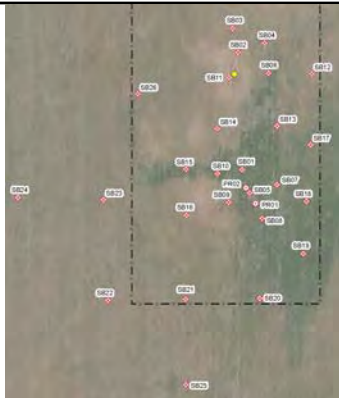
SCREEN TYPE: PVC

SCREEN SLOT: 0.020"

SCREEN LENGTH: 15'

Vapor (ppm)		Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0	2000.0									
						0	SC		SC: Clayey Sand, trace gravel, moist from 0'-5', dry from 5'-14', dark brown, no stain, no odor	
0.00			Dry		4/5	5				
0.00					2/5	10				
0.00					5/5	15	ML		ML: Clayey Silt, trace sand, moist, orange-brown, no stain, no odor	
0.00			Moist		4/5	20	CL		CL: Silty and Sandy Clay, most, orange-brown, no stain, no odor	
0.00					3/5	25	SC		SC: Clayey Sand, fine to medium grained, dry, light brown, no stain, no odor	
0.00			Dry		3/5	30	SP		SP: Sand, fine grained, poorly graded, dry, light brown, no stain, strong odor	
17.10				SB05 @34'	3.5/5	35	SPS		SPS: Sandstone, dry, olive/blue-gray from 33.5'-38', medium brown from 38'-39', stain from 39'-42.5', strong odor	
694.3					5/5	40				
1,028					5/5	45	CLS		CLS: Claystone, dry, gray-blue with orange mottles, no stain, moderate odor from 42.5'-46'	
1,356				SB05 @44'	3/3					
1,211										
946.9				SB05 @48'						
502.3										
713.6										
728.0										
1,239										
701.9										
322.5										
3.60									Stickup Height: 22"	
						50				

Location Map

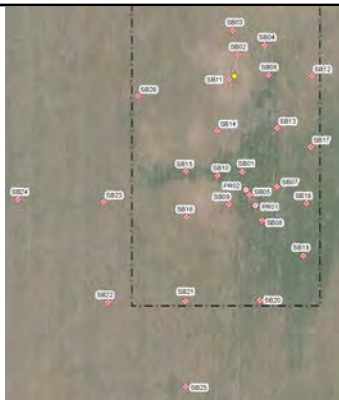


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LT Environmental, Inc.**4600 W. 60th Avenue****Arvada, Colorado 80003****BORING LOG/MONITORING WELL COMPLETION DIAGRAM****BORING/WELL NO.:** SB06**DATE:** 11/01/13**LOGGED BY:** Chris Roy**DRILL MTHD:** Hollow Stem Auger**PROJECT:** Fri 2-18**PROJECT NO.:** 008313095**DRILLED BY:** Site Services**SAMPLE MTHD:** Continuous**DETECTOR:** UltraRAE 3000**GRAVEL PACK:** Silica Sand**CASING TYPE:** PVC**SCREEN TYPE:** PVC**HOLE DIA.:** 8"**SEAL:** Bentonite**CASING DIA.:** 2"**SCREEN SLOT:** 0.020"**TD:** 48' **DTW:** Not Encountered**GROUT:** NA**CASING LENGTH:** 33'**SCREEN LENGTH:** 15'

Vapor (ppm)	Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0 3000.0									
					0	CL		CL: Silty and Sandy Clay, most, light brown, no stain, no odor	
0.00		Moist		5/5	5	SM		SM: Silty Sand, trace clay, dry, light brown, no stain, no odor	
0.00		Dry		5/5	10	SP		SP: Sand, hard, dry, light brown with white mottles, no stain, no odor	
0.00				5/5	15				
3.00				5/5	20	SC		SC: Clayey Sand, dry from 19'-29', moist from 29'-34', olive brown and light brown, moderately hard, no stain, no odor	
4.45				5/5	25				
17.15				5/5	30				
0.00		Moist		5/5	35	ML		ML: Clayey Silt, little sand, clay content increasing with depth, moist, olive-brown, intermittent stained layers from 37.5'-38.5', slight odor	
0.00				5/5	40	SP		SP: Sand, poorly graded, dry, orange-brown, no stain, no odor	
53.75			SB06 @38.5'	5/5	45	CL		CL: Sandy Clay, hard, dry, olive-brown, no stain, no odor	
809.6		Dry		5/5	48	ML		ML: Silt, trace clay and sand, dry from 43.5'-44', moist from 44'-48', olive-brown, no stain, no odor	
2,142				3/3	50				
19.30		Moist	SB06 @48'						

Location Map

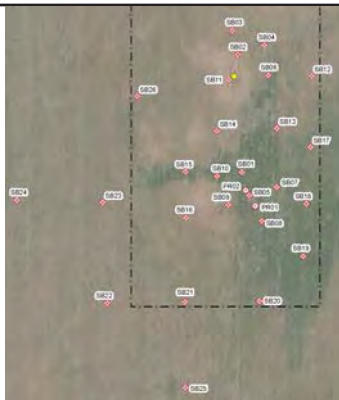


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LT Environmental, Inc.**4600 W. 60th Avenue****Arvada, Colorado 80003****BORING LOG/MONITORING WELL COMPLETION DIAGRAM****BORING/WELL NO.:** SB07**DATE:** 11/04/13**LOGGED BY:** Dan Hosler**DRILL MTHD:** Hollow Stem Auger**PROJECT:** Fri 2-18**PROJECT NO.:** 008313095**DRILLED BY:** Site Services**SAMPLE MTHD:** Continuous**DETECTOR:** UltraRAE 3000**GRAVEL PACK:** Silica Sand**CASING TYPE:** PVC**SCREEN TYPE:** PVC**HOLE DIA.:** 8"**SEAL:** Bentonite**CASING DIA.:** 2"**SCREEN SLOT:** 0.020"**TD:** 47'**DTW:** Not Encountered**GROUT:** NA**CASING LENGTH:** 32'**SCREEN LENGTH:** 15'

Vapor (ppm)		Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0	2000.0									
			Moist			0	CL		CL: Sandy Clay, fine grained, moist, dark brown turnign to medium brown with depth, low plasticity, low cohesion, no stain, no odor	
	0.00				2/5					
	0.00					5				
	0.00				5/5					
	0.00					10				
	0.00				5/5		SC		SC: Clayey Sand, very fine grained, clay content decreasing with depth, dry, hard, crumbly, moist from 11'-18', dry from 18'-25', light brown, no stain, no odor	
	0.00					15				
	0.00		Dry		5/5					
	0.00					20				
	0.00				5/5					
	0.00					25	SW		SW: Sand, fine to coarse grained, well graded, little silt, little to some gravel, dry, medium brown, no stain, no odor	
	0.00				3/5					
	43.5			SB07 @32'	4/5	30	SP		SP: Sand, fine to medium grained, grain size increasing with depth, poorly graded, little clay, dry, orange-brown turning to light brown, no stain, moderate odor from 30'-35'	
	1,430					35				
	1,319									
	1,071									
	198.0			SB07 @37'	5/5		CLS		CLS: Claystone, sandy, very fine grained, dry, olive-brown with orange mottles, hard, crumbly, no stain, no odor	
	0.00					40				
	0.00				5/5					
	0.00					45				
	0.00				2/2					
	0.00								Stickup Height: 27.5"	

Location Map



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LT Environmental, Inc.**4600 W. 60th Avenue****Arvada, Colorado 80003****BORING LOG/MONITORING WELL COMPLETION DIAGRAM****BORING/WELL NO.:** SB08**DATE:** 11/04/13**LOGGED BY:** Dan Hosler**DRILL MTHD:** Hollow Stem Auger**PROJECT:** Fri 2-18**PROJECT NO.:** 008313095**DRILLED BY:** Site Services**SAMPLE MTHD:** Continuous**DETECTOR:** UltraRAE 3000**GRAVEL PACK:** Silica Sand**CASING TYPE:** PVC**SCREEN TYPE:** PVC**HOLE DIA.:** 8"**SEAL:** Bentonite**CASING DIA.:** 2"**SCREEN SLOT:** 0.020"**TD:** 48' **DTW:** Not Encountered**GROUT:** NA**CASING LENGTH:** 33'**SCREEN LENGTH:** 15'

Vapor (ppm)	Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0 2000.0									
0.00		Moist		4/5	0	CL		CL: Sandy Clay, very fine grained, unconsolidated from 0'-6', moist from 0'-6', dry from 6'-20', dark brown turning to medium brown, hard from 10'-20', crumbly from 15'-20', low plasticity, low cohesion, no stain, no odor	
0.00		Dry		5/5	5				
0.00				5/5	10				
0.00				5/5	15				
0.00				5/5	20	SC		SC: Clayey Sand, fine to medium grained, grain size increasing with depth, trace gravel, dry from 20'-25', moist from 25'-30', dry from 30'-33', light brown, no stain, no odor	
0.00		Moist		5/5	25				
0.00				5/5	30				
15.00		Dry		5/5	35	SP		SP: Sand, very fine grained, poorly graded, little clay, dry, orange-brown, no stain, slight odor from 35'-40'	
333.0			SB08 @37'	3/5	40	CLS		CLS: Claystone, sandy, dry, olive-brown with orange mottles, soft, crumbly, no stain, no odor	
1,749				4/5	45				
662.8			SB08 @44'	3/3					
239.9									
18.36									
0.00									
0.00									
								Stickup Height: 22.75"	
					50				

Location Map



BORING/WELL NO.: SB09	PROJECT: Fri 2-18
DATE: 11/05/13	PROJECT NO.: 008313095
LOGGED BY: Dan Hosler	DRILLED BY: Site Services
DRILL MTHD: Hollow Stem Auger	SAMPLE MTHD: Continuous
HOLE DIA.: 8"	TD: 48' DTW: Not Encountered
SEAL: Bentonite	GROUT: NA
CASING DIA.: 2"	CASING LENGTH: 33'
SCREEN SLOT: 0.020"	SCREEN LENGTH: 15'

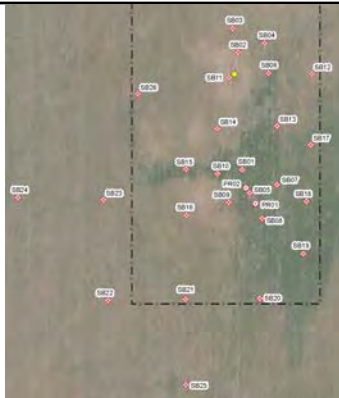
SCREEN TYPE: PVC

SCREEN SLOT: 0.020"

SCREEN LENGTH: 15'

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Location Map

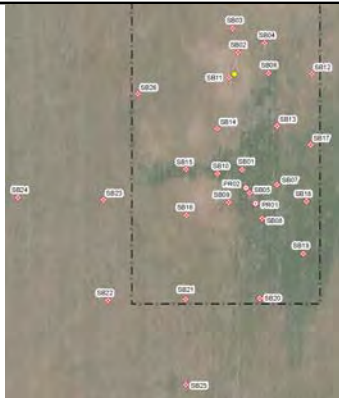


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LT Environmental, Inc.**4600 W. 60th Avenue****Arvada, Colorado 80003****BORING LOG/MONITORING WELL COMPLETION DIAGRAM****BORING/WELL NO.:** SB10**DATE:** 11/05/13**LOGGED BY:** Dan Hosler**DRILL MTHD:** Hollow Stem Auger**PROJECT:** Fri 2-18**PROJECT NO.:** 008313095**DRILLED BY:** Site Services**SAMPLE MTHD:** Continuous**DETECTOR:** UltraRAE 3000**GRAVEL PACK:** Silica Sand**CASING TYPE:** PVC**SCREEN TYPE:** PVC**HOLE DIA.:** 8"**SEAL:** Bentonite**CASING DIA.:** 2"**SCREEN SLOT:** 0.020"**TD:** 48'**DTW:** Not Encountered**GROUT:** NA**CASING LENGTH:** 33'**SCREEN LENGTH:** 15'

Vapor (ppm)	Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0 3000.0									
0.00		Moist		2/5	0	CL		CL: Sandy Clay, trace gravel, unconsolidated, moist, dark brown, no stain, no odor	
0.00				2/5	5				
0.00				2/5	10				
0.00				5/5	15			CL: Sandy Clay, very fine grained, moist, medium brown, moderate plasticity, low cohesion, crumbly from 15'-20', no stain, no odor	
0.00				4/5	20				
0.00		Dry		5/5	25	SC		SC: Clayey Sand, fine grained, trace gravel from 30'-34', dry, light brown, no stain, no odor	
0.00				5/5	30				
0.00				3/5	35	SP		SP: Sand, fine grained, poorly graded, dry, orange-brown, no stain, slight odor	
396.8			SB10 @37'	3/5	40	CLS		CLS: Claystone, sandy, sand content increasing with depth, dry, olive-brown with orange mottles, hard, crumbly, stain and odor from 43'-44'	
2,037				3/5	45				
1,560				1/3	50	SPS		SPS: Sandstone, fine grained, poorly graded, cemented, dry, no stain, no odor	
939.7								Stickup Height: 22.75"	
178.0									
4.20			SB10 @48'						

Location Map



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LT Environmental, Inc.**4600 W. 60th Avenue****Arvada, Colorado 80003****BORING LOG/MONITORING WELL COMPLETION DIAGRAM****BORING/WELL NO.:** SB11**DATE:** 11/25/13**LOGGED BY:** Chris Roy**DRILL MTHD:** Hollow Stem Auger**PROJECT:** Fri 2-18**PROJECT NO.:** 008313095**DRILLED BY:** Site Services**SAMPLE MTHD:** Continuous**DETECTOR:** UltraRAE 3000**GRAVEL PACK:** Silica Sand**CASING TYPE:** PVC**SCREEN TYPE:** PVC**HOLE DIA.:** 8"**SEAL:** Bentonite**CASING DIA.:** 2"**SCREEN SLOT:** 0.020"**TD:** 48'**DTW:** Not Encountered**GROUT:** NA**CASING LENGTH:** 33'**SCREEN LENGTH:** 15'

Vapor (ppm)	Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0 1000.0									
0.00		Dry		3/5	0	CL		CL: Sandy clay, fine grained, light brown, dry, moderate cohesion, moderate plasticity, no odor	
0.00				5/5	5	SC		SC: Clayey sand, fine grained, medium brown with light brown mottles, dry, no odor	
0.00				5/5	10				
0.00				2.5/5	15			SC: Clayey sand, trace gravel, light brown, dry, no odor	
0.00				5/5	20			SC: Clayey sand, fine grained, some silt, olive-brown, dry, no odor	
0.00				4/5	25	ML		ML: Silty sand, fine grained, little clay, olive-brown, dry, slightly moist at 25', no odor	
0.00		Slight Moist		3.5/5	30				
0.00				3.5/5	35	CL		CL: Clay, olive-brown, moist, some staining with slight odor at 34'-36'	
255.7			SB11 @35'	3.5/5	40	CLS		CLS: Claystone, olive-brown, minor stain, slight odor	
151.6			SB11 @38'	5/5	45	SPS		SPS: Sandstone, orange-brown, moist, no odor	
0.00				3/3	50				
0.00								Stickup Height: 27"	

Location Map

The map displays a grid of 23 numbered points, each marked with a red diamond. The points are distributed across a textured, brownish-green background. A dashed black line outlines a central rectangular area. A north arrow is positioned to the left of the map, pointing upwards.

Points are labeled as follows:

- 0001, 0002, 0003, 0004, 0005, 0006, 0007, 0008, 0009, 0010, 0011, 0012, 0013, 0014, 0015, 0016, 0017, 0018, 0019, 0020, 0021, 0022, 0023



BORING/WELL NO.: SB12	PROJECT: Fri 2-18
DATE: 11/25/13-11/26/13	PROJECT NO.: 008313095
LOGGED BY: Chris Roy	DRILLED BY: Site Services
DRILL MTHD: Hollow Stem Auger	SAMPLE MTHD: Continuous
HOLE DIA.: 8"	TD: 48' DTW: Not Encountered
SEAL: Bentonite	GROUT: NA
CASING DIA.: 2"	CASING LENGTH: 33'
SCREEN SLOT: 0.020"	SCREEN LENGTH: 15'

SCREEN TYPE: PVC

SCREEN SLOT: 0.020"

SCREEN LENGTH: 15'

Vapor (ppm)		Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0	1000.0									
<div> <div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> </div> <div> <div>0</div> <div>5</div> <div>10</div> <div>15</div> <div>20</div> <div>25</div> <div>30</div> <div>35</div> <div>40</div> <div>45</div> <div>50</div> </div> <div> <div>CL</div> <div>SP</div> <div>SP</div> <div>SP</div> <div>CL</div> <div>CLS</div> <div></div> </div> <div> <div>CL: Sandy clay, medium brown, dry, no odor</div> <div>SP: Sand, fine grained, medium brown, dry, no odor</div> <div>SP: Sand, fine grained, medium brown, dry, very hard, no odor</div> <div>SP: Sand, fine grained, trace silt, trace clay, clay content increase with depth, light brown, dry, no odor</div> <div>CL: Clay, olive-brown, dry, blocky, no odor</div> <div>CLS: Claystone, occasional micaceous sand at 37'-38', olive-brown, dry, orange mottles, hard, crumbly, low plasticity, low-moderate cohesion, no odor</div> <div>Stickup Height: 23"</div> </div> </div>										

Location Map



BORING/WELL NO.: SB13
DATE: 11/26/13
LOGGED BY: Chris Roy
DRILL MTHD: Hollow Stem Auger

PROJECT: Fri 2-18
PROJECT NO.: 008313095
DRILLED BY: Site Services
SAMPLE MTHD: Continuous

TD: 48' **DTW:** Not Encountered

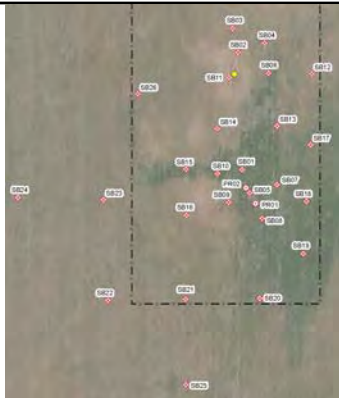
GROUT: NA

CASING LENGTH: 33'

SCREEN LENGTH: 15'

[illegible]

Location Map



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LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

BORING/WELL NO.: SB14

DATE: 11/26/13

LOGGED BY: Chris Roy

DRILL MTHD: Hollow Stem Auger

PROJECT: Fri 2-18

PROJECT NO.: 008313095

DRILLED BY: Site Services

SAMPLE MTHD: Continuous

DETECTOR: UltraRAE 3000

GRAVEL PACK: Silica Sand

CASING TYPE: PVC

SCREEN TYPE: PVC

HOLE DIA.: 8"

SEAL: Bentonite

CASING DIA.: 2"

SCREEN SLOT: 0.020"

TD: 48'

DTW: Not Encountered

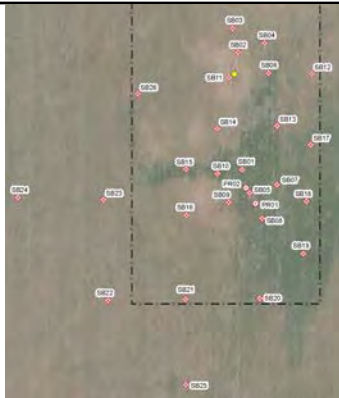
GROUT: NA

CASING LENGTH: 33'

SCREEN LENGTH: 15'

Vapor (ppm)		Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0	1000.0									
			Dry			0	CL		CL: Silty clay, light brown, dry, very plastic, very cohesive, no odor	
0.00					5/5	5			CL: Sandy clay, light brown, dry, moderate plastic, moderate cohesion, no odor	
0.00					5/5	10	SC		SC: Clayey sand, light brown, dry, very hard, no odor	
0.00					5/5	15	SP		SP: Sand, fine grained, light brown with brown mottles, no odor	
0.00					5/5	20				
0.00					5/5	25				
0.00					5/5	30	SC		SC: Sand, fine grained, some clay, light brown with brown mottles, dry, hard, no odor	
0.00					5/5	35				
0.00					5/5	40	SP		SP: Sand, fine grained, light brown, moist, no odor	
0.00					5/5	45				
379.4			Moist	SB14 @34'	5/5	50	SPS		SPS: Sandstone, olive-brown to orange-brown, hard, moist, slight odor	
314.9				SB14 @38'	5/5				SPS: Sandstone, orange-brown, moist, hard, platy, no odor	
0.00					5/5					
0.00					3/3					
0.00									Stickup Height: 24"	

Location Map



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LT Environmental, Inc.**4600 W. 60th Avenue****Arvada, Colorado 80003****BORING LOG/MONITORING WELL COMPLETION DIAGRAM****BORING/WELL NO.:** SB15**DATE:** 11/27/13**LOGGED BY:** Daniel Hosler**DRILL MTHD:** Hollow Stem Auger**PROJECT:** Fri 2-18**PROJECT NO.:** 008313095**DRILLED BY:** Site Services**SAMPLE MTHD:** Continuous**DETECTOR:** UltraRAE 3000**GRAVEL PACK:** Silica Sand**CASING TYPE:** PVC**SCREEN TYPE:** PVC**HOLE DIA.:** 8"**SEAL:** Bentonite**CASING DIA.:** 2"**SCREEN SLOT:** 0.020"**TD:** 46'**DTW:** Not Encountered**GROUT:** NA**CASING LENGTH:** 31'**SCREEN LENGTH:** 15'

Vapor (ppm)	Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0 3000.0									
					0				
0.00		Dry		2/5	5	CL		CL: Topsoil, sandy clay, some gravel, dark brown, dry, no odor Little recovery at 5'-10'	
0.00				1/5	10			CL: Sandy clay, very fine grained, light brown, dry, low plasticity, low cohesion, no odor	
0.00				5/5	15			CL: Sandy clay, very fine grained, light brown, dry, hard, crumbly, no odor	
0.00				5/5	20			CL: Sandy clay, some silt, very fine grained, light brown, dry, hard, crumbly, no odor	
0.00				5/5	25	SC		SC: Clayey sand, very fine-fine grained, light brown, dry, moist @ 30', no odor	
0.00		Moist		5/5	30				
0.00				4/5	35	SW		SW: Sand, fine-coarse grained, some gravel, little clay, light brown, dry, well graded, no odor	
52.60		Dry	SB15 @36'	4/5	40	SP		SP: Sand, fine grained, some medium grained, light brown, some orange oxydation staining, dry, poorly graded, no odor	
19.50				4/5	45			SPS: Sandstone, fine-medium grained, white-light brown, cemented, poorly graded, no odor	
4.10			SB15 @41'	1/1	46	SPS		Refusal at 46' Stickup: 0.0"	
2.90					50				

Location Map



BORING/WELL NO.: SB16	PROJECT: Fri 2-18
DATE: 11/27/13	PROJECT NO.: 008313095
LOGGED BY: Daniel Hosler	DRILLED BY: Site Services
DRILL MTHD: Hollow Stem Auger	SAMPLE MTHD: Continuous
HOLE DIA.: 8"	TD: 42' DTW: Not Encountered
SEAL: Bentonite	GROUT: NA
CASING DIA.: 2"	CASING LENGTH: 27'
SCREEN SLOT: 0.020"	SCREEN LENGTH: 15'

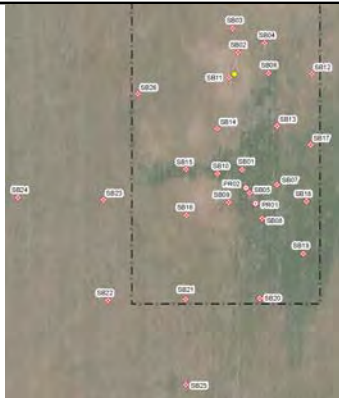
SCREEN TYPE: PVC

SCREEN SLOT: 0.020"

SCREEN LENGTH: 15'

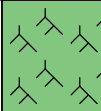
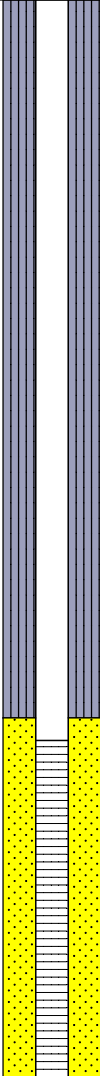


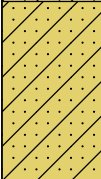



Vapor (ppm)		Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0	3000.0									
<p>The log displays a soil profile from 0 to 60 feet depth. The soil types identified are CL (Clay), SC (Sandy Clay), SW (Sand), SP (Silt), and SPS (Sandstone). The lithology descriptions provide detailed information about the soil's composition, grain size, and behavior. The well construction shows a 4-inch diameter casing with a 2-inch diameter hole, and a refusal at 42 feet.</p>										

Location Map

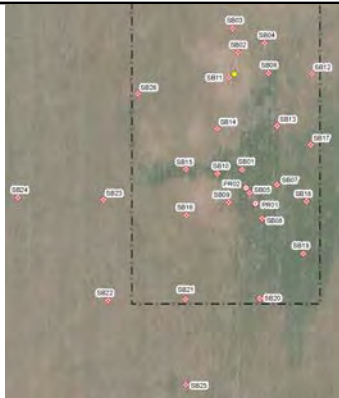


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LT Environmental, Inc.**4600 W. 60th Avenue****Arvada, Colorado 80003****BORING LOG/MONITORING WELL COMPLETION DIAGRAM****BORING/WELL NO.:** SB17**DATE:** 12/2/13**LOGGED BY:** Daniel Hosler**DRILL MTHD:** Hollow Stem Auger**PROJECT:** Fri 2-18**PROJECT NO.:** 008313095**DRILLED BY:** Site Services**SAMPLE MTHD:** Continuous**DETECTOR:** UltraRAE 3000**GRAVEL PACK:** Silica Sand**CASING TYPE:** PVC**SCREEN TYPE:** PVC**HOLE DIA.:** 8"**SEAL:** Bentonite**CASING DIA.:** 2"**SCREEN SLOT:** 0.020"**TD:** 48' **DTW:** Not Encountered**GROUT:** NA**CASING LENGTH:** 33'**SCREEN LENGTH:** 15'

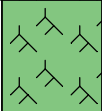
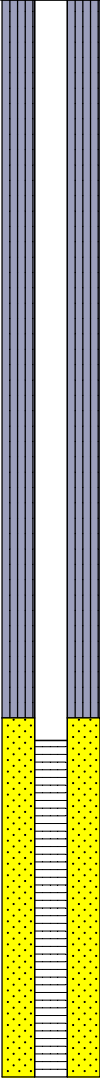
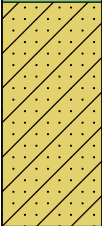
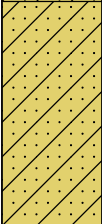
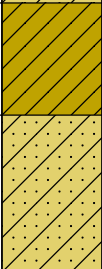

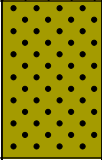
Vapor (ppm)		Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0	1000.0									
<div></div>										
			Dry			0	CL		Topsoil: Topsoil, silty clay, some fine grained sand, medium brown, dry, no odor	
0.00				3/5	5				CL: Silty clay, some very fine grained sand, light brown, dry, low plasticity, low cohesion, no odor	
0.00				4/5	10					
0.00					4/5	15	SC		SC: Clayey sand, very fine grained, light brown, dry, no odor	
0.00				5/5	20				SC: Clayey sand, very fine grained, light brown, dry, hard, crumbly, caliche observed, no odor	
0.00				3/5	25					
0.00					5/5	30	CL		CL: Silty clay, some very fine grained sand, gray-brown, hard, crumbly, low cohesion, no odor	
0.00				5/5	35				CL: Silty clay, gray-brown, some orange oxydation staining, hard, crumbly, low cohesion, no odor	
0.00				5/5	40					
0.00					4/5	45			CL: Silty clay, some very fine grained sand, medium brown with orange oxydation staining, hard, crumbly, low cohesion, no odor	
0.00				3/3		50			Stickup:24"	

Location Map



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LT Environmental, Inc.**4600 W. 60th Avenue****Arvada, Colorado 80003****BORING LOG/MONITORING WELL COMPLETION DIAGRAM****BORING/WELL NO.:** SB18**DATE:** 12/2/13**LOGGED BY:** Daniel Hosler**DRILL MTHD:** Hollow Stem Auger**PROJECT:** Fri 2-18**PROJECT NO.:** 008313095**DRILLED BY:** Site Services**SAMPLE MTHD:** Continuous**DETECTOR:** UltraRAE 3000**GRAVEL PACK:** Silica Sand**CASING TYPE:** PVC**SCREEN TYPE:** PVC**HOLE DIA.:** 8"**SEAL:** Bentonite**CASING DIA.:** 2"**SCREEN SLOT:** 0.020"**TD:** 48' **DTW:** Not Encountered**GROUT:** NA**CASING LENGTH:** 33'**SCREEN LENGTH:** 15'

Vapor (ppm)		Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction	
0.0	1000.0										
			Dry			0	SC		Topsoil: Topsoil, clayey sand, fine grained, dark brown, dry, no odor		
0.00					2/5	5			SC: Clayey sand, very fine grained, coarsening grain size with depth, sand content increase with depth, medium brown, dry, caliche observed at 10', no odor		
0.00					2/5	10					
0.00					2/5	15		SC: Clayey sand, fine grained, clay content decrease with depth, medium brown, dry, crumbly, caliche observed, no odor			
0.00					4/5	20					
0.00					4.5/5	25	CL		CL: Sandy clay, very fine grained, little silt, medium brown with orange oxydation staining, slightly moist, crumbly, low plasticity, low cohesion, no odor		
0.00		Slight Moist			2/5	30					
0.00			Dry			35	SC		SC: Clayey sand, fine grained, medium brown with orange oxydation staining, dry, hard, crumbly, no odor		
0.00					5/5	40					
0.00					5/5	45	CL		CL: Sandy clay, very fine grained, light brown with orange oxydation staining, slightly moist, moderate plasticity, low cohesion, no odor		
0.00		Slight Moist			5/5	50					
0.00				SB18 @40'			SPS		SPS: Weathered sandstone, fine grained, intermittent clay layers, medium brown with orange oxydation staining, dry, no odor		
0.00					3/3						
0.00									Stickup:25"		

Location Map



BORING/WELL NO.: SB19
DATE: 12/3/13
LOGGED BY: Daniel Hosler
DRILL MTHD: Hollow Stem Auger

PROJECT: Fri 2-18
PROJECT NO.: 008313095
DRILLED BY: Site Services
SAMPLE MTHD: Continuous

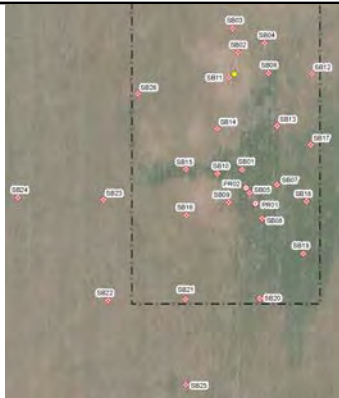
TD: 48' **DTW:** Not Encountered

GROUT: NA

CASING LENGTH: 33'

SCREEN LENGTH: 15'

[illegible]

Location Map


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LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, Colorado 80003
BORING LOG/MONITORING WELL COMPLETION DIAGRAM
BORING/WELL NO.: SB20

DATE: 12/16/13

LOGGED BY: Daniel Hosler

DRILL MTHD: Hollow Stem Auger

PROJECT: Fri 2-18

PROJECT NO.: 008313095

DRILLED BY: Site Services

SAMPLE MTHD: Continuous

DETECTOR: UltraRAE 3000

GRAVEL PACK: Silica Sand

CASING TYPE: PVC

SCREEN TYPE: PVC

HOLE DIA.: 8"

SEAL: Bentonite

CASING DIA.: 2"

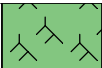
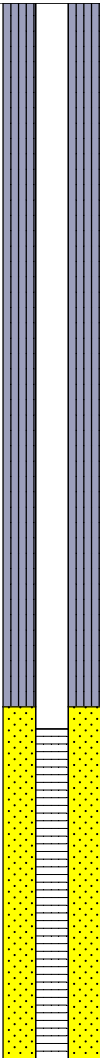
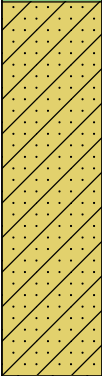
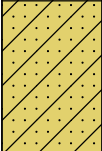

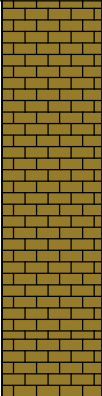
SCREEN SLOT: 0.020"

TD: 48' **DTW:** Not Encountered

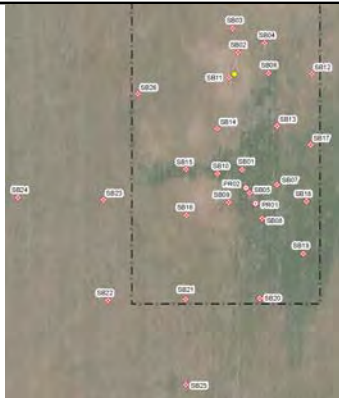
GROUT: NA

CASING LENGTH: 33'

SCREEN LENGTH: 15'

Vapor (ppm)		Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0	1000.0									
<div></div>										
			Dry			0	SC		Topsoil: Clayey sand, fine grained, dry, medium brown, some organics, no odor	
0.00				3/5	3				SC: Clayey sand, fine grained, dry, medium brown, caliche observed at 8', no odor	
0.00				5/5	5					
0.00				4/5	10					
0.00				5/5	15					
0.00				5/5	20			SC: Clayey sand, fine grained, increase in clay content with depth, dry, medium brown, caliche observed at 8', no odor		
0.00				5/5	25					
0.00				5/5	30	CL		CL: Clay, some sand, little silt, dry, gray-brown, some orange oxydation staining, low plasticity, low cohesion, no odor		
0.00				5/5	35	CLS		CLS: Claystone, some sand, dry, gray-brown with orange oxydation staining, hard, crumbly, no odor		
0.50			SB20 @35'	4.5/5	40					
0.00				5/5	45					
0.10				3/3	48					
0.00					50					
									Stickup: 2.0'	

Location Map



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LT Environmental, Inc.**4600 W. 60th Avenue****Arvada, Colorado 80003****BORING LOG/MONITORING WELL COMPLETION DIAGRAM****BORING/WELL NO.:** SB21**DATE:** 12/16/13**LOGGED BY:** Daniel Hosler**DRILL MTHD:** Hollow Stem Auger**PROJECT:** Fri 2-18**PROJECT NO.:** 008313095**DRILLED BY:** Site Services**SAMPLE MTHD:** Continuous**DETECTOR:** UltraRAE 3000**GRAVEL PACK:** Silica Sand**CASING TYPE:** PVC**SCREEN TYPE:** PVC**HOLE DIA.:** 8"**SEAL:** Bentonite**CASING DIA.:** 2"**SCREEN SLOT:** 0.020"**TD:** 46' **DTW:** Not Encountered**GROUT:** NA**CASING LENGTH:** 31'**SCREEN LENGTH:** 15'

Vapor (ppm)	Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0 2000.0									
					0	CL		Topsoil: Sandy clay, very fine grained, dry, medium brown, moderate plasticity, moderate cohesion, no odor	
0.00				2/5	5	SC		SC: Clayey sand, very fine grained, dry, medium brown, hard, tight, caliche observed at 9', no odor	
0.00				5/5	10				
0.00				5/5	15				
0.00				5/5	20				
0.00				5/5	25	CL		CL: Clay, little sand, dry, gray-brown, some orange oxydation staining, hard, crumbly, low cohesion, no odor	
0.00				5/5	30				
0.30				5/5	35	CLS		CLS: Claystone, some fine sand, intermittent fine sandy clay layers, dry, gray-brown with orange oxydation staining, no odor	
0.10				5/5	40	SPS		SPS: Sandstone, fine grained, dry, white-light brown, orange oxydation staining, poorly graded, moderate odor at 37'-46'	
0.00				5/5	45				
52.15				4/5					
1,098				1/1					
1,213									
1,394									
								Stickup: 24" Refusal at 46'	
					50				

Location Map



BORING/WELL NO.: SB22	PROJECT: Fri 2-18
DATE: 12/17/13	PROJECT NO.: 008313095
LOGGED BY: Daniel Hosler	DRILLED BY: Site Services
DRILL MTHD: Hollow Stem Auger	SAMPLE MTHD: Continuous
HOLE DIA.: 8"	TD: 48' DTW: Not Encountered
SEAL: Bentonite	GROUT: NA
CASING DIA.: 2"	CASING LENGTH: 33'
SCREEN SLOT: 0.020"	SCREEN LENGTH: 15'

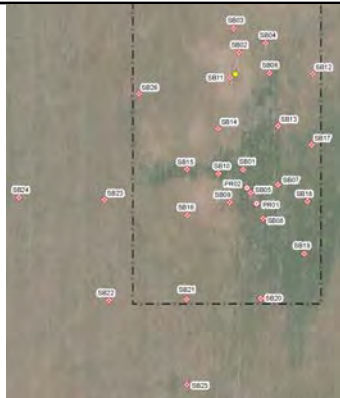
SCREEN TYPE: PVC

SCREEN SLOT: 0.020"

SCREEN LENGTH: 15'

Vapor (ppm)		Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0	1000.0									

Location Map



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LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

BORING/WELL NO.: SB23

DATE: 12/17/13

LOGGED BY: Daniel Hosler

DRILL MTHD: Hollow Stem Auger

PROJECT:Fri 2-18

PROJECT NO.: 008313095

DRILLED BY: Site Services

SAMPLE MTHD: Continuous

DETECTOR: UltraRAE 3000

GRAVEL PACK: Silica Sand

CASING TYPE: PVC

SCREEN TYPE: PVC

HOLE DIA.:8"

SEAL: Bentonite

CASING DIA.: 2"

SCREEN SLOT: 0.020"

TD: 48' **DTW: 33'**

GROUT: NA

CASING LENGTH: 33'

SCREEN LENGTH: 15'

[illegible]

Location Map



BORING/WELL NO.: SB24	PROJECT: Fri 2-18
DATE: 12/18/13	PROJECT NO.: 008313095
LOGGED BY: Chris Roy	DRILLED BY: Site Services
DRILL MTHD: Hollow Stem Auger	SAMPLE MTHD: Continuous
HOLE DIA.: 8"	TD: 48' DTW: Not Encountered
SEAL: Bentonite	GROUT: NA
CASING DIA.: 2"	CASING LENGTH: 33'
SCREEN SLOT: 0.020"	SCREEN LENGTH: 15'

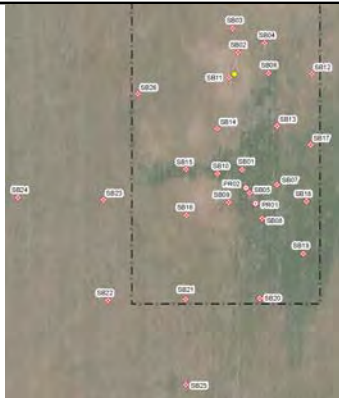
SCREEN TYPE: PVC

SCREEN SLOT: 0.020"

SCREEN LENGTH: 15'

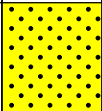
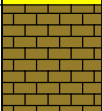
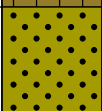
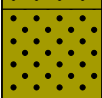
Vapor (ppm)		Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0	1000.0									
<div> <div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> <div>0.00</div> </div> <div> <div>0</div> <div>5</div> <div>10</div> <div>15</div> <div>20</div> <div>25</div> <div>30</div> <div>35</div> <div>40</div> <div>45</div> <div>50</div> </div> <div> <div>CL</div> <div>CL</div> <div>SP</div> <div>CLS</div> <div>CLS</div> <div>SPS</div> <div></div> </div> <div> <div>CL: Silty Clay, dry, light brown, no stain, no odor</div> <div>CL: Sandy Clay, dry, medium brown with light brown mottles, no stain, no odor</div> <div>SP: Sand, fine grained, dry, light brown with occasional white mottles, hard, no stain, no odor, poorly graded</div> <div>CLS: Claystone, weathered, dry, olive with orange and white mottles, blocky, no stain, no odor</div> <div>CLS: Claystone, weathered turning to competent @36', dry, olive-blue, 4-inch lens of orange-dark borwn sandstone @38', no stain, no odor</div> <div>SPS: Sandstone, fine grained, dry, moist @46', yellow-brown, no stain, no odor</div> <div>Stickup Height: 25"</div> </div> </div>										

Location Map

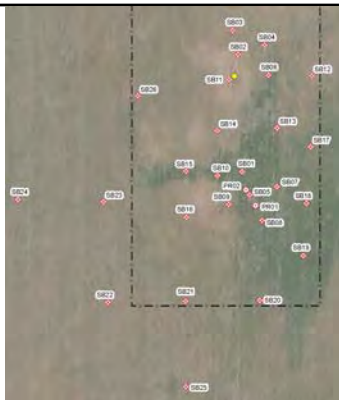


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LT Environmental, Inc.**4600 W. 60th Avenue****Arvada, Colorado 80003****BORING LOG/MONITORING WELL COMPLETION DIAGRAM****BORING/WELL NO.:** SB25**DATE:** 12/18/13**LOGGED BY:** Chris Roy**DRILL MTHD:** Hollow Stem Auger**PROJECT:** Fri 2-18**PROJECT NO.:** 008313095**DRILLED BY:** Site Services**SAMPLE MTHD:** Continuous**DETECTOR:** UltraRAE 3000**GRAVEL PACK:** Silica Sand**CASING TYPE:** PVC**SCREEN TYPE:** PVC**HOLE DIA.:** 8"**SEAL:** Bentonite**CASING DIA.:** 2"**SCREEN SLOT:** 0.020"**TD:** 48' **DTW:** Not Encountered**GROUT:** NA**CASING LENGTH:** 33'**SCREEN LENGTH:** 15'


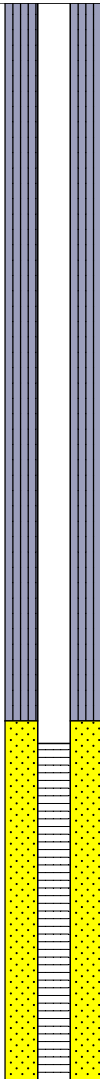
Vapor (ppm)		Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0	1000.0									
<div></div>										
						0			Not sampled	
						5				
						10				
						15				
						20				
						25				
0.00			Dry		3/5	30	SP		SP: Sand, fine grained, dry, olive-blue, sopme lithified layers, no stain, no odor	
0.00						35	CLS		CLS: Claystone, weathered, dry, light yellow-brown from 34'-35', dark olive-brown from 35'-39', occasional rust-brown mottles, blocky, no stain, no odor	
0.00				SB25 @38'	5/5	40	SPS		SPS: Sandstone, dry, olive-blue and rust-brown turning to light brown, platy, no stain, no odor	
0.00						45			SPS: Sandstone, dry, yellow-brown, 6-inch lens of soft, dark brown clay @46', no stain, no odor	
0.00				SB25 @48'	4/4				Stickup Height: 25"	
						50				

Location Map



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LT Environmental, Inc.**4600 W. 60th Avenue****Arvada, Colorado 80003****BORING LOG/MONITORING WELL COMPLETION DIAGRAM****BORING/WELL NO.:** SB26**DATE:** 12/19/13**LOGGED BY:** Dan Hosler**DRILL MTHD:** Hollow Stem Auger**PROJECT:** Fri 2-18**PROJECT NO.:** 008313095**DRILLED BY:** Site Services**SAMPLE MTHD:** Continuous**DETECTOR:** UltraRAE 3000**GRAVEL PACK:** Silica Sand**CASING TYPE:** PVC**SCREEN TYPE:** PVC**HOLE DIA.:** 8"**SEAL:** Bentonite**CASING DIA.:** 2"**SCREEN SLOT:** 0.020"**TD:** 48' **DTW:** Not Encountered**GROUT:** NA**CASING LENGTH:** 33'**SCREEN LENGTH:** 15'

Vapor (ppm)		Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction		
0.0	1000.0											
<div></div>												
			Moist	SB26 @34'	0.5/5	0	SC		CL: Clayey Sand, fine grained, moist, little caliche @9', dark brown turning to medium brown, some orange oxidation, no stain, no odor			
0.00	0.00	Dry	2.5/5		5							
0.00	0.00		2/5		10	CL: Clayey Sand, fine grained, dry, some caliche, medium brown, no stain, no odor						
0.00	0.00		2.5/5		15	CL: Clayey Sand, fine grained, clay content increasing with depth, dry, some caliche, medium brown, hard, crumbly, no stain, no odor						
0.00	0.00		1/5		20							
0.00	0.00		2/5		25	CL: Clayey Sand, fine grained, clay content decreasing with depth, dry, some caliche, medium brown, hard, crumbly, no stain, no odor						
0.00	0.00		3/5		30	SW	SW: Sand, fine to coarse grained, some gravel, trace clay, dry, medium brown, well graded, no stain, no odor					
0.30	0.00		4/5		35	CL	CL: Sandy Clay, fine grained, dry, light brown-gray with orange oxidation in fractures, low cohesion, crumbly, no stain, no odor					
0.00	0.00		5/5		40	CLS	CLS: Claystone, little sand and silt, dry, gray-brown with orange oxidation in fractures, hard, crumbly, low competence, no stain, no odor					
0.00	0.00		2/3		45	SPS	SPS: Sandstone, fine grained, dry, orange-brown with oxidation, poorly graded, competent, no stain, no odor					
0.00												

Location Map



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LT Environmental, Inc.**4600 W. 60th Avenue****Arvada, Colorado 80003****BORING LOG/MONITORING WELL COMPLETION DIAGRAM****BORING/WELL NO.:** SB27**DATE:** 12/31/13**LOGGED BY:** Chris Roy**DRILL MTHD:** Hollow Stem Auger**PROJECT:** Fri 2-18**PROJECT NO.:** 008313095**DRILLED BY:** Site Services**SAMPLE MTHD:** Continuous**DETECTOR:** UltraRAE 3000**GRAVEL PACK:** Silica Sand**CASING TYPE:** PVC**SCREEN TYPE:** PVC**HOLE DIA.:** 8"**SEAL:** Bentonite**CASING DIA.:** 2"**SCREEN SLOT:** 0.020"**TD:** 48'**DTW:** Not Encountered**GROUT:** NA**CASING LENGTH:** 33'**SCREEN LENGTH:** 15'

Vapor (ppm)	Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0 3000.0									
0.00					0			Not Sampled	
0.00					5				
0.00					10				
0.00					15				
0.00					20				
0.00					25				
0.00					30	CLS		CLS: Claystone, unconsolidated, dry, olive-gray with orange oxidation in fractures, mottling from 32' to 34', blocky, no stain, no odor	
0.00		Dry	SB27 @32'	3/5	35				
0.00				5/5	40				
0.00				5/5	45	SPS		SPS: Sandstone, light tan with orange oxidation in fractures, platy, no stain, no odor	
0.00				4/4	50				
0.00			SB27 @48'					Stickup Height: 1.88'	

Location Map



Compliance • Engineering • Remediation

LT Environmental, Inc.**4600 W. 60th Avenue****Arvada, Colorado 80003****BORING LOG/MONITORING WELL COMPLETION DIAGRAM****BORING/WELL NO.:** SB28**DATE:** 12/31/13**LOGGED BY:** Chris Roy**DRILL MTHD:** Hollow Stem Auger**PROJECT:** Fri 2-18**PROJECT NO.:** 008313095**DRILLED BY:** Site Services**SAMPLE MTHD:** Continuous**DETECTOR:** UltraRAE 3000**GRAVEL PACK:** Silica Sand**CASING TYPE:** PVC**SCREEN TYPE:** PVC**HOLE DIA.:** 8"**SEAL:** Bentonite**CASING DIA.:** 2"**SCREEN SLOT:** 0.020"**TD:** 48'**DTW:** Not Encountered**GROUT:** NA**CASING LENGTH:** 33'**SCREEN LENGTH:** 15'

Vapor (ppm)	Staining	Moisture Content	Sample	Sample Run	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.0 3000.0									
0.00					0			Not Sampled	
0.00					5				
0.00					10				
0.00					15				
0.00					20				
0.00					25				
0.00					30	CLS		CLS: Claystone, unconsolidated, dry, olive-gray with orange oxidation in fractures, mottling at 36', blocky, no stain, no odor	
0.00				5/5	35				
0.00				5/5	40	SPS		SPS: Sandstone, rust-brown, dry, unconsolidated, no stain, no odor	
0.00				5/5	45				
0.00				4/4	50				
0.00				SB28 @48'				Stickup Height: 2.26'	

ATTACHMENT 2
LABORATORY ANALYTICAL REPORTS

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

October 30, 2013

Rob Rebel

LT Environmental, Inc.

4600 West 60th Avenue

Arvada, CO 80003

RE: NEP - Fri 2-18

Enclosed are the results of analyses for samples received by Summit Scientific on 10/28/13 17:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury

President / Laboratory Manager



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
10/30/13 22:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB01@34'	R310284-01	Soil	10/28/13 11:00	10/28/13 17:30
SB02@38'	R310284-02	Soil	10/28/13 14:30	10/28/13 17:30

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095

Project Manager: Rob Rebel

Reported:

10/30/13 22:16

Summit Scientific
R31024

S₂
741 Corporate Circle Suite J ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-277-9531 Fax

Client: LT Environmental, Inc.

Address: 4600 West 60th Avenue

City/State/Zip: Arvada, CO 80003

Phone: (303) 433-9788

Fax: (303) 433-1432

Sampler Name:

Project Number: 01833095

Project Manager,

E-Mail: joncrafft@altavista.comProject Name: Ex 7-1

Project Number: 008313095

[illegible]

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
10/30/13 22:16

SB01@34'
R310284-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/28/13 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	250	50	mg/kg	1	3102818	10/28/13	10/30/13	8015M	

Date Sampled: 10/28/13 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		89.5 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/28/13 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.36	0.10	mg/kg	10	3102819	10/28/13	10/29/13	EPA 8260B	
Benzene	0.0042	0.0020	"	1	"	"	"	"	
Toluene	0.15	0.050	"	10	"	"	"	"	
Ethylbenzene	0.18	0.050	"	"	"	"	"	"	
Xylenes (total)	4.0	0.10	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	130	5.0	"	"	"	"	"	"	

Date Sampled: 10/28/13 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.8 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
10/30/13 22:16

SB02@38'
R310284-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/28/13 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3102818	10/28/13	10/30/13	8015M	

Date Sampled: **10/28/13 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		89.7 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/13 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.046	0.010	mg/kg	1	3102819	10/28/13	10/29/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.016	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.20	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	21	0.50	"	"	"	"	"	"	

Date Sampled: **10/28/13 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
10/30/13 22:16

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3102818 - EPA 3550A

Blank (3102818-BLK1)				Prepared: 10/28/13 Analyzed: 10/29/13						
C10-C28 (DRO)	ND	50	mg/kg							
LCS (3102818-BS1)				Prepared: 10/28/13 Analyzed: 10/29/13						
C10-C28 (DRO)	443	50	mg/kg	501		88.4	73-134			
LCS (3102818-BS2)				Prepared: 10/28/13 Analyzed: 10/30/13						
C10-C28 (DRO)	456	50	mg/kg	501		91.0	73-134			
LCS Dup (3102818-BSD1)				Prepared: 10/28/13 Analyzed: 10/30/13						
C10-C28 (DRO)	453	50	mg/kg	501		90.4	73-134	2.25	11	
LCS Dup (3102818-BSD2)				Prepared: 10/28/13 Analyzed: 10/30/13						
C10-C28 (DRO)	471	50	mg/kg	501		94.0	73-134	3.22	11	
Matrix Spike (3102818-MS1)				Source: R310272-01		Prepared: 10/28/13 Analyzed: 10/30/13				
C10-C28 (DRO)	455	50	mg/kg	496	ND	91.7	50-148			
Matrix Spike (3102818-MS2)				Source: R310272-02		Prepared: 10/28/13 Analyzed: 10/30/13				
C10-C28 (DRO)	463	50	mg/kg	480	ND	96.5	50-148			
Matrix Spike Dup (3102818-MSD1)				Source: R310272-01		Prepared: 10/28/13 Analyzed: 10/30/13				
C10-C28 (DRO)	482	50	mg/kg	495	ND	97.4	50-148	5.87	13	
Matrix Spike Dup (3102818-MSD2)				Source: R310272-02		Prepared: 10/28/13 Analyzed: 10/30/13				
C10-C28 (DRO)	453	50	mg/kg	483	ND	93.8	50-148	2.27	13	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
10/30/13 22:16

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3102819 - EPA 5030 Soil MS

Blank (3102819-BLK1)

Prepared: 10/28/13 Analyzed: 10/29/13

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0434</i>		<i>"</i>	<i>0.0397</i>		<i>109</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0390</i>		<i>"</i>	<i>0.0400</i>		<i>97.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>21-167</i>			

LCS (3102819-BS1)

Prepared: 10/28/13 Analyzed: 10/29/13

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0824	0.0020	"	0.100		82.4	58-130			
Toluene	0.0944	0.0050	"	0.100		94.4	61-134			
Ethylbenzene	0.111	0.0050	"	0.100		111	74-139			
m,p-Xylene	0.215	0.010	"	0.200		107	73-137			
o-Xylene	0.108	0.0050	"	0.100		108	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0435</i>		<i>"</i>	<i>0.0397</i>		<i>110</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0401</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>21-167</i>			

LCS (3102819-BS2)

Prepared: 10/28/13 Analyzed: 10/30/13

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0826	0.0020	"	0.100		82.6	58-130			
Toluene	0.0941	0.0050	"	0.100		94.1	61-134			
Ethylbenzene	0.109	0.0050	"	0.100		109	74-139			
m,p-Xylene	0.211	0.010	"	0.200		105	73-137			
o-Xylene	0.107	0.0050	"	0.100		107	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0442</i>		<i>"</i>	<i>0.0397</i>		<i>111</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0401</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>21-167</i>			

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
10/30/13 22:16

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3102819 - EPA 5030 Soil MS

LCS Dup (3102819-BSD1)

Prepared: 10/28/13 Analyzed: 10/29/13

Naphthalene	ND	0.010	mg/kg				66-138		12	
Benzene	0.0829	0.0020	"	0.100		82.9	58-130	0.690	13	
Toluene	0.0946	0.0050	"	0.100		94.6	61-134	0.254	16	
Ethylbenzene	0.111	0.0050	"	0.100		111	74-139	0.108	12	
m,p-Xylene	0.215	0.010	"	0.200		107	73-137	0.112	14	
o-Xylene	0.108	0.0050	"	0.100		108	73-141	0.416	12	
Surrogate: 1,2-Dichloroethane-d4	0.0431		"	0.0397		109	23-173			
Surrogate: Toluene-d8	0.0393		"	0.0400		98.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		100	21-167			

LCS Dup (3102819-BSD2)

Prepared: 10/28/13 Analyzed: 10/30/13

Naphthalene	ND	0.010	mg/kg				66-138		12	
Benzene	0.0820	0.0020	"	0.100		82.0	58-130	0.838	13	
Toluene	0.0928	0.0050	"	0.100		92.8	61-134	1.44	16	
Ethylbenzene	0.110	0.0050	"	0.100		110	74-139	0.848	12	
m,p-Xylene	0.213	0.010	"	0.200		106	73-137	0.836	14	
o-Xylene	0.107	0.0050	"	0.100		107	73-141	0.393	12	
Surrogate: 1,2-Dichloroethane-d4	0.0427		"	0.0397		108	23-173			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.7	21-167			

Matrix Spike (3102819-MS1)

Source: R310272-01

Prepared: 10/28/13 Analyzed: 10/30/13

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0793	0.0020	"	0.0943	ND	84.1	30-131			
Toluene	0.0909	0.0050	"	0.0943	ND	96.4	30-134			
Ethylbenzene	0.104	0.0050	"	0.0943	ND	110	22-153			
m,p-Xylene	0.201	0.010	"	0.189	ND	107	10-159			
o-Xylene	0.101	0.0050	"	0.0943	ND	107	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0432		"	0.0375		115	23-173			
Surrogate: Toluene-d8	0.0376		"	0.0377		99.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0379		"	0.0377		100	21-167			

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
10/30/13 22:16

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3102819 - EPA 5030 Soil MS

Matrix Spike (3102819-MS2)				Source: R310272-02		Prepared: 10/28/13		Analyzed: 10/30/13	
Naphthalene	ND	0.010	mg/kg		ND				10-158
Benzene	0.0784	0.0020	"	0.0986	ND	79.5	30-131		
Toluene	0.0919	0.0050	"	0.0986	ND	93.2	30-134		
Ethylbenzene	0.110	0.0050	"	0.0986	ND	111	22-153		
m,p-Xylene	0.212	0.010	"	0.197	ND	108	10-159		
o-Xylene	0.107	0.0050	"	0.0986	ND	109	31-151		
Surrogate: 1,2-Dichloroethane-d4	0.0420		"	0.0392		107	23-173		
Surrogate: Toluene-d8	0.0388		"	0.0394		98.3	20-170		
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0394		101	21-167		

Matrix Spike Dup (3102819-MSD1)				Source: R310272-01		Prepared: 10/28/13		Analyzed: 10/30/13	
Naphthalene	ND	0.010	mg/kg		ND				42
Benzene	0.0798	0.0020	"	0.0945	ND	84.4	30-131	0.581	34
Toluene	0.0904	0.0050	"	0.0945	ND	95.7	30-134	0.530	30
Ethylbenzene	0.106	0.0050	"	0.0945	ND	112	22-153	1.27	24
m,p-Xylene	0.203	0.010	"	0.189	ND	107	10-159	0.890	68
o-Xylene	0.103	0.0050	"	0.0945	ND	109	31-151	1.96	38
Surrogate: 1,2-Dichloroethane-d4	0.0412		"	0.0375		110	23-173		
Surrogate: Toluene-d8	0.0370		"	0.0378		97.8	20-170		
Surrogate: 4-Bromofluorobenzene	0.0379		"	0.0378		100	21-167		

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
10/30/13 22:16

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

A handwritten signature in black ink, appearing to be 'JMM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 01, 2013

Rob Rebel

LT Environmental, Inc.

4600 West 60th Avenue

Arvada, CO 80003

RE: NEP - Fri 2-18

Enclosed are the results of analyses for samples received by Summit Scientific on 10/29/13 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury

President / Laboratory Manager



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/01/13 20:03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB03@38'	R310296-01	Soil	10/29/13 10:40	10/29/13 17:00
SB03@42'	R310296-02	Soil	10/29/13 11:40	10/29/13 17:00
SB04@38'	R310296-03	Soil	10/29/13 14:30	10/29/13 17:00
SB04@45'	R310296-04	Soil	10/29/13 14:40	10/29/13 17:00

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/01/13 20:03

R310296

Summit Scientific

S₂

741 Corporate Circle, Suite 180 • Golden, Colorado 80401
303-277-9310 • 303-374-5933

Page 1 of 1

Client: LT Environmental, Inc.
Address: 4600 West 60th Ave
City/State/Zip: Arvada, CO 80003
Phone: 303-433-9788 Fax: 303-374-5933
Project Name: Fri 2-18
Project Number: 0083-13095
Sampler Name: [Signature]
Project Manager: Rob Rebel
E-Mail: rebel@ltenv.com

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix	Analysis Requested	Special Instructions
					HCl	HNO ₃	None	Other (Specify)			
1	S003-278	10/24/13	1440	1					Soil	Asbestos	
2	S003-278	10/24/13	1440	1					Soil	Asbestos	
3	S003-278	10/24/13	1440	1					Soil	Asbestos	
4	S003-278	10/24/13	1440	1					Soil	Asbestos	
5											
6											
7											
8											
9											
10											
Relinquished by: [Signature]		Date/Time: 10/24/13 17:00	Received by: [Signature]	Date/Time: 10/24/13 17:00	Turn Around Time (Check)		Notes:				
Relinquished by: [Signature]		Date/Time: 10/24/13 17:00	Received by: [Signature]	Date/Time: 10/24/13 17:00	Sample Integrity: 8.2		Temperature Upon Receipt: 8.2				
Relinquished by: [Signature]		Date/Time: 10/24/13 17:00	Received by: [Signature]	Date/Time: 10/24/13 17:00	Intact: Yes						

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[Signature]



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/01/13 20:03

SB03@38'
R310296-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/29/13 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	59	50	mg/kg	1	3103102	10/31/13	11/01/13	8015M	

Date Sampled: **10/29/13 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		94.3 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/29/13 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.022	0.010	mg/kg	1	3103103	10/31/13	10/31/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	5.4	0.50	"	"	"	"	"	"	

Date Sampled: **10/29/13 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		94.6 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		95.7 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/01/13 20:03

SB03@42'
R310296-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/29/13 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3103102	10/31/13	11/01/13	8015M	

Date Sampled: **10/29/13 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		89.0 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/29/13 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3103103	10/31/13	10/31/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/29/13 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.7 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/01/13 20:03

SB04@38'
R310296-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/29/13 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3103102	10/31/13	11/01/13	8015M	

Date Sampled: 10/29/13 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		89.8 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/29/13 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.024	0.010	mg/kg	1	3103103	10/31/13	10/31/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	5.6	0.50	"	"	"	"	"	"	

Date Sampled: 10/29/13 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		93.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.8 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/01/13 20:03

SB04@45'
R310296-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/29/13 14:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3103102	10/31/13	11/01/13	8015M	

Date Sampled: 10/29/13 14:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		87.7 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/29/13 14:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3103103	10/31/13	10/31/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 10/29/13 14:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.4 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/01/13 20:03

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3103102 - EPA 3550A

Blank (3103102-BLK1)				Prepared: 10/31/13 Analyzed: 11/01/13						
C10-C28 (DRO)	ND	50	mg/kg							
LCS (3103102-BS1)				Prepared: 10/31/13 Analyzed: 11/01/13						
C10-C28 (DRO)	507	50	mg/kg	501		101	73-134			
LCS (3103102-BS2)				Prepared: 10/31/13 Analyzed: 11/01/13						
C10-C28 (DRO)	528	50	mg/kg	501		105	73-134			
LCS Dup (3103102-BSD1)				Prepared: 10/31/13 Analyzed: 11/01/13						
C10-C28 (DRO)	495	50	mg/kg	501		98.9	73-134	2.26	11	
LCS Dup (3103102-BSD2)				Prepared: 10/31/13 Analyzed: 11/01/13						
C10-C28 (DRO)	489	50	mg/kg	501		97.6	73-134	7.56	11	
Matrix Spike (3103102-MS1)				Source: R310296-01		Prepared: 10/31/13 Analyzed: 11/01/13				
C10-C28 (DRO)	541	50	mg/kg	475	58.6	101	50-148			
Matrix Spike (3103102-MS2)				Source: R310296-02		Prepared: 10/31/13 Analyzed: 11/01/13				
C10-C28 (DRO)	450	50	mg/kg	488	ND	92.1	50-148			
Matrix Spike Dup (3103102-MSD1)				Source: R310296-01		Prepared: 10/31/13 Analyzed: 11/01/13				
C10-C28 (DRO)	538	50	mg/kg	479	58.6	100	50-148	0.587	13	
Matrix Spike Dup (3103102-MSD2)				Source: R310296-02		Prepared: 10/31/13 Analyzed: 11/01/13				
C10-C28 (DRO)	503	50	mg/kg	486	ND	103	50-148	11.2	13	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/01/13 20:03

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3103103 - EPA 5030 Soil MS

Blank (3103103-BLK1)

Prepared: 10/31/13 Analyzed: 11/01/13

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0430		"	0.0397		108	23-173			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		102	21-167			

LCS (3103103-BS1)

Prepared: 10/31/13 Analyzed: 11/01/13

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0837	0.0020	"	0.100		83.7	58-130			
Toluene	0.0960	0.0050	"	0.100		96.0	61-134			
Ethylbenzene	0.110	0.0050	"	0.100		110	74-139			
m,p-Xylene	0.212	0.010	"	0.200		106	73-137			
o-Xylene	0.106	0.0050	"	0.100		106	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0438		"	0.0397		110	23-173			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	21-167			

LCS (3103103-BS2)

Prepared: 10/31/13 Analyzed: 11/01/13

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0840	0.0020	"	0.100		84.0	58-130			
Toluene	0.0973	0.0050	"	0.100		97.3	61-134			
Ethylbenzene	0.113	0.0050	"	0.100		113	74-139			
m,p-Xylene	0.219	0.010	"	0.200		109	73-137			
o-Xylene	0.108	0.0050	"	0.100		108	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0417		"	0.0397		105	23-173			
Surrogate: Toluene-d8	0.0393		"	0.0400		98.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0400		99.3	21-167			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/01/13 20:03

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3103103 - EPA 5030 Soil MS

LCS Dup (3103103-BSD1)

Prepared: 10/31/13 Analyzed: 11/01/13

Naphthalene	ND	0.010	mg/kg				66-138		12	
Benzene	0.0838	0.0020	"	0.100		83.8	58-130	0.215	13	
Toluene	0.0943	0.0050	"	0.100		94.3	61-134	1.80	16	
Ethylbenzene	0.111	0.0050	"	0.100		111	74-139	0.788	12	
m,p-Xylene	0.214	0.010	"	0.200		107	73-137	0.788	14	
o-Xylene	0.107	0.0050	"	0.100		107	73-141	0.536	12	
Surrogate: 1,2-Dichloroethane-d4	0.0441		"	0.0397		111	23-173			
Surrogate: Toluene-d8	0.0390		"	0.0400		97.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.5	21-167			

LCS Dup (3103103-BSD2)

Prepared: 10/31/13 Analyzed: 11/01/13

Naphthalene	ND	0.010	mg/kg				66-138		12	
Benzene	0.0820	0.0020	"	0.100		82.0	58-130	2.35	13	
Toluene	0.0950	0.0050	"	0.100		95.0	61-134	2.34	16	
Ethylbenzene	0.111	0.0050	"	0.100		111	74-139	2.01	12	
m,p-Xylene	0.214	0.010	"	0.200		107	73-137	1.95	14	
o-Xylene	0.107	0.0050	"	0.100		107	73-141	0.975	12	
Surrogate: 1,2-Dichloroethane-d4	0.0430		"	0.0397		108	23-173			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		98.9	21-167			

Matrix Spike (3103103-MS1)

Source: R310296-01

Prepared: 10/31/13 Analyzed: 11/01/13

Naphthalene	0.0247	0.010	mg/kg		0.0221		10-158			
Benzene	0.0834	0.0020	"	0.0990	ND	84.3	30-131			
Toluene	0.0963	0.0050	"	0.0990	ND	97.2	30-134			
Ethylbenzene	0.113	0.0050	"	0.0990	ND	115	22-153			
m,p-Xylene	0.223	0.010	"	0.198	ND	113	10-159			
o-Xylene	0.110	0.0050	"	0.0990	ND	111	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0431		"	0.0393		110	23-173			
Surrogate: Toluene-d8	0.0402		"	0.0396		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0396		101	21-167			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/01/13 20:03

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3103103 - EPA 5030 Soil MS

Matrix Spike (3103103-MS2)

Source: R310296-02

Prepared: 10/31/13

Analyzed: 11/01/13

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0831	0.0020	"	0.100	ND	83.1	30-131			
Toluene	0.0968	0.0050	"	0.100	ND	96.8	30-134			
Ethylbenzene	0.111	0.0050	"	0.100	ND	111	22-153			
m,p-Xylene	0.215	0.010	"	0.200	ND	108	10-159			
o-Xylene	0.108	0.0050	"	0.100	ND	108	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0431		"	0.0397		109	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		101	21-167			

Matrix Spike Dup (3103103-MSD1)

Source: R310296-01

Prepared: 10/31/13

Analyzed: 11/01/13

Naphthalene	0.0324	0.010	mg/kg		0.0221		10-158	27.0	42	
Benzene	0.0838	0.0020	"	0.0988	ND	84.8	30-131	0.441	34	
Toluene	0.0974	0.0050	"	0.0988	ND	98.6	30-134	1.15	30	
Ethylbenzene	0.114	0.0050	"	0.0988	ND	116	22-153	0.766	24	
m,p-Xylene	0.226	0.010	"	0.198	ND	114	10-159	1.12	68	
o-Xylene	0.110	0.0050	"	0.0988	ND	111	31-151	0.117	38	
Surrogate: 1,2-Dichloroethane-d4	0.0434		"	0.0392		111	23-173			
Surrogate: Toluene-d8	0.0403		"	0.0395		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0395		103	21-167			

Matrix Spike Dup (3103103-MSD2)

Source: R310296-02

Prepared: 10/31/13

Analyzed: 11/01/13

Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0783	0.0020	"	0.0971	ND	80.6	30-131	6.00	34	
Toluene	0.0915	0.0050	"	0.0971	ND	94.2	30-134	5.66	30	
Ethylbenzene	0.108	0.0050	"	0.0971	ND	112	22-153	2.82	24	
m,p-Xylene	0.211	0.010	"	0.194	ND	109	10-159	2.00	68	
o-Xylene	0.106	0.0050	"	0.0971	ND	109	31-151	1.88	38	
Surrogate: 1,2-Dichloroethane-d4	0.0411		"	0.0385		107	23-173			
Surrogate: Toluene-d8	0.0378		"	0.0388		97.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0388		100	21-167			

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/01/13 20:03

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

A handwritten signature in black ink, appearing to be 'JMM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 03, 2013

Rob Rebel
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: NEP - Fri 2-18

Enclosed are the results of analyses for samples received by Summit Scientific on 11/01/13 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury
President / Laboratory Manager



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/03/13 18:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB01	R311004-01	Water	11/01/13 13:35	11/01/13 17:00
SB02	R311004-02	Water	11/01/13 13:15	11/01/13 17:00
SB03	R311004-03	Water	11/01/13 13:05	11/01/13 17:00
SB04	R311004-04	Water	11/01/13 13:25	11/01/13 17:00

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/03/13 18:26

Summit Scientific
B31004

S₁

741 Corporate Circle, Suite 188 • Golden, Colorado 80401
303-277-9510 • 303-374-5933

Page 1 of 1

Client: LT Environmental
Address: 4600 West 60th Avenue
City/State/Zip: Arvada, CO 80003
Phone: 303-433-9788
Fax: 303-374-5933
Project Name: Fri 2-18
Project Number: 0083-13095
Sampler Name: Ryan K

Project Manager: Chris Roy




E-Mail: croy@ltenv.com

jeans@ltenv.com

jeans@ltenv.com

Project Name: Fri 2-18

Project Number: 0083-13095

Preservative					Matrix		Analysis Requested										Special Instructions						
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	GRO	Naphthalene	DRO	pH, EC	SAR	Arsenic				
1	5801	11-01-13	1335	3		X	X		X				X										
2	5802	11-01-13	1315	3		X	X		X				X										
3	5803	11-01-13	1305	3		X	X		X				X										
4	5804	11-01-13	1325	3		X	X		X				X										
5																							
6																							
7																							
8																							
9																							
10																							
Relinquished by: 		Date/Time: 11-01-13	Received by: 	Date/Time: 11/1/13 1200																	Turn Around Time (Check)	Notes: invoice to Farm Spangler	
																					Same Day	72 hours	
																					24 hours	Standard	
																					48 hours		
Relinquished by: 		Date/Time:	Received by:	Date/Time:																	Sample Integrity:		
																					Temperature Upon Receipt:		
																					Intact: Yes No		

www.s2scientific.com

[Signature]



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/03/13 18:26

SB01
R311004-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/01/13 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	150	10	ug/l	10	3110109	11/01/13	11/01/13	EPA 8260B	
Toluene	240	10	"	"	"	"	"	"	
Ethylbenzene	9.2	1.0	"	1	"	"	"	"	
Xylenes (total)	330	10	"	10	"	"	"	"	

Date Sampled: 11/01/13 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.0 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		93.8 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		93.2 %	45-146		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/03/13 18:26

SB02
R311004-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/01/13 13:15

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	13	1.0		ug/l	1	3110109	11/02/13	11/02/13	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	10	1.0		"	"	"	"	"	"	
Xylenes (total)	60	1.0		"	"	"	"	"	"	

Date Sampled: 11/01/13 13:15

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		126 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		105 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		45-146		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/03/13 18:26

SB03
R311004-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/01/13 13:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	3110109	11/01/13	11/01/13	EPA 8260B	
Toluene	1.0	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	1.4	1.0	"	"	"	"	"	"	

Date Sampled: 11/01/13 13:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		88.8 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		94.5 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.9 %	45-146		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/03/13 18:26

SB04
R311004-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/01/13 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	16	1.0	ug/l	1	3110109	11/01/13	11/01/13	EPA 8260B	
Toluene	17	1.0	"	"	"	"	"	"	
Ethylbenzene	4.0	1.0	"	"	"	"	"	"	
Xylenes (total)	100	1.0	"	"	"	"	"	"	

Date Sampled: 11/01/13 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		92.2 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		95.2 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		92.4 %	45-146		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/03/13 18:26

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3110109 - EPA 5030 Water MS

Blank (3110109-BLK1)

Prepared & Analyzed: 11/02/13

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	17.2		"	13.2	130	37-154				
Surrogate: Toluene-d8	13.1		"	13.3	98.0	45-149				
Surrogate: 4-Bromofluorobenzene	14.7		"	13.3	110	45-146				

LCS (3110109-BS1)

Prepared & Analyzed: 11/02/13

Benzene	32.3	1.0	ug/l	33.3	96.8	51-132				
Toluene	37.1	1.0	"	33.3	111	51-138				
Ethylbenzene	40.3	1.0	"	33.3	121	58-146				
m,p-Xylene	77.8	2.0	"	66.7	117	57-144				
o-Xylene	37.9	1.0	"	33.3	114	53-146				
Surrogate: 1,2-Dichloroethane-d4	17.3		"	13.2	131	37-154				
Surrogate: Toluene-d8	13.4		"	13.3	100	45-149				
Surrogate: 4-Bromofluorobenzene	14.2		"	13.3	107	45-146				

LCS Dup (3110109-BSD1)

Prepared & Analyzed: 11/02/13

Benzene	32.0	1.0	ug/l	33.3	95.9	51-132	0.903	17		
Toluene	37.1	1.0	"	33.3	111	51-138	0.0539	17		
Ethylbenzene	40.5	1.0	"	33.3	122	58-146	0.519	16		
m,p-Xylene	77.8	2.0	"	66.7	117	57-144	0.0129	16		
o-Xylene	37.4	1.0	"	33.3	112	53-146	1.38	15		
Surrogate: 1,2-Dichloroethane-d4	17.1		"	13.2	129	37-154				
Surrogate: Toluene-d8	13.2		"	13.3	98.8	45-149				
Surrogate: 4-Bromofluorobenzene	14.4		"	13.3	108	45-146				

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/03/13 18:26

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3110109 - EPA 5030 Water MS

Matrix Spike (3110109-MS1)		Source: R311004-02			Prepared & Analyzed: 11/02/13					
Benzene	42.7	1.0	ug/l	33.3	13.3	88.3	34-141			
Toluene	37.5	1.0	"	33.3	ND	112	27-151			
Ethylbenzene	46.6	1.0	"	33.3	10.1	110	29-160			
m,p-Xylene	92.7	2.0	"	66.7	38.2	81.8	20-166			
o-Xylene	57.2	1.0	"	33.3	22.1	105	33-159			
Surrogate: 1,2-Dichloroethane-d4	16.7		"	13.2		126	37-154			
Surrogate: Toluene-d8	14.1		"	13.3		106	45-149			
Surrogate: 4-Bromofluorobenzene	15.2		"	13.3		114	45-146			

Matrix Spike Dup (3110109-MSD1)		Source: R311004-02			Prepared & Analyzed: 11/02/13					
Benzene	42.8	1.0	ug/l	33.3	13.3	88.5	34-141	0.187	32	
Toluene	38.3	1.0	"	33.3	ND	115	27-151	2.22	25	
Ethylbenzene	48.8	1.0	"	33.3	10.1	116	29-160	4.63	50	
m,p-Xylene	96.0	2.0	"	66.7	38.2	86.8	20-166	3.53	36	
o-Xylene	59.4	1.0	"	33.3	22.1	112	33-159	3.82	26	
Surrogate: 1,2-Dichloroethane-d4	17.1		"	13.2		129	37-154			
Surrogate: Toluene-d8	14.1		"	13.3		106	45-149			
Surrogate: 4-Bromofluorobenzene	14.7		"	13.3		110	45-146			

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Rob Rebel

Reported:
11/03/13 18:26

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

A handwritten signature in black ink, appearing to be 'JMM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 07, 2013

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: NEP - Fri 2-18

Enclosed are the results of analyses for samples received by Summit Scientific on 11/01/13 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury
President / Laboratory Manager



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB05@34'	R311015-01	Soil	11/01/13 00:00	11/01/13 17:00
SB05@44'	R311015-02	Soil	11/01/13 00:00	11/01/13 17:00
SB05@48'	R311015-03	Soil	11/01/13 00:00	11/01/13 17:00
SB06@38.5'	R311015-04	Soil	11/01/13 00:00	11/01/13 17:00
SB06@48'	R311015-05	Soil	11/01/13 00:00	11/01/13 17:00

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:47

R311015

Summit Scientific

S₂

741 Corporate Circle, Suite 100 • Golden, Colorado 80401
303-277-9310 • 303-574-5933

Page 1 of 1

Client: LT Environmental, Inc.
Address: 4600 West 60th Avenue
City/State/Zip: Arvada, CO 80003
Phone: 303-433-4788
Project Manager: Chris Roy
E-Mail: croy@ltenv.com
Fax: 303-574-5933
Project Name: Fri 2-18
Project Number: 0083-13095
Sampler Name: C. Roy

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix	Analysis Requested	Special Instructions
					HCl	HNO ₃	None	Other (Specify)			
1	SP50 34	11/01/13					X	Soil	DEO, GAO		
2	SP50 44						X	Groundwater	BTEX, mp		
3	SP50 48						X				
4	SP50 38.5'						X				
5	SP50 48'						X				
6											
7											
8											
9											
10											

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
<i>[Signature]</i>	11/01/13	<i>[Signature]</i>	11/13/13 1700	Same Day <input checked="" type="checkbox"/> 72 hours <input checked="" type="checkbox"/> Standard <input checked="" type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: <input checked="" type="checkbox"/> Inact: <input checked="" type="checkbox"/> No	

www.summitscientific.com

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

[Signature]



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:47

SB05@34'
R311015-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	230	50	mg/kg	1	3110512	11/05/13	11/06/13	8015M	

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		88.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.52	0.10	mg/kg	10	3110511	11/05/13	11/05/13	EPA 8260B	
Benzene	ND	0.0020	"	1	"	"	11/05/13	"	
Toluene	0.67	0.050	"	10	"	"	11/05/13	"	
Ethylbenzene	0.54	0.050	"	"	"	"	"	"	
Xylenes (total)	10	0.10	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	150	5.0	"	"	"	"	11/05/13	"	

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		108 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		105 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		107 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:47

SB05@44'
R311015-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	220	50	mg/kg	1	3110512	11/05/13	11/06/13	8015M	

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.4 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	1.0	0.10	mg/kg	10	3110511	11/05/13	11/05/13	EPA 8260B	
Benzene	0.14	0.020	"	"	"	"	"	"	
Toluene	10	0.050	"	"	"	"	"	"	
Ethylbenzene	2.9	0.050	"	"	"	"	"	"	
Xylenes (total)	44	2.0	"	200	"	"	"	"	
Gasoline Range Hydrocarbons	790	100	"	"	"	"	"	"	

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		124 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		130 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:47

SB05@48'
R311015-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3110512	11/05/13	11/06/13	8015M	

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		85.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3110511	11/05/13	11/05/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:47

SB06@38.5'
R311015-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	130	50	mg/kg	1	3110512	11/05/13	11/06/13	8015M	

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.13	0.010	mg/kg	1	3110511	11/05/13	11/05/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	0.017	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.049	0.0050	"	"	"	"	"	"	
Xylenes (total)	1.4	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	36	0.50	"	"	"	"	"	"	

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		122 %	21-167		"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:47

SB06@48'
R311015-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3110512	11/05/13	11/06/13	8015M	

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		103 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3110511	11/05/13	11/05/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 11/01/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:47

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3110512 - EPA 3550A

Blank (3110512-BLK1)

Prepared & Analyzed: 11/05/13

C10-C28 (DRO) ND 50 mg/kg

LCS (3110512-BS1)

Prepared & Analyzed: 11/05/13

C10-C28 (DRO) 467 50 mg/kg 501 93.3 73-134

LCS Dup (3110512-BSD1)

Prepared & Analyzed: 11/05/13

C10-C28 (DRO) 471 50 mg/kg 501 93.9 73-134 0.681 11

Matrix Spike (3110512-MS1)

Source: R311015-03

Prepared: 11/05/13 Analyzed: 11/06/13

C10-C28 (DRO) 448 50 mg/kg 451 20.0 94.9 50-148

Matrix Spike Dup (3110512-MSD1)

Source: R311015-03

Prepared: 11/05/13 Analyzed: 11/06/13

C10-C28 (DRO) 463 50 mg/kg 462 20.0 95.8 50-148 3.26 13

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3110511 - EPA 5030 Soil MS

Blank (3110511-BLK1)

Prepared: 11/05/13 Analyzed: 11/06/13

Naphthalene	ND	0.010	mg/kg
Benzene	ND	0.0020	"
Toluene	ND	0.0050	"
Ethylbenzene	ND	0.0050	"
Xylenes (total)	ND	0.010	"
Gasoline Range Hydrocarbons	ND	0.50	"

Surrogate: 1,2-Dichloroethane-d4	0.0386	"	0.0397	97.2	23-173
Surrogate: Toluene-d8	0.0374	"	0.0400	93.4	20-170
Surrogate: 4-Bromofluorobenzene	0.0360	"	0.0400	90.1	21-167

LCS (3110511-BS1)

Prepared: 11/05/13 Analyzed: 11/06/13

Naphthalene	0.138	0.010	mg/kg	0.150	92.0	66-138
Benzene	0.149	0.0020	"	0.150	99.2	58-130
Toluene	0.159	0.0050	"	0.150	106	61-134
Ethylbenzene	0.160	0.0050	"	0.150	107	74-139
m,p-Xylene	0.324	0.010	"	0.300	108	73-137
o-Xylene	0.162	0.0050	"	0.150	108	73-141

Surrogate: 1,2-Dichloroethane-d4	0.0291	"	0.0397	73.3	23-173
Surrogate: Toluene-d8	0.0389	"	0.0400	97.3	20-170
Surrogate: 4-Bromofluorobenzene	0.0383	"	0.0400	95.7	21-167

LCS Dup (3110511-BSD1)

Prepared: 11/05/13 Analyzed: 11/06/13

Naphthalene	0.151	0.010	mg/kg	0.150	100	66-138	8.79	12
Benzene	0.142	0.0020	"	0.150	94.6	58-130	4.66	13
Toluene	0.148	0.0050	"	0.150	98.6	61-134	7.52	16
Ethylbenzene	0.152	0.0050	"	0.150	102	74-139	5.03	12
m,p-Xylene	0.309	0.010	"	0.300	103	73-137	4.59	14
o-Xylene	0.155	0.0050	"	0.150	104	73-141	4.38	12

Surrogate: 1,2-Dichloroethane-d4	0.0360	"	0.0397	90.7	23-173
Surrogate: Toluene-d8	0.0378	"	0.0400	94.5	20-170
Surrogate: 4-Bromofluorobenzene	0.0383	"	0.0400	95.7	21-167

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3110511 - EPA 5030 Soil MS

Matrix Spike (3110511-MS1)		Source: R311013-01			Prepared: 11/05/13		Analyzed: 11/06/13			
Naphthalene	0.127	0.010	mg/kg	0.148	ND	85.5	10-158			
Benzene	0.124	0.0020	"	0.148	ND	84.0	30-131			
Toluene	0.131	0.0050	"	0.148	ND	88.3	30-134			
Ethylbenzene	0.129	0.0050	"	0.148	ND	86.9	22-153			
m,p-Xylene	0.263	0.010	"	0.296	ND	89.0	10-159			
o-Xylene	0.132	0.0050	"	0.148	ND	89.1	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0381		"	0.0392		97.4	23-173			
Surrogate: Toluene-d8	0.0377		"	0.0394		95.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0382		"	0.0394		96.8	21-167			

Matrix Spike Dup (3110511-MSD1)		Source: R311013-01			Prepared: 11/05/13		Analyzed: 11/06/13			
Naphthalene	0.135	0.010	mg/kg	0.146	ND	92.6	10-158	6.41	42	
Benzene	0.127	0.0020	"	0.146	ND	87.3	30-131	2.29	34	
Toluene	0.133	0.0050	"	0.146	ND	91.4	30-134	1.97	30	
Ethylbenzene	0.133	0.0050	"	0.146	ND	91.4	22-153	3.53	24	
m,p-Xylene	0.272	0.010	"	0.291	ND	93.3	10-159	3.07	68	
o-Xylene	0.136	0.0050	"	0.146	ND	93.4	31-151	3.19	38	
Surrogate: 1,2-Dichloroethane-d4	0.0386		"	0.0385		100	23-173			
Surrogate: Toluene-d8	0.0375		"	0.0388		96.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0382		"	0.0388		98.3	21-167			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:47

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

A handwritten signature in black ink, appearing to be 'JMM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 07, 2013

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: NEP - Fri 2-18

Enclosed are the results of analyses for samples received by Summit Scientific on 11/04/13 17:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury
President / Laboratory Manager



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB08@37'	R311022-01	Soil	11/04/13 13:30	11/04/13 17:05
SB08@44'	R311022-02	Soil	11/04/13 14:00	11/04/13 17:05
SB07@32'	R311022-03	Soil	11/04/13 10:30	11/04/13 17:05
SB07@37'	R311022-04	Soil	11/04/13 10:40	11/04/13 17:05

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:45

R311022
Summit Scientific

S:

741 Corporate Circle, Suite 100 • Golden, Colorado 80401
303-277-9310 • 303-374-5933

Client: LT Environmental, Inc. Project Manager: Chris Roy
Address: 4600 West 60th Avenue E-Mail: croy@ltenv.com
City/State/Zip: Arvada, CO 80003
Phone: 303-433-9788 Fax: 303-374-5933
Sampler Name: Chris Roy Project Name: Fri 2-18
Project Number: 0083-13095

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested	Special Instructions	
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #			Other (Specify)
1	SR010 37'	11/14/13	1330	1										
2	SR010 64'	11/14/13	1400	1										
3	SR010 67'	11/14/13	1030	1										
4	SR010 37'	11/14/13	1040	1										
5														
6														
7														
8														
9														
10														
Relinquished by:		Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)		Notes:							
		11/14/13		11/14/13 12:05	Same Day		72 hours							
					24 hours		Standard							
Relinquished by:		Date/Time:	Received by:	Date/Time:	48 hours									
Relinquished by:		Date/Time:	Received by:	Date/Time:	Sample Integrity:		Temperature Upon Receipt:							
					Intact: Yes No									

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:45

SB08@37'
R311022-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/04/13 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	70	50	mg/kg	1	3110512	11/05/13	11/06/13	8015M	

Date Sampled: 11/04/13 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		104 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/04/13 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.039	0.010	mg/kg	1	3110707	11/07/13	11/07/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.012	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	5.3	0.50	"	"	"	"	"	"	

Date Sampled: 11/04/13 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		100 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.2 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:45

SB08@44'
R311022-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/04/13 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3110512	11/05/13	11/06/13	8015M	

Date Sampled: 11/04/13 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		104 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/04/13 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3110707	11/07/13	11/07/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 11/04/13 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:45

SB07@32'
R311022-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/04/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	630	50	mg/kg	1	3110512	11/05/13	11/06/13	8015M	

Date Sampled: 11/04/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.8 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/04/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	1.3	0.10	mg/kg	10	3110707	11/07/13	11/07/13	EPA 8260B	
Benzene	0.0097	0.0020	"	1	"	"	"	"	
Toluene	4.0	0.050	"	10	"	"	"	"	
Ethylbenzene	2.3	0.050	"	"	"	"	"	"	
Xylenes (total)	68	1.0	"	100	"	"	"	"	
Gasoline Range Hydrocarbons	1200	50	"	"	"	"	"	"	

Date Sampled: 11/04/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		93.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:45

SB07@37'
R311022-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/04/13 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3110512	11/05/13	11/06/13	8015M	

Date Sampled: 11/04/13 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/04/13 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3110707	11/07/13	11/07/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	0.0058	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.018	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 11/04/13 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:45

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3110512 - EPA 3550A

Blank (3110512-BLK1)

Prepared & Analyzed: 11/05/13

C10-C28 (DRO) ND 50 mg/kg

LCS (3110512-BS1)

Prepared & Analyzed: 11/05/13

C10-C28 (DRO) 467 50 mg/kg 501 93.3 73-134

LCS Dup (3110512-BSD1)

Prepared & Analyzed: 11/05/13

C10-C28 (DRO) 471 50 mg/kg 501 93.9 73-134 0.681 11

Matrix Spike (3110512-MS1)

Source: R311015-03

Prepared: 11/05/13 Analyzed: 11/06/13

C10-C28 (DRO) 448 50 mg/kg 451 20.0 94.9 50-148

Matrix Spike Dup (3110512-MSD1)

Source: R311015-03

Prepared: 11/05/13 Analyzed: 11/06/13

C10-C28 (DRO) 463 50 mg/kg 462 20.0 95.8 50-148 3.26 13

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:45

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3110707 - EPA 5030 Soil MS

Blank (3110707-BLK1)

Prepared & Analyzed: 11/07/13

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0422</i>		<i>"</i>	<i>0.0397</i>		<i>106</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0402</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0409</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>21-167</i>			

LCS (3110707-BS1)

Prepared & Analyzed: 11/07/13

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0932	0.0020	"	0.100		93.2	58-130			
Toluene	0.109	0.0050	"	0.100		109	61-134			
Ethylbenzene	0.128	0.0050	"	0.100		128	74-139			
m,p-Xylene	0.244	0.010	"	0.200		122	73-137			
o-Xylene	0.119	0.0050	"	0.100		119	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0433</i>		<i>"</i>	<i>0.0397</i>		<i>109</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0399</i>		<i>"</i>	<i>0.0400</i>		<i>99.7</i>	<i>21-167</i>			

LCS Dup (3110707-BSD1)

Prepared & Analyzed: 11/07/13

Naphthalene	ND	0.010	mg/kg				66-138		12	
Benzene	0.0938	0.0020	"	0.100		93.8	58-130	0.545	13	
Toluene	0.110	0.0050	"	0.100		110	61-134	0.439	16	
Ethylbenzene	0.130	0.0050	"	0.100		130	74-139	1.21	12	
m,p-Xylene	0.245	0.010	"	0.200		123	73-137	0.625	14	
o-Xylene	0.119	0.0050	"	0.100		119	73-141	0.505	12	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0432</i>		<i>"</i>	<i>0.0397</i>		<i>109</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0402</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>21-167</i>			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:45

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3110707 - EPA 5030 Soil MS

Matrix Spike (3110707-MS1)

Source: R311022-02

Prepared & Analyzed: 11/07/13

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0975	0.0020	"	0.0963	ND	101	30-131			
Toluene	0.107	0.0050	"	0.0963	ND	111	30-134			
Ethylbenzene	0.132	0.0050	"	0.0963	ND	137	22-153			
m,p-Xylene	0.252	0.010	"	0.193	ND	131	10-159			
o-Xylene	0.119	0.0050	"	0.0963	ND	123	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0451		"	0.0382		118	23-173			
Surrogate: Toluene-d8	0.0371		"	0.0385		96.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0385		100	21-167			

Matrix Spike Dup (3110707-MSD1)

Source: R311022-02

Prepared & Analyzed: 11/07/13

Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0919	0.0020	"	0.102	ND	90.5	30-131	5.91	34	
Toluene	0.110	0.0050	"	0.102	ND	108	30-134	2.08	30	
Ethylbenzene	0.132	0.0050	"	0.102	ND	130	22-153	0.0562	24	
m,p-Xylene	0.251	0.010	"	0.203	ND	123	10-159	0.325	68	
o-Xylene	0.123	0.0050	"	0.102	ND	121	31-151	3.16	38	
Surrogate: 1,2-Dichloroethane-d4	0.0438		"	0.0403		109	23-173			
Surrogate: Toluene-d8	0.0396		"	0.0407		97.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0407		101	21-167			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:45

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

A handwritten signature in black ink, appearing to be 'JMM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 07, 2013

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: NEP - Fri 2-18

Enclosed are the results of analyses for samples received by Summit Scientific on 11/05/13 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury
President / Laboratory Manager



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB09@34'	R311040-01	Soil	11/05/13 09:30	11/05/13 17:00
SB09@44'	R311040-02	Soil	11/05/13 10:00	11/05/13 17:00
SB09@48'	R311040-03	Soil	11/05/13 10:20	11/05/13 17:00
SB10@37'	R311040-04	Soil	11/05/13 12:30	11/05/13 17:00
SB10@48'	R311040-05	Soil	11/05/13 14:00	11/05/13 17:00

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:50

R311040
Summit Scientific
S2

741 Corporate Circle, Suite J&K • Golden, Colorado 80401
303-277-9310 • 303-374-5933

Client: LT Environmental, Inc.
Address: 4600 West 60th Avenue
City/State/Zip: Arvada, CO 80003
Phone: 303-433-9788
Fax: 303-374-5933
Project Manager: Chris Roy
E-Mail: croy@ltenv.com
Project Name: Fri 2-18
Project Number: 0083-13095
Sampler Name: J&K

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix	Analysis Requested	Special Instructions
					HCl	HNO3	None	Other (Specify)			
1	5106241	11/13	0530	1					Soil	X BTEX X Air-Canister # X Other (Specify) Hydrocarbons	
2	5106241	5/13	1600	1					X		
3	5106241		1020	1					X		
4	5106251		1230	1					X		
5	5106251		1400	1					X		
6											
7											
8											
9											
10											
Relinquished by: J&K		Date/Time: 11/5/13 1200	Received by: J&K	Date/Time: 11/5/13 1200	Turn Around Time (Check)		Notes:				
Relinquished by:		Date/Time:	Received by:	Date/Time:	Same Day		72 hours				
Relinquished by:		Date/Time:	Received by:	Date/Time:	24 hours		Standard				
Relinquished by:		Date/Time:	Received by:	Date/Time:	48 hours		Standard				
Relinquished by:		Date/Time:	Received by:	Date/Time:	Sample Integrity:		Temperature Upon Receipt: 32				
Relinquished by:		Date/Time:	Received by:	Date/Time:	Intact:		Yes No				

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:50

SB09@34'
R311040-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/05/13 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3110706	11/07/13	11/07/13	8015M	

Date Sampled: 11/05/13 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/05/13 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3110707	11/07/13	11/07/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	2.2	0.50	"	"	"	"	"	"	

Date Sampled: 11/05/13 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.7 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:50

SB09@44'
R311040-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/05/13 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3110706	11/07/13	11/07/13	8015M	

Date Sampled: 11/05/13 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.3 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/05/13 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3110707	11/07/13	11/07/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.015	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	3.0	0.50	"	"	"	"	"	"	

Date Sampled: 11/05/13 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:50

SB09@48'
R311040-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/05/13 10:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3110706	11/07/13	11/07/13	8015M	

Date Sampled: 11/05/13 10:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.8 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/05/13 10:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3110707	11/07/13	11/07/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 11/05/13 10:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:50

SB10@37'
R311040-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/05/13 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	930	50	mg/kg	1	3110706	11/07/13	11/07/13	8015M	

Date Sampled: 11/05/13 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		105 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/05/13 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	1.3	0.10	mg/kg	10	3110707	11/07/13	11/07/13	EPA 8260B	
Benzene	ND	0.020	"	"	"	"	"	"	
Toluene	1.8	0.050	"	"	"	"	"	"	
Ethylbenzene	2.6	0.050	"	"	"	"	"	"	
Xylenes (total)	56	1.0	"	100	"	"	"	"	
Gasoline Range Hydrocarbons	1000	5.0	"	10	"	"	"	"	

Date Sampled: 11/05/13 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	21-167		"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:50

SB10@48'
R311040-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/05/13 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3110706	11/07/13	11/07/13	8015M	

Date Sampled: 11/05/13 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		106 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/05/13 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3110707	11/07/13	11/07/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 11/05/13 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		90.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.6 %	21-167		"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:50

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3110706 - EPA 3550A

Blank (3110706-BLK1)

Prepared & Analyzed: 11/07/13

C10-C28 (DRO) ND 50 mg/kg

LCS (3110706-BS1)

Prepared & Analyzed: 11/07/13

C10-C28 (DRO) 553 50 mg/kg 501 110 73-134

Matrix Spike (3110706-MS1)

Source: R311040-01

Prepared & Analyzed: 11/07/13

C10-C28 (DRO) 495 50 mg/kg 454 ND 109 50-148

Matrix Spike Dup (3110706-MSD1)

Source: R311040-01

Prepared & Analyzed: 11/07/13

C10-C28 (DRO) 509 50 mg/kg 481 ND 106 50-148 2.74 13

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:50

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3110707 - EPA 5030 Soil MS

Blank (3110707-BLK1)

Prepared & Analyzed: 11/07/13

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0422		"	0.0397	106	23-173				
Surrogate: Toluene-d8	0.0402		"	0.0400	100	20-170				
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400	102	21-167				

LCS (3110707-BS1)

Prepared & Analyzed: 11/07/13

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.0932	0.0020	"	0.100	93.2	58-130				
Toluene	0.109	0.0050	"	0.100	109	61-134				
Ethylbenzene	0.128	0.0050	"	0.100	128	74-139				
m,p-Xylene	0.244	0.010	"	0.200	122	73-137				
o-Xylene	0.119	0.0050	"	0.100	119	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0433		"	0.0397	109	23-173				
Surrogate: Toluene-d8	0.0404		"	0.0400	101	20-170				
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400	99.7	21-167				

LCS Dup (3110707-BSD1)

Prepared & Analyzed: 11/07/13

Naphthalene	ND	0.010	mg/kg			66-138			12	
Benzene	0.0938	0.0020	"	0.100	93.8	58-130	0.545		13	
Toluene	0.110	0.0050	"	0.100	110	61-134	0.439		16	
Ethylbenzene	0.130	0.0050	"	0.100	130	74-139	1.21		12	
m,p-Xylene	0.245	0.010	"	0.200	123	73-137	0.625		14	
o-Xylene	0.119	0.0050	"	0.100	119	73-141	0.505		12	
Surrogate: 1,2-Dichloroethane-d4	0.0432		"	0.0397	109	23-173				
Surrogate: Toluene-d8	0.0404		"	0.0400	101	20-170				
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400	100	21-167				

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:50

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3110707 - EPA 5030 Soil MS

Matrix Spike (3110707-MS1)			Source: R311022-02		Prepared & Analyzed: 11/07/13					
Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0975	0.0020	"	0.0963	ND	101	30-131			
Toluene	0.107	0.0050	"	0.0963	ND	111	30-134			
Ethylbenzene	0.132	0.0050	"	0.0963	ND	137	22-153			
m,p-Xylene	0.252	0.010	"	0.193	ND	131	10-159			
o-Xylene	0.119	0.0050	"	0.0963	ND	123	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0451		"	0.0382		118	23-173			
Surrogate: Toluene-d8	0.0371		"	0.0385		96.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0385		100	21-167			

Matrix Spike Dup (3110707-MSD1)			Source: R311022-02		Prepared & Analyzed: 11/07/13					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0919	0.0020	"	0.102	ND	90.5	30-131	5.91	34	
Toluene	0.110	0.0050	"	0.102	ND	108	30-134	2.08	30	
Ethylbenzene	0.132	0.0050	"	0.102	ND	130	22-153	0.0562	24	
m,p-Xylene	0.251	0.010	"	0.203	ND	123	10-159	0.325	68	
o-Xylene	0.123	0.0050	"	0.102	ND	121	31-151	3.16	38	
Surrogate: 1,2-Dichloroethane-d4	0.0438		"	0.0403		109	23-173			
Surrogate: Toluene-d8	0.0396		"	0.0407		97.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0407		101	21-167			

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 21:50

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

A handwritten signature in black ink, appearing to be 'JMM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 07, 2013

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: NEP - Fri 2-18

Enclosed are the results of analyses for samples received by Summit Scientific on 11/06/13 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury
President / Laboratory Manager



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB06	R311044-01	Water	11/06/13 12:00	11/06/13 17:00
SB10	R311044-02	Water	11/06/13 13:00	11/06/13 17:00

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

A handwritten signature in black ink, appearing to be 'JMM'.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:39

Summit Scientific
S: R31044

741 Corporate Circle, Suite 100 • Golden, Colorado 80401
303-277-5930 • 303-374-5933

Client: LT Environmental, Inc. Project Manager: Chris Roy
Address: 4600 West 60th Avenue E-Mail: croy@ltenv.com
City/State/Zip: Arvada, CO 80003
Phone: 303-433-9788 Fax: 303-374-5933
Sampler Name: 11/16/13 Project Name: NEP - Fri 2-18
Project Number: 0083-13095

Page 1 of 1

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	Other (Specify)	Other (Specify)			
1	S01	11/13/13	1200	3													
2	S02	11/13/13	1300	3													
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
Relinquished by:		Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)		Notes:										
Relinquished by:		Date/Time:	Received by:	Date/Time:	Same Day		72 hours										
Relinquished by:		Date/Time:	Received by:	Date/Time:	24 hours		Standard										
Relinquished by:		Date/Time:	Received by:	Date/Time:	48 hours		Standard										
Relinquished by:		Date/Time:	Received by:	Date/Time:	Sample Integrity:		Temperature Upon Receipt:										
Relinquished by:		Date/Time:	Received by:	Date/Time:	Intact:		Yes No										

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:39

SB06
R311044-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/06/13 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	9.0	1.0	ug/l	1	3110607	11/06/13	11/06/13	EPA 8260B	
Toluene	15	1.0	"	"	"	"	"	"	
Ethylbenzene	2.2	1.0	"	"	"	"	"	"	
Xylenes (total)	48	1.0	"	"	"	"	"	"	

Date Sampled: 11/06/13 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		82.7 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		90.7 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		87.2 %	45-146		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:39

SB10
R311044-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/06/13 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	5300	100		ug/l	100	3110607	11/06/13	11/06/13	EPA 8260B	
Toluene	11000	100		"	"	"	"	"	"	
Ethylbenzene	560	100		"	"	"	"	"	"	
Xylenes (total)	8300	100		"	"	"	"	"	"	

Date Sampled: **11/06/13 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		105 %		37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		99.5 %		45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		101 %		45-146		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:39

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3110607 - EPA 5030 Water MS

Blank (3110607-BLK1)

Prepared & Analyzed: 11/07/13

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.6		"	13.2	103	37-154				
Surrogate: Toluene-d8	13.2		"	13.3	98.6	45-149				
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3	100	45-146				

LCS (3110607-BS1)

Prepared & Analyzed: 11/07/13

Benzene	32.8	1.0	ug/l	33.3	98.6	51-132				
Toluene	33.1	1.0	"	33.3	99.4	51-138				
Ethylbenzene	33.9	1.0	"	33.3	102	58-146				
m,p-Xylene	66.2	2.0	"	66.7	99.4	57-144				
o-Xylene	32.3	1.0	"	33.3	96.8	53-146				
Surrogate: 1,2-Dichloroethane-d4	13.3		"	13.2	101	37-154				
Surrogate: Toluene-d8	13.3		"	13.3	99.6	45-149				
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3	95.0	45-146				

LCS Dup (3110607-BSD1)

Prepared & Analyzed: 11/07/13

Benzene	32.5	1.0	ug/l	33.3	97.6	51-132	0.948	17		
Toluene	33.0	1.0	"	33.3	98.9	51-138	0.484	17		
Ethylbenzene	34.3	1.0	"	33.3	103	58-146	1.06	16		
m,p-Xylene	67.2	2.0	"	66.7	101	57-144	1.50	16		
o-Xylene	32.7	1.0	"	33.3	98.0	53-146	1.23	15		
Surrogate: 1,2-Dichloroethane-d4	13.4		"	13.2	102	37-154				
Surrogate: Toluene-d8	13.1		"	13.3	98.4	45-149				
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3	94.5	45-146				

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 5 of 7



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:39

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3110607 - EPA 5030 Water MS

Matrix Spike (3110607-MS1)		Source: R311044-01			Prepared & Analyzed: 11/07/13					
Benzene	41.0	1.0	ug/l	33.3	9.02	95.9	34-141			
Toluene	45.8	1.0	"	33.3	15.1	92.2	27-151			
Ethylbenzene	36.4	1.0	"	33.3	2.20	102	29-160			
m,p-Xylene	102	2.0	"	66.7	40.7	91.6	20-166			
o-Xylene	39.4	1.0	"	33.3	6.85	97.6	33-159			
Surrogate: 1,2-Dichloroethane-d4	13.7		"	13.2		104	37-154			
Surrogate: Toluene-d8	13.3		"	13.3		99.5	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.5	45-146			
Matrix Spike Dup (3110607-MSD1)		Source: R311044-01			Prepared & Analyzed: 11/07/13					
Benzene	40.2	1.0	ug/l	33.3	9.02	93.4	34-141	2.02	32	
Toluene	43.9	1.0	"	33.3	15.1	86.5	27-151	4.23	25	
Ethylbenzene	36.0	1.0	"	33.3	2.20	101	29-160	0.940	50	
m,p-Xylene	94.6	2.0	"	66.7	40.7	80.8	20-166	7.27	36	
o-Xylene	37.6	1.0	"	33.3	6.85	92.2	33-159	4.63	26	
Surrogate: 1,2-Dichloroethane-d4	14.6		"	13.2		110	37-154			
Surrogate: Toluene-d8	13.5		"	13.3		101	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.9	45-146			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/07/13 17:39

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

A handwritten signature in black ink, appearing to be 'JMM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 15, 2013

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: NEP - Fri 2-18

Enclosed are the results of analyses for samples received by Summit Scientific on 11/14/13 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury
President / Laboratory Manager



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/15/13 21:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB07	R311098-01	Water	11/14/13 14:20	11/14/13 17:00
SB08	R311098-02	Water	11/14/13 15:00	11/14/13 17:00

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

A handwritten signature in black ink, appearing to be 'JMM'.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/15/13 21:58

R311098

Summit Scientific

S₂

741 Corporate Circle, Suite 188 • Golden, Colorado 80401
303-277-9310 • 303-574-5933

Page 1 of 1

Client: LT Environmental, Inc.
Address: 4600 West 60th Avenue
City/State/Zip: Arvada, CO 80003
Phone: 303-433-8788
Fax: 303-574-5933
Project Name: LT Environmental, Inc. 4600 West 60th Avenue, Arvada, CO 80003
Project Number: 0083-13095
Sampler Name: Chris Roy

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix	Analysis Requested	Special Instructions
					HCl	HNO ₃	Zone	Other (Specify)			
1	SR07	11/14/13	1400	3		X	X		Soil		
2	SR18	11/14/13	1500	3		X	X		Groundwater		
3									Air-Canister #		
4									Other (Specify)		
5											
6											
7											
8											
9											
10											

Relinquished by: [Signature] Date/Time: 11/14/13 1700
Received by: [Signature] Date/Time: 11/14/13 1700
Relinquished by: [Signature] Date/Time: 11/15/13
Received by: [Signature] Date/Time: 11/15/13

Notes: 811 to Todd Collins

Turn Around Time (Check): 72 hours
Same Day X 72 hours -
24 hours - Standard -

Sample Integrity: 5%
Temperature Upon Receipt: 5°C
Intact: Yes No -

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Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

[Signature]



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/15/13 21:58

SB07
R311098-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/14/13 14:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	4000	100	ug/l	100	3111413	11/14/13	11/14/13	EPA 8260B	
Toluene	8600	100	"	"	"	"	"	"	
Ethylbenzene	240	1.0	"	1	"	"	11/14/13	"	
Xylenes (total)	4600	100	"	100	"	"	11/14/13	"	

Date Sampled: 11/14/13 14:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		78.9 %	37-154		"	"	11/14/13	"	
<i>Surrogate: Toluene-d8</i>		88.8 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		101 %	45-146		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/15/13 21:58

SB08
R311098-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/14/13 15:00

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	3700	100	ug/l	100	3111413	11/14/13	11/14/13	EPA 8260B	
Toluene	15000	100	"	"	"	"	"	"	
Ethylbenzene	530	100	"	"	"	"	"	"	
Xylenes (total)	7900	100	"	"	"	"	"	"	

Date Sampled: 11/14/13 15:00

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<i>Surrogate: 1,2-Dichloroethane-d4</i>		70.7 %	37-154		"	"	11/14/13	"	
<i>Surrogate: Toluene-d8</i>		260 %	45-149		"	"	"	"	S-02
<i>Surrogate: 4-Bromofluorobenzene</i>		129 %	45-146		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/15/13 21:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3111413 - EPA 5030 Water MS

Blank (3111413-BLK1)

Prepared & Analyzed: 11/15/13

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.2	104	37-154				
Surrogate: Toluene-d8	13.3		"	13.3	100	45-149				
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3	102	45-146				

LCS (3111413-BS1)

Prepared & Analyzed: 11/15/13

Benzene	32.3	1.0	ug/l	33.3	96.9	51-132				
Toluene	33.7	1.0	"	33.3	101	51-138				
Ethylbenzene	33.4	1.0	"	33.3	100	58-146				
m,p-Xylene	66.6	2.0	"	66.7	99.9	57-144				
o-Xylene	32.2	1.0	"	33.3	96.7	53-146				
Surrogate: 1,2-Dichloroethane-d4	13.7		"	13.2	103	37-154				
Surrogate: Toluene-d8	13.4		"	13.3	101	45-149				
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3	98.3	45-146				

Matrix Spike (3111413-MS1)

Source: R311101-01

Prepared & Analyzed: 11/15/13

Benzene	31.6	1.0	ug/l	33.3	ND	94.9	34-141			
Toluene	33.6	1.0	"	33.3	ND	101	27-151			
Ethylbenzene	34.4	1.0	"	33.3	ND	103	29-160			
m,p-Xylene	67.8	2.0	"	66.7	ND	102	20-166			
o-Xylene	33.3	1.0	"	33.3	ND	99.8	33-159			
Surrogate: 1,2-Dichloroethane-d4	12.8		"	13.2	96.9	37-154				
Surrogate: Toluene-d8	13.5		"	13.3	101	45-149				
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3	98.0	45-146				

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/15/13 21:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3111413 - EPA 5030 Water MS

Matrix Spike Dup (3111413-MSD1)	Source: R311101-01			Prepared & Analyzed: 11/15/13						
Benzene	31.6	1.0	ug/l	33.3	ND	94.7	34-141	0.158	32	
Toluene	33.6	1.0	"	33.3	ND	101	27-151	0.0297	25	
Ethylbenzene	35.0	1.0	"	33.3	ND	105	29-160	1.76	50	
m,p-Xylene	69.5	2.0	"	66.7	ND	104	20-166	2.37	36	
o-Xylene	33.7	1.0	"	33.3	ND	101	33-159	1.31	26	
Surrogate: 1,2-Dichloroethane-d4	12.6		"	13.2		95.2	37-154			
Surrogate: Toluene-d8	13.3		"	13.3		99.7	45-149			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		99.0	45-146			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
11/15/13 21:58

Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

A handwritten signature in black ink, appearing to be 'JMM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 02, 2013

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: NEP - Fri 2-18

Enclosed are the results of analyses for samples received by Summit Scientific on 11/25/13 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury
President / Laboratory Manager



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/02/13 15:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB11@35'	R311152-01	Soil	11/25/13 10:25	11/25/13 17:00
SB11@38'	R311152-02	Soil	11/25/13 11:00	11/25/13 17:00

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/02/13 15:49

R31152
Summit Scientific

S₂

741 Corporate Circle, Suite 188 • Golden, Colorado 80401
303-277-9510 • 303-374-5933

Page 1 of 1

Client: LT Environmental
Address: 4600 West 60th Avenue
City/State/Zip: Arvada, CO 80003
Phone: 303-433-9788
Project Name: CR
Project Number: 0083-13095
Project Manager: Chris Roy
E-Mail: Chris.Roy@SummitScientific.com
City/State/Zip: Arvada, CO 80003
Phone: 303-374-5933
Fax: 303-374-5933
Project Name: Fri 2-18
Project Number: 0083-13095

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative			Matrix	Analysis Requested										Special Instructions
					HCl	HNO ₃	None		Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	GRO	Naphthalene	DRO	PH, EC	
1	SB11 @ 35'	11/25/13	1025	1		X				X	X	X							
2	SB11 @ 38'	11/25/13	1100	1		X				X	X	X							
3	SB12 @ 33'	11/25/13	1400	1		X				X	X	X							HOLD
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
<i>[Signature]</i>	11/25/13	<i>[Signature]</i>	11/25/13 1700	Same Day 72 hours 24 hours 48 hours	Invoice To: LTE Fawn Spangler Jacob Evans Todd Cullum
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: <u>6°C</u> Intact: <u>Yes</u> No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/02/13 15:49

SB11@35'
R311152-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/25/13 10:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3112614	11/27/13	11/27/13	8015M	

Date Sampled: 11/25/13 10:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		126 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/25/13 10:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3112613	"	11/27/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	2.4	0.50	"	"	"	"	"	"	

Date Sampled: 11/25/13 10:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/02/13 15:49

SB11@38'
R311152-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/25/13 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3112614	11/27/13	11/27/13	8015M	

Date Sampled: 11/25/13 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		126 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/25/13 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3112613	"	11/27/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 11/25/13 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/02/13 15:49

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3112614 - EPA 3550A

Blank (3112614-BLK1)

Prepared & Analyzed: 11/27/13

C10-C28 (DRO) ND 50 mg/kg

LCS (3112614-BS1)

Prepared & Analyzed: 11/27/13

C10-C28 (DRO) 569 50 mg/kg 499 114 73-134

Matrix Spike (3112614-MS1)

Source: R311156-01

Prepared & Analyzed: 11/27/13

C10-C28 (DRO) 594 50 mg/kg 499 61.9 107 50-148

Matrix Spike Dup (3112614-MSD1)

Source: R311156-01

Prepared & Analyzed: 11/27/13

C10-C28 (DRO) 579 50 mg/kg 482 61.9 107 50-148 2.55 13

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/02/13 15:49

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3112613 - EPA 5030 Soil MS

Blank (3112613-BLK1)

Prepared & Analyzed: 11/27/13

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0415</i>		<i>"</i>	<i>0.0397</i>		<i>105</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>97.9</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0409</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>21-167</i>			

LCS (3112613-BS1)

Prepared & Analyzed: 11/27/13

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0945	0.0020	"	0.0996		94.9	58-130			
Toluene	0.0950	0.0050	"	0.0996		95.4	61-134			
Ethylbenzene	0.0993	0.0050	"	0.0996		99.7	74-139			
m,p-Xylene	0.198	0.010	"	0.199		99.2	73-137			
o-Xylene	0.0962	0.0050	"	0.0996		96.6	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0404</i>		<i>"</i>	<i>0.0395</i>		<i>102</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0391</i>		<i>"</i>	<i>0.0398</i>		<i>98.1</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0406</i>		<i>"</i>	<i>0.0398</i>		<i>102</i>	<i>21-167</i>			

Matrix Spike (3112613-MS1)

Source: R311156-01

Prepared & Analyzed: 11/27/13

Naphthalene	0.00931	0.010	mg/kg		0.0172		10-158			
Benzene	0.0922	0.0020	"	0.0943	0.00394	93.6	30-131			
Toluene	0.0913	0.0050	"	0.0943	ND	96.8	30-134			
Ethylbenzene	0.103	0.0050	"	0.0943	0.0119	96.8	22-153			
m,p-Xylene	0.298	0.010	"	0.189	0.181	61.9	10-159			
o-Xylene	0.112	0.0050	"	0.0943	0.0302	87.1	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0414</i>		<i>"</i>	<i>0.0375</i>		<i>111</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0378</i>		<i>"</i>	<i>0.0377</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0377</i>		<i>"</i>	<i>0.0377</i>		<i>100</i>	<i>21-167</i>			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/02/13 15:49

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3112613 - EPA 5030 Soil MS

Matrix Spike Dup (3112613-MSD1)			Source: R311156-01		Prepared & Analyzed: 11/27/13					
Naphthalene	0.0117	0.010	mg/kg		0.0172		10-158	22.7	42	
Benzene	0.0957	0.0020	"	0.0975	0.00394	94.1	30-131	3.69	34	
Toluene	0.0947	0.0050	"	0.0975	ND	97.1	30-134	3.60	30	
Ethylbenzene	0.106	0.0050	"	0.0975	0.0119	96.9	22-153	2.93	24	
m,p-Xylene	0.303	0.010	"	0.195	0.181	62.5	10-159	1.64	68	
o-Xylene	0.117	0.0050	"	0.0975	0.0302	88.8	31-151	3.86	38	
Surrogate: 1,2-Dichloroethane-d4	0.0417		"	0.0387		108	23-173			
Surrogate: Toluene-d8	0.0386		"	0.0390		99.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0390		98.2	21-167			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/02/13 15:49

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

A handwritten signature in black ink, appearing to be 'JMM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 04, 2013

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: NEP - Fri 2-18

Enclosed are the results of analyses for samples received by Summit Scientific on 11/27/13 15:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury
President / Laboratory Manager



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB12@48'	R311186-01	Soil	11/26/13 09:15	11/27/13 15:45
SB13@30'	R311186-02	Soil	11/26/13 11:50	11/27/13 15:45
SB13@35'	R311186-03	Soil	11/26/13 12:00	11/27/13 15:45
SB14@34'	R311186-04	Soil	11/26/13 14:45	11/27/13 15:45
SB14@38'	R311186-05	Soil	11/26/13 15:00	11/27/13 15:45

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:13

Summit Scientific. R3/11/16

S2

741 Corporate Circle, Suite 100 • Golden, Colorado 80401
303-277-9310 • 303-374-5933

Page 1 of 1

Client: LT Environmental
Address: 4600 West 60th Avenue
City/State/Zip: Arvada, CO 80003
Phone: 303-433-9788
Fax: 303-374-5933
Project Name: Chris Roy
Project Number: 0083-13095
Project Manager: Chris Roy
E-Mail: Chris.Roy, Steve Kain, Rob Rebel, Chuck Gresson
Fawn Spangler, Todd Cullum, Justin Jepperson, Jacob Evans
Fri 2-18

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	GRO	Naphthalene	DRO	PH, EC	
1	SB12 @ 18'	11-26-13	0915	1			X										
2	SB13 @ 30'		1150	1			X										
3	SB13 @ 35'		1200	1			X										
4	SB14 @ 34'		1445	1			X										
5	SB14 @ 38'		1500	1			X										
6																	
7																	
8																	
9																	
10																	

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
<i>Chris Roy</i>	11-26-13	<i>Chris Roy</i>	11/27/13 15:45	72 hours Standard	Invoice To: LTE Fawn Spangler Jacob Evans Todd Cullum
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: <input checked="" type="checkbox"/> Intact <input type="checkbox"/> No	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt: <input type="checkbox"/> Intact <input type="checkbox"/> No	

www.s2scientific.com



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:13

SB12@48'
R311186-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/26/13 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3120208	12/02/13	12/03/13	8015M	

Date Sampled: 11/26/13 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		108 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/26/13 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3120207	12/02/13	12/03/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 11/26/13 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		123 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:13

SB13@30'
R311186-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/26/13 11:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	64	50	mg/kg	1	3120208	12/02/13	12/03/13	8015M	

Date Sampled: 11/26/13 11:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		107 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/26/13 11:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.070	0.010	mg/kg	1	3120207	12/02/13	12/03/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	0.012	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.026	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.64	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	20	0.50	"	"	"	"	"	"	

Date Sampled: 11/26/13 11:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.9 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:13

SB13@35'
R311186-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/26/13 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3120208	12/02/13	12/03/13	8015M	

Date Sampled: 11/26/13 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		105 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/26/13 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3120207	12/02/13	12/03/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.99	0.50	"	"	"	"	"	"	

Date Sampled: 11/26/13 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:13

SB14@34'
R311186-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/26/13 14:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	190	50	mg/kg	1	3120208	12/02/13	12/03/13	8015M	

Date Sampled: 11/26/13 14:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		105 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/26/13 14:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3120207	12/02/13	12/03/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.016	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	9.6	0.50	"	"	"	"	"	"	

Date Sampled: 11/26/13 14:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:13

SB14@38'
R311186-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/26/13 15:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3120208	12/02/13	12/03/13	8015M	

Date Sampled: 11/26/13 15:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		104 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/26/13 15:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3120207	12/02/13	12/03/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	0.0057	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1.6	0.50	"	"	"	"	"	"	

Date Sampled: 11/26/13 15:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:13

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120208 - EPA 3550A

Blank (3120208-BLK1)

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) ND 50 mg/kg

LCS (3120208-BS1)

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 498 50 mg/kg 481 104 73-134

LCS (3120208-BS2)

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 541 50 mg/kg 498 109 73-134

Matrix Spike (3120208-MS1)

Source: R311186-03

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 565 50 mg/kg 485 ND 117 50-148

Matrix Spike (3120208-MS2)

Source: R311186-05

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 486 50 mg/kg 464 ND 105 50-148

Matrix Spike Dup (3120208-MSD1)

Source: R311186-03

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 566 50 mg/kg 494 ND 115 50-148 0.139 13

Matrix Spike Dup (3120208-MSD2)

Source: R311186-05

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 526 50 mg/kg 480 ND 110 50-148 7.92 13

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:13

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120207 - EPA 5030 Soil MS

Blank (3120207-BLK1)

Prepared & Analyzed: 12/02/13

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0416</i>		<i>"</i>	<i>0.0396</i>		<i>105</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0385</i>		<i>"</i>	<i>0.0399</i>		<i>96.5</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0413</i>		<i>"</i>	<i>0.0399</i>		<i>104</i>	<i>21-167</i>			

LCS (3120207-BS1)

Prepared & Analyzed: 12/02/13

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0961	0.0020	"	0.0996		96.4	58-130			
Toluene	0.0990	0.0050	"	0.0996		99.4	61-134			
Ethylbenzene	0.0996	0.0050	"	0.0996		100	74-139			
m,p-Xylene	0.195	0.010	"	0.199		97.8	73-137			
o-Xylene	0.0970	0.0050	"	0.0996		97.4	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0398</i>		<i>"</i>	<i>0.0395</i>		<i>101</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0397</i>		<i>"</i>	<i>0.0398</i>		<i>99.7</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0394</i>		<i>"</i>	<i>0.0398</i>		<i>99.0</i>	<i>21-167</i>			

LCS (3120207-BS2)

Prepared & Analyzed: 12/02/13

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0963	0.0020	"	0.0992		97.0	58-130			
Toluene	0.0994	0.0050	"	0.0992		100	61-134			
Ethylbenzene	0.0999	0.0050	"	0.0992		101	74-139			
m,p-Xylene	0.197	0.010	"	0.198		99.2	73-137			
o-Xylene	0.0958	0.0050	"	0.0992		96.5	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0401</i>		<i>"</i>	<i>0.0394</i>		<i>102</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0404</i>		<i>"</i>	<i>0.0397</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0396</i>		<i>"</i>	<i>0.0397</i>		<i>99.8</i>	<i>21-167</i>			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:13

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120207 - EPA 5030 Soil MS

Matrix Spike (3120207-MS1)

Source: R311186-03

Prepared: 12/02/13

Analyzed: 12/03/13

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0942	0.0020	"	0.0967	ND	97.4	30-131			
Toluene	0.0967	0.0050	"	0.0967	ND	100	30-134			
Ethylbenzene	0.0957	0.0050	"	0.0967	ND	98.9	22-153			
m,p-Xylene	0.191	0.010	"	0.193	ND	98.7	10-159			
o-Xylene	0.0945	0.0050	"	0.0967	ND	97.7	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0417		"	0.0384		109	23-173			
Surrogate: Toluene-d8	0.0386		"	0.0387		99.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0387		98.2	21-167			

Matrix Spike (3120207-MS2)

Source: R311186-05

Prepared: 12/02/13

Analyzed: 12/03/13

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0940	0.0020	"	0.0963	ND	97.6	30-131			
Toluene	0.0992	0.0050	"	0.0963	0.00570	97.1	30-134			
Ethylbenzene	0.0951	0.0050	"	0.0963	ND	98.7	22-153			
m,p-Xylene	0.190	0.010	"	0.193	ND	98.5	10-159			
o-Xylene	0.0931	0.0050	"	0.0963	ND	96.7	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0398		"	0.0382		104	23-173			
Surrogate: Toluene-d8	0.0376		"	0.0385		97.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0371		"	0.0385		96.3	21-167			

Matrix Spike Dup (3120207-MSD1)

Source: R311186-03

Prepared: 12/02/13

Analyzed: 12/03/13

Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0969	0.0020	"	0.0963	ND	101	30-131	2.80	34	
Toluene	0.100	0.0050	"	0.0963	ND	104	30-134	3.56	30	
Ethylbenzene	0.0965	0.0050	"	0.0963	ND	100	22-153	0.910	24	
m,p-Xylene	0.194	0.010	"	0.193	ND	101	10-159	1.48	68	
o-Xylene	0.0958	0.0050	"	0.0963	ND	99.5	31-151	1.41	38	
Surrogate: 1,2-Dichloroethane-d4	0.0426		"	0.0382		111	23-173			
Surrogate: Toluene-d8	0.0390		"	0.0385		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0385		101	21-167			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:13

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120207 - EPA 5030 Soil MS

Matrix Spike Dup (3120207-MSD2)				Source: R311186-05		Prepared: 12/02/13		Analyzed: 12/03/13		
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.103	0.0020	"	0.0969	ND	106	30-131	8.80	34	
Toluene	0.108	0.0050	"	0.0969	0.00570	105	30-134	8.17	30	
Ethylbenzene	0.0975	0.0050	"	0.0969	ND	101	22-153	2.48	24	
m,p-Xylene	0.197	0.010	"	0.194	ND	102	10-159	3.68	68	
o-Xylene	0.0977	0.0050	"	0.0969	ND	101	31-151	4.77	38	
Surrogate: 1,2-Dichloroethane-d4	0.0438		"	0.0385		114	23-173			
Surrogate: Toluene-d8	0.0409		"	0.0388		106	20-170			
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0388		101	21-167			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:13

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

A handwritten signature in black ink, appearing to be 'JMM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 04, 2013

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: NEP - Fri 2-18

Enclosed are the results of analyses for samples received by Summit Scientific on 11/27/13 15:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury
President / Laboratory Manager



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB15@36'	R311187-01	Soil	11/27/13 14:00	11/27/13 15:45
SB15@41'	R311187-02	Soil	11/27/13 14:15	11/27/13 15:45
SB16@40'	R311187-03	Soil	11/27/13 11:45	11/27/13 15:45

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:24

R311187

Summit Scientific

S2

741 Corporate Circle, Suite 100 • Golden, Colorado 80401
303-277-9310 • 303-574-9333

Page 1 of 1

Client: LT Environmental, Inc. Project Manager: Chris Roy
Address: 4600 West 60th Avenue E-Mail: croy@ltenv.com
City/State/Zip: Arvada, CO 80003
Phone: 303-433-9788 Fax: 303-574-9333
Sampler Name: D1030 Project Name: Fri 2-18
Project Number: 008313095

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix	Analysis Requested	Special Instructions
					HCl	HNO3	None	Other (Specify)			
1	SBSC3	11/27/13	1400	1				X	Soil	DTX GRO DSO Alphaldr	
2	SBSC4	11/27/13	1415	1				X	Groundwater	X X X	
3	SBSC40	11/27/13	1445	1				X	Groundwater	X X X	
4											
5											
6											
7											
8											
9											
10											

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
<i>[Signature]</i>	11/27/13	<i>[Signature]</i>	11/27/13 15:45	Same Day 24 hours 48 hours 72 hours Standard X	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	Temperature Upon Receipt: Intact Yes No
Relinquished by:	Date/Time:	Received by:	Date/Time:		

www.s2scientific.com

[Signature]



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:24

SB15@36'
R311187-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/27/13 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3120208	12/02/13	12/02/13	8015M	

Date Sampled: 11/27/13 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.1 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/27/13 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3120207	12/02/13	12/03/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	0.0096	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.014	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 11/27/13 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:24

SB15@41'
R311187-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/27/13 14:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3120208	12/02/13	12/02/13	8015M	

Date Sampled: 11/27/13 14:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		78.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/27/13 14:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3120207	12/02/13	12/03/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 11/27/13 14:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:24

SB16@40'
R311187-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/27/13 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	540	50	mg/kg	1	3120208	12/02/13	12/02/13	8015M	

Date Sampled: 11/27/13 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.4 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/27/13 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	1.1	0.10	mg/kg	10	3120207	12/02/13	12/03/13	EPA 8260B	
Benzene	0.060	0.0020	"	1	"	"	"	"	
Toluene	8.6	1.0	"	200	"	"	"	"	
Ethylbenzene	2.4	0.050	"	10	"	"	"	"	
Xylenes (total)	33	2.0	"	200	"	"	"	"	
Gasoline Range Hydrocarbons	1100	100	"	"	"	"	"	"	

Date Sampled: 11/27/13 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:24

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120208 - EPA 3550A

Blank (3120208-BLK1)

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) ND 50 mg/kg

LCS (3120208-BS1)

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 498 50 mg/kg 481 104 73-134

LCS (3120208-BS2)

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 541 50 mg/kg 498 109 73-134

Matrix Spike (3120208-MS1)

Source: R311186-03

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 565 50 mg/kg 485 ND 117 50-148

Matrix Spike (3120208-MS2)

Source: R311186-05

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 486 50 mg/kg 464 ND 105 50-148

Matrix Spike Dup (3120208-MSD1)

Source: R311186-03

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 566 50 mg/kg 494 ND 115 50-148 0.139 13

Matrix Spike Dup (3120208-MSD2)

Source: R311186-05

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 526 50 mg/kg 480 ND 110 50-148 7.92 13

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:24

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120207 - EPA 5030 Soil MS

Blank (3120207-BLK1)

Prepared & Analyzed: 12/02/13

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0416</i>		<i>"</i>	<i>0.0396</i>		<i>105</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0385</i>		<i>"</i>	<i>0.0399</i>		<i>96.5</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0413</i>		<i>"</i>	<i>0.0399</i>		<i>104</i>	<i>21-167</i>			

LCS (3120207-BS1)

Prepared & Analyzed: 12/02/13

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0961	0.0020	"	0.0996		96.4	58-130			
Toluene	0.0990	0.0050	"	0.0996		99.4	61-134			
Ethylbenzene	0.0996	0.0050	"	0.0996		100	74-139			
m,p-Xylene	0.195	0.010	"	0.199		97.8	73-137			
o-Xylene	0.0970	0.0050	"	0.0996		97.4	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0398</i>		<i>"</i>	<i>0.0395</i>		<i>101</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0397</i>		<i>"</i>	<i>0.0398</i>		<i>99.7</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0394</i>		<i>"</i>	<i>0.0398</i>		<i>99.0</i>	<i>21-167</i>			

LCS (3120207-BS2)

Prepared & Analyzed: 12/02/13

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0963	0.0020	"	0.0992		97.0	58-130			
Toluene	0.0994	0.0050	"	0.0992		100	61-134			
Ethylbenzene	0.0999	0.0050	"	0.0992		101	74-139			
m,p-Xylene	0.197	0.010	"	0.198		99.2	73-137			
o-Xylene	0.0958	0.0050	"	0.0992		96.5	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0401</i>		<i>"</i>	<i>0.0394</i>		<i>102</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0404</i>		<i>"</i>	<i>0.0397</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0396</i>		<i>"</i>	<i>0.0397</i>		<i>99.8</i>	<i>21-167</i>			

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:24

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120207 - EPA 5030 Soil MS

Matrix Spike (3120207-MS1)

Source: R311186-03

Prepared: 12/02/13

Analyzed: 12/03/13

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0942	0.0020	"	0.0967	ND	97.4	30-131			
Toluene	0.0967	0.0050	"	0.0967	ND	100	30-134			
Ethylbenzene	0.0957	0.0050	"	0.0967	ND	98.9	22-153			
m,p-Xylene	0.191	0.010	"	0.193	ND	98.7	10-159			
o-Xylene	0.0945	0.0050	"	0.0967	ND	97.7	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0417		"	0.0384		109	23-173			
Surrogate: Toluene-d8	0.0386		"	0.0387		99.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0387		98.2	21-167			

Matrix Spike (3120207-MS2)

Source: R311186-05

Prepared: 12/02/13

Analyzed: 12/03/13

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0940	0.0020	"	0.0963	ND	97.6	30-131			
Toluene	0.0992	0.0050	"	0.0963	0.00570	97.1	30-134			
Ethylbenzene	0.0951	0.0050	"	0.0963	ND	98.7	22-153			
m,p-Xylene	0.190	0.010	"	0.193	ND	98.5	10-159			
o-Xylene	0.0931	0.0050	"	0.0963	ND	96.7	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0398		"	0.0382		104	23-173			
Surrogate: Toluene-d8	0.0376		"	0.0385		97.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0371		"	0.0385		96.3	21-167			

Matrix Spike Dup (3120207-MSD1)

Source: R311186-03

Prepared: 12/02/13

Analyzed: 12/03/13

Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0969	0.0020	"	0.0963	ND	101	30-131	2.80	34	
Toluene	0.100	0.0050	"	0.0963	ND	104	30-134	3.56	30	
Ethylbenzene	0.0965	0.0050	"	0.0963	ND	100	22-153	0.910	24	
m,p-Xylene	0.194	0.010	"	0.193	ND	101	10-159	1.48	68	
o-Xylene	0.0958	0.0050	"	0.0963	ND	99.5	31-151	1.41	38	
Surrogate: 1,2-Dichloroethane-d4	0.0426		"	0.0382		111	23-173			
Surrogate: Toluene-d8	0.0390		"	0.0385		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0385		101	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:24

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120207 - EPA 5030 Soil MS

Matrix Spike Dup (3120207-MSD2)				Source: R311186-05		Prepared: 12/02/13		Analyzed: 12/03/13		
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.103	0.0020	"	0.0969	ND	106	30-131	8.80	34	
Toluene	0.108	0.0050	"	0.0969	0.00570	105	30-134	8.17	30	
Ethylbenzene	0.0975	0.0050	"	0.0969	ND	101	22-153	2.48	24	
m,p-Xylene	0.197	0.010	"	0.194	ND	102	10-159	3.68	68	
o-Xylene	0.0977	0.0050	"	0.0969	ND	101	31-151	4.77	38	
Surrogate: 1,2-Dichloroethane-d4	0.0438		"	0.0385		114	23-173			
Surrogate: Toluene-d8	0.0409		"	0.0388		106	20-170			
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0388		101	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/04/13 17:24

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

A handwritten signature in black ink, appearing to be 'JMM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 03, 2013

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: NEP - Fri 2-18

Enclosed are the results of analyses for samples received by Summit Scientific on 12/02/13 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury
President / Laboratory Manager



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB11	R312004-01	Water	12/02/13 11:00	12/02/13 17:00
SB12	R312004-02	Water	12/02/13 11:35	12/02/13 17:00
SB13	R312004-03	Water	12/02/13 12:20	12/02/13 17:00
SB14	R312004-04	Water	12/02/13 13:00	12/02/13 17:00
SB15	R312004-05	Water	12/02/13 14:15	12/02/13 17:00

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:32

Summit Scientific R3/2004

S:

741 Corporate Circle, Suite J&K • Golden, Colorado 80401
303-277-9910 • 303-374-5933

Page 1 of 1

Client: LT Environmental
Address: 4600 West 60th Avenue
City/State/Zip: Arvada, CO 80003
Phone: 303-433-9788
Fax: 303-374-5933
Project Manager: Chris Roy
E-Mail: Chris.Roy@SummitScientific.com
Project Name: Fri 2-18
Project Number: 0083-13095

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions
					HCl	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	GRO	Naphthalene	PH, EC	SAR	
1	SB11	12/2/13	1100	3		X		X									
2	SB12	12/2/13	1135	1		X		X									
3	SB13	12/2/13	1210	1		X		X									
4	SB14	12/2/13	1300	1		X		X									
5	SB15	12/2/13	1415	1		X		X									
6																	
7																	
8																	
9																	
10																	

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
W. Williams	12/4/2013 1400	Chris Roy	12/2/13 1700	72 hours	Invoice To: Fawn Spangler
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours	Sample Integrity: 70%
				48 hours	Temperature Upon Receipt: 70%
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	Intact: Yes No
					Todd Cullum

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:32

SB11
R312004-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/02/13 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	3120209	12/02/13	12/02/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 12/02/13 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.0 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		94.8 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	45-146		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:32

SB12
R312004-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/02/13 11:35

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	3120209	12/02/13	12/02/13	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: 12/02/13 11:35

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		99.2 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		99.1 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		45-146		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:32

SB13
R312004-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/02/13 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	3120209	12/02/13	12/02/13	EPA 8260B	
Toluene	1.6	1.0	"	"	"	"	"	"	
Ethylbenzene	1.1	1.0	"	"	"	"	"	"	
Xylenes (total)	2.5	1.0	"	"	"	"	"	"	

Date Sampled: 12/02/13 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	45-146		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:32

SB14
R312004-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/02/13 13:00

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	6.5	1.0		ug/l	1	3120209	12/02/13	12/02/13	EPA 8260B	
Toluene	11	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	20	1.0		"	"	"	"	"	"	

Date Sampled: 12/02/13 13:00

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		101 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		97.6 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		45-146		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:32

SB15
R312004-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/02/13 14:15

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	9000	100		ug/l	100	3120209	12/02/13	12/02/13	EPA 8260B	
Toluene	24000	100		"	"	"	"	"	"	
Ethylbenzene	1300	100		"	"	"	"	"	"	
Xylenes (total)	19000	100		"	"	"	"	"	"	

Date Sampled: 12/02/13 14:15

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %		37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		100 %		45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		103 %		45-146		"	"	"	"	

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120209 - EPA 5030 Water MS

Blank (3120209-BLK1)

Prepared & Analyzed: 12/02/13

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.2		104	37-154			
Surrogate: Toluene-d8	12.8		"	13.3		95.8	45-149			
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3		102	45-146			

LCS (3120209-BS1)

Prepared & Analyzed: 12/02/13

Benzene	29.3	1.0	ug/l	33.3		87.8	51-132			
Toluene	33.4	1.0	"	33.3		100	51-138			
Ethylbenzene	44.3	1.0	"	33.3		133	58-146			
m,p-Xylene	81.3	2.0	"	66.7		122	57-144			
o-Xylene	40.7	1.0	"	33.3		122	53-146			
Surrogate: 1,2-Dichloroethane-d4	14.0		"	13.2		106	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.1	45-149			
Surrogate: 4-Bromofluorobenzene	13.7		"	13.3		103	45-146			

Matrix Spike (3120209-MS1)

Source: R312004-01

Prepared & Analyzed: 12/02/13

Benzene	28.3	1.0	ug/l	33.3	ND	84.9	34-141			
Toluene	32.9	1.0	"	33.3	ND	98.7	27-151			
Ethylbenzene	45.0	1.0	"	33.3	ND	135	29-160			
m,p-Xylene	82.7	2.0	"	66.7	ND	124	20-166			
o-Xylene	41.2	1.0	"	33.3	ND	123	33-159			
Surrogate: 1,2-Dichloroethane-d4	12.6		"	13.2		95.4	37-154			
Surrogate: Toluene-d8	12.8		"	13.3		96.2	45-149			
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3		102	45-146			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120209 - EPA 5030 Water MS

Matrix Spike Dup (3120209-MSD1)		Source: R312004-01			Prepared & Analyzed: 12/02/13					
Benzene	28.6	1.0	ug/l	33.3	ND	85.9	34-141	1.16	32	
Toluene	33.1	1.0	"	33.3	ND	99.2	27-151	0.515	25	
Ethylbenzene	45.2	1.0	"	33.3	ND	135	29-160	0.310	50	
m,p-Xylene	83.0	2.0	"	66.7	ND	124	20-166	0.410	36	
o-Xylene	41.5	1.0	"	33.3	ND	125	33-159	0.847	26	
Surrogate: 1,2-Dichloroethane-d4	13.1		"	13.2		98.8	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.3	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	45-146			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:32

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

A handwritten signature in black ink, appearing to be 'JMM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 03, 2013

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: NEP - Fri 2-18

Enclosed are the results of analyses for samples received by Summit Scientific on 12/02/13 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury
President / Laboratory Manager



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB17@40'	R312005-01	Soil	12/02/13 13:00	12/02/13 17:00
SB18@40'	R312005-02	Soil	12/02/13 10:30	12/02/13 17:00

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095

Project Manager: Chris Roy

Reported:

12/03/13 20:36

Summit Scientific
R312005

52

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303-277-9310 • 303-374-5933

Page 1 of 1

Client: LT Environmental

Project Manager: Chris Roy

Address: 4600 West 60th Avenue

E-Mail: Chris Roy, Steve Kahn, Rob Rebel, Chuck Gresson

City/State/Zip: Arvada, CO 80003

Fawn Spangler, Todd Cullum, Justin Jepperson, Jacob Evans

Phone: 303-433-9788

Fax: 303-374-5933

Project Name: Fr 2-16

Sampler Name: 7788

Project Number: 0003-13062 00333075

Project Number: 0003-13062 00333075

Preservative		Matrix		Analysis Requested		Special Instructions											
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other (Specify)	Soil	Air-Canister #	Other (Specify)	BTEX	GRO	Zaphthalene	PH, EC	SAR	Arsenic
1	Sgt 7040'	12/2/13	3:00	1					X			X	X	X			
2	Sgt 6040'	12/2/13	1:30	1					X			X	X	X			
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
Relinquished by: <i>[Signature]</i>		Date/Time: 12/2/13 1600	Received by: <i>[Signature]</i>	Date/Time: 12/2/13 1700	Turn Around Time (Check)		Notes: Invoice To: LTE Fawn Spangler										
Relinquished by: <i>[Signature]</i>		Date/Time: 12/2/13 1600	Received by: <i>[Signature]</i>	Date/Time: 12/2/13 1700	Sample Integrity: Temperature Upon Receipt: 2°C Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Notes: Invoice To: LTE Fawn Spangler										
Relinquished by: <i>[Signature]</i>		Date/Time: 12/2/13 1600	Received by: <i>[Signature]</i>	Date/Time: 12/2/13 1700	Sample Integrity: Temperature Upon Receipt: 2°C Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Notes: Invoice To: LTE Fawn Spangler										

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Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:36

SB17@40'
R312005-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/02/13 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3120208	12/02/13	12/02/13	8015M	

Date Sampled: 12/02/13 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		109 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/02/13 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3120207	12/02/13	12/02/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 12/02/13 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:36

SB18@40'
R312005-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/02/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3120208	12/02/13	12/02/13	8015M	

Date Sampled: 12/02/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		108 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/02/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3120207	12/02/13	12/02/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 12/02/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:36

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120208 - EPA 3550A

Blank (3120208-BLK1)

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) ND 50 mg/kg

LCS (3120208-BS1)

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 498 50 mg/kg 481 104 73-134

LCS (3120208-BS2)

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 541 50 mg/kg 498 109 73-134

Matrix Spike (3120208-MS1)

Source: R311186-03

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 565 50 mg/kg 485 ND 117 50-148

Matrix Spike (3120208-MS2)

Source: R311186-05

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 486 50 mg/kg 464 ND 105 50-148

Matrix Spike Dup (3120208-MSD1)

Source: R311186-03

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 566 50 mg/kg 494 ND 115 50-148 0.139 13

Matrix Spike Dup (3120208-MSD2)

Source: R311186-05

Prepared & Analyzed: 12/02/13

C10-C28 (DRO) 526 50 mg/kg 480 ND 110 50-148 7.92 13

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:36

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120207 - EPA 5030 Soil MS

Blank (3120207-BLK1)

Prepared & Analyzed: 12/02/13

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0416</i>		<i>"</i>	<i>0.0396</i>		<i>105</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0385</i>		<i>"</i>	<i>0.0399</i>		<i>96.5</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0413</i>		<i>"</i>	<i>0.0399</i>		<i>104</i>	<i>21-167</i>			

LCS (3120207-BS1)

Prepared & Analyzed: 12/02/13

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0961	0.0020	"	0.0996		96.4	58-130			
Toluene	0.0990	0.0050	"	0.0996		99.4	61-134			
Ethylbenzene	0.0996	0.0050	"	0.0996		100	74-139			
m,p-Xylene	0.195	0.010	"	0.199		97.8	73-137			
o-Xylene	0.0970	0.0050	"	0.0996		97.4	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0398</i>		<i>"</i>	<i>0.0395</i>		<i>101</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0397</i>		<i>"</i>	<i>0.0398</i>		<i>99.7</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0394</i>		<i>"</i>	<i>0.0398</i>		<i>99.0</i>	<i>21-167</i>			

LCS (3120207-BS2)

Prepared & Analyzed: 12/02/13

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0963	0.0020	"	0.0992		97.0	58-130			
Toluene	0.0994	0.0050	"	0.0992		100	61-134			
Ethylbenzene	0.0999	0.0050	"	0.0992		101	74-139			
m,p-Xylene	0.197	0.010	"	0.198		99.2	73-137			
o-Xylene	0.0958	0.0050	"	0.0992		96.5	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0401</i>		<i>"</i>	<i>0.0394</i>		<i>102</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0404</i>		<i>"</i>	<i>0.0397</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0396</i>		<i>"</i>	<i>0.0397</i>		<i>99.8</i>	<i>21-167</i>			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:36

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120207 - EPA 5030 Soil MS

Matrix Spike (3120207-MS1)

Source: R311186-03

Prepared: 12/02/13

Analyzed: 12/03/13

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0942	0.0020	"	0.0967	ND	97.4	30-131			
Toluene	0.0967	0.0050	"	0.0967	ND	100	30-134			
Ethylbenzene	0.0957	0.0050	"	0.0967	ND	98.9	22-153			
m,p-Xylene	0.191	0.010	"	0.193	ND	98.7	10-159			
o-Xylene	0.0945	0.0050	"	0.0967	ND	97.7	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0417		"	0.0384		109	23-173			
Surrogate: Toluene-d8	0.0386		"	0.0387		99.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0387		98.2	21-167			

Matrix Spike (3120207-MS2)

Source: R311186-05

Prepared: 12/02/13

Analyzed: 12/03/13

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0940	0.0020	"	0.0963	ND	97.6	30-131			
Toluene	0.0992	0.0050	"	0.0963	0.00570	97.1	30-134			
Ethylbenzene	0.0951	0.0050	"	0.0963	ND	98.7	22-153			
m,p-Xylene	0.190	0.010	"	0.193	ND	98.5	10-159			
o-Xylene	0.0931	0.0050	"	0.0963	ND	96.7	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0398		"	0.0382		104	23-173			
Surrogate: Toluene-d8	0.0376		"	0.0385		97.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0371		"	0.0385		96.3	21-167			

Matrix Spike Dup (3120207-MSD1)

Source: R311186-03

Prepared: 12/02/13

Analyzed: 12/03/13

Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0969	0.0020	"	0.0963	ND	101	30-131	2.80	34	
Toluene	0.100	0.0050	"	0.0963	ND	104	30-134	3.56	30	
Ethylbenzene	0.0965	0.0050	"	0.0963	ND	100	22-153	0.910	24	
m,p-Xylene	0.194	0.010	"	0.193	ND	101	10-159	1.48	68	
o-Xylene	0.0958	0.0050	"	0.0963	ND	99.5	31-151	1.41	38	
Surrogate: 1,2-Dichloroethane-d4	0.0426		"	0.0382		111	23-173			
Surrogate: Toluene-d8	0.0390		"	0.0385		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0385		101	21-167			

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:36

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120207 - EPA 5030 Soil MS

Matrix Spike Dup (3120207-MSD2)				Source: R311186-05		Prepared: 12/02/13		Analyzed: 12/03/13		
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.103	0.0020	"	0.0969	ND	106	30-131	8.80	34	
Toluene	0.108	0.0050	"	0.0969	0.00570	105	30-134	8.17	30	
Ethylbenzene	0.0975	0.0050	"	0.0969	ND	101	22-153	2.48	24	
m,p-Xylene	0.197	0.010	"	0.194	ND	102	10-159	3.68	68	
o-Xylene	0.0977	0.0050	"	0.0969	ND	101	31-151	4.77	38	
Surrogate: 1,2-Dichloroethane-d4	0.0438		"	0.0385		114	23-173			
Surrogate: Toluene-d8	0.0409		"	0.0388		106	20-170			
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0388		101	21-167			

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 20:36

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

A handwritten signature in black ink, appearing to be 'JMM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 03, 2013

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: NEP - Fri 2-18

Enclosed are the results of analyses for samples received by Summit Scientific on 12/03/13 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', written in a cursive style.

Ben Shrewsbury
President / Laboratory Manager



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 22:12

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB19@37'	R312017-01	Soil	12/03/13 10:30	12/03/13 17:00

Summit Scientific
R312017

S₂

741 Corporate Circle, Suite 100 • Golden, Colorado 80401
303-277-9310 • 303-374-5933

Page 1 of 1

Client: LT Environmental, Inc.
Address: 4600 West 60th Avenue
City/State/Zip: Arvada, CO 80003
Phone: 303-433-9788
Project Manager: Chris Roy
E-Mail: croy@ltenv.com
Fax: 303-374-5933
Project Name: Fri 2-18
Project Number: 0083-13095
Sampler Name: JH815

ID	Sample Description	Date Sampled	Time Sampled	Preservative				Matrix	Analysis Requested	Special Instructions
				HCl	HNO ₃	None	Other (Specify)			
1	SB19@37'	12/3/13	10:30					Soil	As requested	
2										
3										
4										
5										
6										
7										
8										
9										
10										

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
SLW	12/3/13 10:30	SLW	12/3/2013 1700	Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	Temperature Upon Receipt: 2°C
Relinquished by:	Date/Time:	Received by:	Date/Time:	Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

www.s2scientific.com

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 22:12

SB19@37'
R312017-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/03/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3120308	12/03/13	12/03/13	8015M	

Date Sampled: 12/03/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		104 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/03/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	3120309	12/03/13	12/03/13	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 12/03/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 22:12

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120308 - EPA 3550A

Blank (3120308-BLK1)

Prepared & Analyzed: 12/03/13

C10-C28 (DRO) ND 50 mg/kg

LCS (3120308-BS1)

Prepared & Analyzed: 12/03/13

C10-C28 (DRO) 565 50 mg/kg 501 113 73-134

Matrix Spike (3120308-MS1)

Source: R312006-01

Prepared & Analyzed: 12/03/13

C10-C28 (DRO) 558 50 mg/kg 501 ND 111 50-148

Matrix Spike Dup (3120308-MSD1)

Source: R312006-01

Prepared & Analyzed: 12/03/13

C10-C28 (DRO) 565 50 mg/kg 501 ND 113 50-148 1.28 13

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18
Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 22:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120309 - EPA 5030 Soil MS

Blank (3120309-BLK1)

Prepared & Analyzed: 12/03/13

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0407		"	0.0397	103	23-173				
Surrogate: Toluene-d8	0.0387		"	0.0400	96.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400	102	21-167				

LCS (3120309-BS1)

Prepared & Analyzed: 12/03/13

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.0966	0.0020	"	0.100	96.6	58-130				
Toluene	0.0998	0.0050	"	0.100	99.8	61-134				
Ethylbenzene	0.0996	0.0050	"	0.100	99.6	74-139				
m,p-Xylene	0.201	0.010	"	0.200	100	73-137				
o-Xylene	0.0962	0.0050	"	0.100	96.2	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0404		"	0.0397	102	23-173				
Surrogate: Toluene-d8	0.0396		"	0.0400	99.1	20-170				
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400	102	21-167				

LCS Dup (3120309-BSD1)

Prepared & Analyzed: 12/03/13

Naphthalene	ND	0.010	mg/kg			66-138			12	
Benzene	0.100	0.0020	"	0.100	100	58-130	3.81		13	
Toluene	0.102	0.0050	"	0.100	102	61-134	2.55		16	
Ethylbenzene	0.101	0.0050	"	0.100	101	74-139	0.929		12	
m,p-Xylene	0.203	0.010	"	0.200	101	73-137	1.01		14	
o-Xylene	0.100	0.0050	"	0.100	100	73-141	4.39		12	
Surrogate: 1,2-Dichloroethane-d4	0.0404		"	0.0397	102	23-173				
Surrogate: Toluene-d8	0.0400		"	0.0400	99.9	20-170				
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400	99.7	21-167				

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 22:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3120309 - EPA 5030 Soil MS

Matrix Spike (3120309-MS1)

Source: R312006-01

Prepared & Analyzed: 12/03/13

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.104	0.0020	"	0.100	ND	104	30-131			
Toluene	0.104	0.0050	"	0.100	ND	104	30-134			
Ethylbenzene	0.103	0.0050	"	0.100	ND	103	22-153			
m,p-Xylene	0.204	0.010	"	0.200	0.00328	100	10-159			
o-Xylene	0.0993	0.0050	"	0.100	ND	99.3	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0406		"	0.0397		102	23-173			
Surrogate: Toluene-d8	0.0396		"	0.0400		98.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		97.0	21-167			

Matrix Spike Dup (3120309-MSD1)

Source: R312006-01

Prepared & Analyzed: 12/03/13

Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0985	0.0020	"	0.100	ND	98.5	30-131	5.80	34	
Toluene	0.102	0.0050	"	0.100	ND	102	30-134	1.83	30	
Ethylbenzene	0.0982	0.0050	"	0.100	ND	98.2	22-153	5.06	24	
m,p-Xylene	0.197	0.010	"	0.200	0.00328	97.0	10-159	3.48	68	
o-Xylene	0.0962	0.0050	"	0.100	ND	96.2	31-151	3.16	38	
Surrogate: 1,2-Dichloroethane-d4	0.0409		"	0.0397		103	23-173			
Surrogate: Toluene-d8	0.0403		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		95.0	21-167			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: NEP - Fri 2-18

Project Number: 0083-13095
Project Manager: Chris Roy

Reported:
12/03/13 22:12

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

A handwritten signature in black ink, appearing to be 'JMM'.



December 09, 2013

LT Environmental, Inc.

Chris Roy

4600 West 60th Avenue

Arvada

CO 80003

Project Name - Noble - Fri 2-18

Project Number - 008313095

Attached are your analytical results for Noble - Fri 2-18 received by Origins Laboratory, Inc. December 09, 2013. This project is associated with Origins project number X312079-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods specified in SW-846. The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

LT Environmental, Inc.

4600 West 60th Avenue

Arvada CO 80003

Chris Roy

Project Number: 008313095

Project: Noble - Fri 2-18

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB18	X312079-01	Water	December 9, 2013 13:15	12/09/2013 17:00

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

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X312079

ORIGINS
LABORATORY, INC

page 1 of 1

Client: LTE
Address:
Telephone Number: 303-433-9788
Email Address: CPXC@ENV.COM

Project Manager: Chris Roy
Project Name: Fri 2-18
Project Number: 008313095
Samples Collected By: Dickler

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #	Other			
SR18	12/13	1315	3					X						1
														2
														3
														4
														5
														6
														7
														8
														9
														10

Relinquished By: [Signature] Date: 12/13 Time: 1700

Relinquished By: [Signature] Date: 12/13 Time: 1700

Turnaround Time: Same Day ☒ 24 Hr ☐ 48 Hr ☐ 72 Hr ☐ Standard ☐

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X 312079

Client: LTE

Client Project ID: 008313095

Checklist Completed by: Jose Smith

Shipped Via: Pick Up
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 12/9/13

Airbill #: NA

Matrix(s) Received: (Check all that apply): ☐ Soil/Solid ☒ Water ☐ Other: _____

Cooler Number/Temperature: 15.1 °C / _____ °C / _____ °C (Describe) _____ °C

Thermometer ID: 7002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?				
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄ / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)		<input checked="" type="checkbox"/>		SAME DAY
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date, time, and person contacted as well as the corrective action to be taken in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

12-09-031803
Date/Time Reviewed

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB18

12/9/2013 1:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. X312079-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	3L09008	12/09/2013	12/09/2013
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	97.8 %	84-121			"	"	"
Surrogate: Toluene-d8	100 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	101 %	84-114			"	"	"

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3L09008 - EPA 5030B (Water)

Blank (3L09008-BLK1)

Prepared: 12/09/2013 Analyzed: 12/09/2013

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.5	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		103	84-114			

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L09008 - EPA 5030B (Water)										
LCS (3L09008-BS1)					Prepared: 12/09/2013 Analyzed: 12/09/2013					
Benzene	48.6	1.0	ug/L	50.0		97.3	74-130			
Toluene	52.4	1.0	"	50.0		105	76-128			
Ethylbenzene	53.6	1.0	"	50.0		107	78-130			
m,p-Xylene	108	2.0	"	100		108	75-134			
o-Xylene	53.0	1.0	"	50.0		106	76-129			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		95.5	84-121			
Surrogate: Toluene-d8	63		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		109	84-114			

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L09008 - EPA 5030B (Water)										
Matrix Spike (3L09008-MS1)		Source: X312054-01			Prepared: 12/09/2013 Analyzed: 12/09/2013					
Benzene	52.5	1.0	ug/L	50.0	413	NR	74-130			QM-05
Toluene	57.5	1.0	"	50.0	ND	115	73-131			
Ethylbenzene	59.2	1.0	"	50.0	3.5	111	76-132			
m,p-Xylene	120	2.0	"	100	81.5	38.1	69-139			QM-05
o-Xylene	59.7	1.0	"	50.0	ND	119	74-131			
Surrogate: 1,2-Dichloroethane-d4	57		"	62.5		90.7	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	69		"	62.5		110	84-114			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L09008 - EPA 5030B (Water)										
Matrix Spike Dup (3L09008-MSD1)			Source: X312054-01		Prepared: 12/09/2013 Analyzed: 12/09/2013					
Benzene	51.8	1.0	ug/L	50.0	413	NR	74-130	1.42	20	QM-05
Toluene	55.7	1.0	"	50.0	ND	111	73-131	3.16	20	
Ethylbenzene	57.2	1.0	"	50.0	3.5	107	76-132	3.59	20	
m,p-Xylene	115	2.0	"	100	81.5	33.2	69-139	4.21	20	QM-05
o-Xylene	57.7	1.0	"	50.0	ND	115	74-131	3.30	20	
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		94.8	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Notes and Definitions

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



December 17, 2013

LT Environmental, Inc.

Chris Roy

4600 West 60th Avenue

Arvada

CO 80003

Project Name - Noble - Fri 2-18

Project Number - 008313095

Attached are your analytical results for Noble - Fri 2-18 received by Origins Laboratory, Inc. December 16, 2013. This project is associated with Origins project number X312153-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods specified in SW-846. The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.

303.433.1322

o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB20@35'	X312153-01	Soil	December 16, 2013 10:30	12/16/2013 15:00
SB21@46'	X312153-02	Soil	December 16, 2013 14:00	12/16/2013 15:00

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

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page 1 of 1

X312153

ORIGINS
LABORATORY, INC

Client: LIE
Address:
Telephone Number: 303-433-9788
Email Address: coy@leni.com

Project Manager: Chris Roy
Project Name: Fri 2-18
Project Number: 008313095
Samples Collected By: D436

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #	Other			
SB20035	12/16/13	1630	1					X				BTEN	1	
SB20046	12/16/13	1400	1					X				GCRO DRO	2	
												Leptobane	3	
													4	
													5	
													6	
													7	
													8	
													9	
													10	

Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:
11/11	12/16/13	08:50	12/16/13	15:00	15:00	Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>

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Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X312153

Client: LT

Client Project ID: FRI 2-18

Checklist Completed by: David Mathis

Shipped Via: H/D

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 12-16-13 1526

Airbill #: _____

Matrix(s) Received: (Check all that apply): X Soil/Solid

 Water

 Other:

Cooler Number/Temperature: 1 / 3.4 °C / °C / °C (Describe)

Thermometer ID: T002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		X		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			✓	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)				
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments/narrative and the case narrative.

Reviewed by (Project Manager)

Date/Time Reviewed

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB20@35'

12/16/2013 10:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312153-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	3L16011	12/16/2013	12/16/2013	
Surrogate: o-Terphenyl	116 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	3L16012	12/16/2013	12/16/2013	
Benzene	ND	0.0020	"	"	"	"	"	
Toluene	ND	0.0020	"	"	"	"	"	
Ethylbenzene	ND	0.0020	"	"	"	"	"	
Xylenes, total	ND	0.0020	"	"	"	"	"	
Napthalene	ND	0.0040	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	106 %	70-130			"	"	"	
Surrogate: Toluene-d8	98.3 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.0 %	70-130			"	"	"	

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB21@46'

12/16/2013 2:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312153-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	161	50.0	mg/kg	1	3L16011	12/16/2013	12/16/2013
Surrogate: o-Terphenyl	110 %	59-131			"	"	"

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	972	20	mg/kg	100	3L16012	12/16/2013	12/16/2013
Benzene	0.972	0.20	"	"	"	"	"
Toluene	4.93	0.50	"	250	"	"	12/17/2013
Ethylbenzene	3.46	0.20	"	100	"	"	12/16/2013
Xylenes, total	12.3	0.50	"	250	"	"	12/17/2013
Naphthalene	0.852	0.40	"	100	"	"	12/16/2013
Surrogate: 1,2-Dichloroethane-d4	92.8 %	70-130			"	"	"
Surrogate: Toluene-d8	115 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	96.4 %	70-130			"	"	"

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L16012 - EPA 5030 (soil)										
Blank (3L16012-BLK1)					Prepared: 12/16/2013 Analyzed: 12/16/2013					
Gasoline Range Hydrocarbons	ND	0.20	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0020	"							
Ethylbenzene	ND	0.0020	"							
Xylenes, total	ND	0.0020	"							
Naphthalene	ND	0.0040	"							
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		97.2	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L16012 - EPA 5030 (soil)										
LCS (3L16012-BS1)					Prepared: 12/16/2013 Analyzed: 12/16/2013					
Benzene	0.096	0.0020	mg/kg	0.100		96.2	70-130			
Toluene	0.098	0.0020	"	0.100		98.3	70-130			
Ethylbenzene	0.10	0.0020	"	0.100		101	70-130			
m,p-Xylene	0.20	0.0040	"	0.200		101	70-130			
o-Xylene	0.10	0.0020	"	0.100		101	70-130			
Naphthalene	0.10	0.0040	"	0.100		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	59		ug/kg	62.5		95.2	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		103	70-130			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L16012 - EPA 5030 (soil)										
Matrix Spike (3L16012-MS1)		Source: X312153-01			Prepared: 12/16/2013 Analyzed: 12/16/2013					
Benzene	0.097	0.0020	mg/kg	0.100	ND	96.8	70-130			
Toluene	0.098	0.0020	"	0.100	ND	97.7	70-130			
Ethylbenzene	0.10	0.0020	"	0.100	ND	101	70-130			
m,p-Xylene	0.20	0.0040	"	0.200	ND	102	70-130			
o-Xylene	0.10	0.0020	"	0.100	ND	102	70-130			
Naphthalene	0.11	0.0040	"	0.100	ND	110	70-130			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	58		"	62.5		93.1	70-130			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L16012 - EPA 5030 (soil)										
Matrix Spike Dup (3L16012-MSD1)		Source: X312153-01			Prepared: 12/16/2013 Analyzed: 12/16/2013					
Benzene	0.099	0.0020	mg/kg	0.100	ND	99.1	70-130	2.27	20	
Toluene	0.096	0.0020	"	0.100	ND	95.7	70-130	2.07	20	
Ethylbenzene	0.099	0.0020	"	0.100	ND	99.1	70-130	1.98	20	
m,p-Xylene	0.20	0.0040	"	0.200	ND	98.7	70-130	3.13	20	
o-Xylene	0.10	0.0020	"	0.100	ND	101	70-130	0.552	20	
Naphthalene	0.12	0.0040	"	0.100	ND	116	70-130	5.16	20	
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.7	70-130			
Surrogate: 4-Bromofluorobenzene	58		"	62.5		93.2	70-130			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3L16011 - EPA 3580

Blank (3L16011-BLK1)

Prepared: 12/16/2013 Analyzed: 12/16/2013

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 59 g 50.0 119 59-131

LCS (3L16011-BS1)

Prepared: 12/16/2013 Analyzed: 12/16/2013

Diesel (C10-C28) 1060 50.0 mg/kg 1000 106 64-121

Surrogate: o-Terphenyl 64 g 50.0 127 59-131

Matrix Spike (3L16011-MS1)

Source: X312153-01

Prepared: 12/16/2013 Analyzed: 12/16/2013

Diesel (C10-C28) 860 50.0 mg/kg 1000 ND 86.0 53-125

Surrogate: o-Terphenyl 45 g 50.0 90.4 59-131

Matrix Spike Dup (3L16011-MSD1)

Source: X312153-01

Prepared: 12/16/2013 Analyzed: 12/16/2013

Diesel (C10-C28) 961 50.0 mg/kg 1000 ND 96.1 53-125 11.1 20

Surrogate: o-Terphenyl 51 g 50.0 102 59-131

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.

4600 West 60th Avenue

Arvada CO 80003

Chris Roy

Project Number: 008313095

Project: Noble - Fri 2-18

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



December 18, 2013

LT Environmental, Inc.

Chris Roy

4600 West 60th Avenue

Arvada

CO 80003

Project Name - Noble - Fri 2-18

Project Number - 008313095

Attached are your analytical results for Noble - Fri 2-18 received by Origins Laboratory, Inc. December 17, 2013. This project is associated with Origins project number X312174-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods specified in SW-846. The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB22@35'	X312174-01	Soil	December 17, 2013 11:00	12/17/2013 17:00
SB23@44'	X312174-02	Soil	December 17, 2013 15:00	12/17/2013 17:00
SB23@48'	X312174-03	Soil	December 17, 2013 15:10	12/17/2013 17:00

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

ORIGINS
LABORATORY, INC

Client: LTE

Address: _____

Telephone Number: 303-433-9788

Email Address: lry@lty.com

Project Manager: Chris Roy

Project Name: Fri 2-18

Project Number: 008313095

Samples Collected By: DHosker

www.originslaboratory.com

X312174

page 1 of 1

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis		Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa	Canister #	Other	
5822035'	12/17/13	1100	1					X				BTX	1
5823044'	12/17/13	1500	1					X				BTX	2
5823048'	12/17/13	1510	1					X				BTX	3
													4
													5
													6
													7
													8
													9
													10

Relinquished By: [Signature]

Relinquished By: _____

Date: 12/17/13

Date: _____

Time: 1700

Time: _____

Received By: [Signature]

Received By: _____

Date: 12/17/13

Date: _____

Time: 1700

Time: _____

Turnaround Time: Same Day ☒ 24 Hr ☐
48 Hr ☐ 72 Hr ☐

Data Description Standard 11/10/13

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X312174

Client: LTE

Client Project ID: _____

Checklist Completed by: Jesse Smith

Shipped Via: PEK UP

Date/time completed: 12/17/13

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: NH

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: _____

Cooler Number/Temperature: 4.3 °C / _____ °C / _____ °C / _____ °C (Describe)

Thermometer ID: T602

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?				
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄ / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

If NO, then contact the client before proceeding with analysis and note date, time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

12/18/13 7:30
Date/Time Reviewed

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB22@35'

12/17/2013 11:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312174-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	3L17012	12/17/2013	12/18/2013
Surrogate: o-Terphenyl	108 %	59-131			"	"	"

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.40	mg/kg	1	3L17011	12/17/2013	12/17/2013
Benzene	ND	0.0040	"	"	"	"	12/18/2013
Toluene	ND	0.0040	"	"	"	"	"
Ethylbenzene	ND	0.0040	"	"	"	"	"
Xylenes, total	ND	0.0040	"	"	"	"	"
Napthalene	ND	0.0080	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	103 %	70-130			"	"	12/17/2013
Surrogate: Toluene-d8	99.1 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	108 %	70-130			"	"	"

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB23@44'

12/17/2013 3:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312174-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	335	50.0	mg/kg	1	3L17012	12/17/2013	12/18/2013
Surrogate: o-Terphenyl	105 %	59-131			"	"	"

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	241	20	mg/kg	50	3L17011	12/17/2013	12/17/2013
Benzene	ND	0.050	"	12.5	"	"	12/18/2013
Toluene	2.18	0.20	"	50	"	"	12/17/2013
Ethylbenzene	0.542	0.20	"	"	"	"	"
Xylenes, total	10.3	0.20	"	"	"	"	"
Napthalene	0.646	0.40	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	103 %	70-130			"	"	"
Surrogate: Toluene-d8	97.8 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	98.4 %	70-130			"	"	"

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB23@48'

12/17/2013 3:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312174-03 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	3L17012	12/17/2013	12/18/2013
Surrogate: o-Terphenyl	108 %	59-131			"	"	"

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.40	mg/kg	1	3L17011	12/17/2013	12/17/2013
Benzene	ND	0.0040	"	"	"	"	"
Toluene	ND	0.0040	"	"	"	"	"
Ethylbenzene	ND	0.0040	"	"	"	"	"
Xylenes, total	ND	0.0040	"	"	"	"	"
Napthalene	ND	0.0080	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	103 %	70-130			"	"	"
Surrogate: Toluene-d8	96.1 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	109 %	70-130			"	"	"

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L17011 - EPA 5030 (soil)										
Blank (3L17011-BLK1)					Prepared: 12/17/2013 Analyzed: 12/17/2013					
Gasoline Range Hydrocarbons	ND	0.40	mg/kg							
Benzene	ND	0.0040	"							
Toluene	ND	0.0040	"							
Ethylbenzene	ND	0.0040	"							
Xylenes, total	ND	0.0040	"							
Naphthalene	ND	0.0080	"							
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		97.8	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.2	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	70-130			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L17011 - EPA 5030 (soil)										
LCS (3L17011-BS1)					Prepared: 12/17/2013 Analyzed: 12/17/2013					
Benzene	0.20	0.0040	mg/kg	0.200		102	70-130			
Toluene	0.18	0.0040	"	0.200		91.3	70-130			
Ethylbenzene	0.19	0.0040	"	0.200		94.3	70-130			
m,p-Xylene	0.38	0.0080	"	0.400		95.3	70-130			
o-Xylene	0.19	0.0040	"	0.200		94.4	70-130			
Naphthalene	0.23	0.0080	"	0.200		117	70-130			
Surrogate: 1,2-Dichloroethane-d4	60		ug/kg	62.5		96.5	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.8	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.0	70-130			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L17011 - EPA 5030 (soil)										
Matrix Spike (3L17011-MS1)		Source: X312174-01			Prepared: 12/17/2013 Analyzed: 12/17/2013					
Benzene	0.20	0.0040	mg/kg	0.200	ND	101	70-130			
Toluene	0.20	0.0040	"	0.200	ND	100	70-130			
Ethylbenzene	0.22	0.0040	"	0.200	ND	109	70-130			
m,p-Xylene	0.37	0.0080	"	0.400	ND	91.6	70-130			
o-Xylene	0.20	0.0040	"	0.200	ND	101	70-130			
Naphthalene	0.26	0.0080	"	0.200	ND	132	70-130			QM-05
Surrogate: 1,2-Dichloroethane-d4	57		ug/kg	62.5		90.7	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.7	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.3	70-130			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L17011 - EPA 5030 (soil)										
Matrix Spike Dup (3L17011-MSD1)			Source: X312174-01		Prepared: 12/17/2013 Analyzed: 12/17/2013					
Benzene	0.20	0.0040	mg/kg	0.200	ND	102	70-130	0.295	20	
Toluene	0.20	0.0040	"	0.200	ND	99.0	70-130	1.23	20	
Ethylbenzene	0.21	0.0040	"	0.200	ND	107	70-130	2.37	20	
m,p-Xylene	0.37	0.0080	"	0.400	ND	92.8	70-130	1.39	20	
o-Xylene	0.21	0.0040	"	0.200	ND	103	70-130	1.78	20	
Naphthalene	0.26	0.0080	"	0.200	ND	129	70-130	1.98	20	
Surrogate: 1,2-Dichloroethane-d4	57		ug/kg	62.5		91.2	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3L17012 - EPA 3580

Blank (3L17012-BLK1)

Prepared: 12/17/2013 Analyzed: 12/17/2013

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 51 g 50.0 102 59-131

LCS (3L17012-BS1)

Prepared: 12/17/2013 Analyzed: 12/17/2013

Diesel (C10-C28) 989 50.0 mg/kg 1000 98.9 64-121

Surrogate: o-Terphenyl 51 g 50.0 102 59-131

Matrix Spike (3L17012-MS1)

Source: X312174-01

Prepared: 12/17/2013 Analyzed: 12/17/2013

Diesel (C10-C28) 1000 50.0 mg/kg 1000 ND 100 53-125

Surrogate: o-Terphenyl 53 g 50.0 105 59-131

Matrix Spike Dup (3L17012-MSD1)

Source: X312174-01

Prepared: 12/17/2013 Analyzed: 12/17/2013

Diesel (C10-C28) 996 50.0 mg/kg 1000 ND 99.6 53-125 0.781 20

Surrogate: o-Terphenyl 56 g 50.0 112 59-131

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Notes and Definitions

- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



December 19, 2013

LT Environmental, Inc.

Chris Roy

4600 West 60th Avenue

Arvada

CO 80003

Project Name - Noble - Fri 2-18

Project Number - 008313095

Attached are your analytical results for Noble - Fri 2-18 received by Origins Laboratory, Inc. December 18, 2013. This project is associated with Origins project number X312183-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods specified in SW-846. The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.

303.433.1322

o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB24@37'	X312183-01	Soil	December 18, 2013 10:20	12/18/2013 17:00
SB24@48'	X312183-02	Soil	December 18, 2013 10:50	12/18/2013 17:00
SB25@38'	X312183-03	Soil	December 18, 2013 13:15	12/18/2013 17:00
SB25@48'	X312183-04	Soil	December 18, 2013 13:40	12/18/2013 17:00

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

www.originslaboratory.com

X312183 page 1 of 1

Client: LTE
Address:
Telephone Number:
Email Address:
Project Manager: Chris Roy
Project Name: Fri 2-18
Project Number: 008313095
Samples Collected By: Chris Roy

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #			Other
5624037	12-18-13	1020	1	X					X			nap, hthalate Gro, Diox BTEX	1
5624048	↓	1050	1	X					X				2
5625038	↓	1315	1	X					X				3
5625048	↓	1340	1	X					X				4
													5
													6
													7
													8
													9
													10
Relinquished By: <u>[Signature]</u>	Date: <u>12-18-13</u>	Time: <u>1700</u>		Received By: <u>[Signature]</u>	Date: <u>12/18/13</u>	Time: <u>1700</u>		Time: <u>1700</u>	Date: <u>12/18/13</u>	Time: <u>1700</u>		Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>	
Relinquished By: <u></u>	Date: <u></u>	Time: <u></u>		Received By: <u></u>	Date: <u></u>	Time: <u></u>		Time: <u></u>	Date: <u></u>	Time: <u></u>			

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Not to Be Reused

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X312183

Client: LTE

Client Project ID: SP 2-18

Checklist Completed by: DAVID MATHIS

Shipped Via: PICK UP

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 12-18-13 1720

Airbill #: _____

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: _____

Cooler Number/Temperature: 18.1 °C 1 °C 1 °C (Describe) _____ °C

Thermometer ID: T002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?		<input checked="" type="checkbox"/>		<u>Sampled today</u>
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) / (pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) [Signature]

12/19/13 4:20
Date/Time Reviewed

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB24@37'

12/18/2013 10:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312183-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	3L18012	12/18/2013	12/18/2013
Surrogate: o-Terphenyl	101 %	59-131			"	"	"

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	3L18013	12/18/2013	12/18/2013
Benzene	ND	0.0020	"	"	"	"	"
Toluene	ND	0.0020	"	"	"	"	"
Ethylbenzene	ND	0.0020	"	"	"	"	"
Xylenes, total	ND	0.0020	"	"	"	"	"
Napthalene	ND	0.0040	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130			"	"	"
Surrogate: Toluene-d8	97.7 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	99.5 %	70-130			"	"	"

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB24@48'

12/18/2013 10:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312183-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	3L18012	12/18/2013	12/18/2013	
Surrogate: o-Terphenyl	101 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	3L18013	12/18/2013	12/18/2013	
Benzene	ND	0.0020	"	"	"	"	"	
Toluene	ND	0.0020	"	"	"	"	"	
Ethylbenzene	ND	0.0020	"	"	"	"	"	
Xylenes, total	ND	0.0020	"	"	"	"	"	
Napthalene	ND	0.0040	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	113 %	70-130			"	"	"	
Surrogate: Toluene-d8	98.8 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.3 %	70-130			"	"	"	

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB25@38'

12/18/2013 1:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312183-03 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	3L18012	12/18/2013	12/18/2013
Surrogate: o-Terphenyl	97.0 %	59-131			"	"	"

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	3L18013	12/18/2013	12/18/2013
Benzene	ND	0.0020	"	"	"	"	"
Toluene	ND	0.0020	"	"	"	"	"
Ethylbenzene	ND	0.0020	"	"	"	"	"
Xylenes, total	ND	0.0020	"	"	"	"	"
Napthalene	ND	0.0040	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	101 %	70-130			"	"	"
Surrogate: Toluene-d8	100 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB25@48'

12/18/2013 1:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312183-04 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	3L18012	12/18/2013	12/18/2013
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Surrogate: o-Terphenyl	122 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	3L18013	12/18/2013	12/18/2013
Benzene	ND	0.0020	"	"	"	"	"
Toluene	ND	0.0020	"	"	"	"	"
Ethylbenzene	ND	0.0020	"	"	"	"	"
Xylenes, total	ND	0.0020	"	"	"	"	"
Napthalene	ND	0.0040	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	106 %	70-130			"	"	"
Surrogate: Toluene-d8	99.7 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	70-130			"	"	"

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L18013 - EPA 5030 (soil)										
Blank (3L18013-BLK1)					Prepared: 12/18/2013 Analyzed: 12/18/2013					
Gasoline Range Hydrocarbons	ND	0.20	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0020	"							
Ethylbenzene	ND	0.0020	"							
Xylenes, total	ND	0.0020	"							
Naphthalene	ND	0.0040	"							
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		99.7	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		108	70-130			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L18013 - EPA 5030 (soil)										
LCS (3L18013-BS1)					Prepared: 12/18/2013 Analyzed: 12/18/2013					
Benzene	0.097	0.0020	mg/kg	0.100		97.1	70-130			
Toluene	0.10	0.0020	"	0.100		101	70-130			
Ethylbenzene	0.10	0.0020	"	0.100		103	70-130			
m,p-Xylene	0.21	0.0040	"	0.200		104	70-130			
o-Xylene	0.10	0.0020	"	0.100		104	70-130			
Naphthalene	0.10	0.0040	"	0.100		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		97.7	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	70-130			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L18013 - EPA 5030 (soil)										
Matrix Spike (3L18013-MS1)		Source: X312183-01			Prepared: 12/18/2013 Analyzed: 12/18/2013					
Benzene	0.072	0.0020	mg/kg	0.100	ND	72.0	70-130			
Toluene	0.071	0.0020	"	0.100	ND	70.7	70-130			
Ethylbenzene	0.072	0.0020	"	0.100	ND	72.3	70-130			
m,p-Xylene	0.15	0.0040	"	0.200	ND	73.0	70-130			
o-Xylene	0.072	0.0020	"	0.100	ND	71.5	70-130			
Naphthalene	0.072	0.0040	"	0.100	ND	72.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.0	70-130			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L18013 - EPA 5030 (soil)										
Matrix Spike Dup (3L18013-MSD1)			Source: X312183-01		Prepared: 12/18/2013 Analyzed: 12/18/2013					
Benzene	0.073	0.0020	mg/kg	0.100	ND	72.9	70-130	1.19	20	
Toluene	0.073	0.0020	"	0.100	ND	73.0	70-130	3.15	20	
Ethylbenzene	0.074	0.0020	"	0.100	ND	74.2	70-130	2.65	20	
m,p-Xylene	0.15	0.0040	"	0.200	ND	74.6	70-130	2.25	20	
o-Xylene	0.074	0.0020	"	0.100	ND	73.7	70-130	2.98	20	
Naphthalene	0.073	0.0040	"	0.100	ND	72.8	70-130	0.772	20	
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		95.1	70-130			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3L18012 - EPA 3580

Blank (3L18012-BLK1)

Prepared: 12/18/2013 Analyzed: 12/18/2013

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 61 g 50.0 123 59-131

LCS (3L18012-BS1)

Prepared: 12/18/2013 Analyzed: 12/18/2013

Diesel (C10-C28) 951 50.0 mg/kg 1000 95.1 64-121

Surrogate: o-Terphenyl 49 g 50.0 98.4 59-131

Matrix Spike (3L18012-MS1)

Source: X312183-01

Prepared: 12/18/2013 Analyzed: 12/18/2013

Diesel (C10-C28) 1090 50.0 mg/kg 1000 ND 109 53-125

Surrogate: o-Terphenyl 63 g 50.0 126 59-131

Matrix Spike Dup (3L18012-MSD1)

Source: X312183-01

Prepared: 12/18/2013 Analyzed: 12/18/2013

Diesel (C10-C28) 847 50.0 mg/kg 1000 ND 84.7 53-125 25.2 20 QM-05

Surrogate: o-Terphenyl 59 g 50.0 118 59-131

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Notes and Definitions

- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



December 20, 2013

LT Environmental, Inc.

Chris Roy

4600 West 60th Avenue

Arvada

CO 80003

Project Name - Noble - Fri 2-18

Project Number - 008313095

Attached are your analytical results for Noble - Fri 2-18 received by Origins Laboratory, Inc. December 19, 2013. This project is associated with Origins project number X312202-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods specified in SW-846. The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.

303.433.1322

o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB26@34'	X312202-01	Soil	December 19, 2013 11:00	12/19/2013 17:00

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

www.originslaboratory.com

X312202

page 1 of 1

Client: LTE
Address:
Telephone Number: 303-433-9788
Email Address: L@OriginsLabs.com

Project Manager: Chris Roy
Project Name: Fri 2-18
Project Number: 008313095
Samples Collected By: D. Hsler

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #		
SB26C34	12/19/13	1100	1					X			BTEX GRD, DRO Methane	1
												2
												3
												4
												5
												6
												7
												8
												9
												10

Turnaround Time: Same Day ☒ 24 Hr ☐ 48 Hr ☐ 72 Hr ☐ Standard ☐

Relinquished By: [Signature] Date: 12/19/13 Time: 1700
Relinquished By: [Signature] Date: 12/19/13 Time: 1700

Date Sampled: 12/19/13

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X312202

Client: LTE

Client Project ID: Noble - Fri

Checklist Completed by: DAVID MATHE

Shipped Via: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 12-19-13 1757

Airbill #: _____

Matrix(s) Received: (Check all that apply): X Soil/Solid _____ Water _____ Other: _____

Cooler Number/Temperature: 1 3.2c _____ °C _____ °C (Describe) _____ °C

Thermometer ID: 7002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<u>X</u>			
Is there ice present (document if blue ice is used)	<u>X</u>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<u>X</u>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<u>X</u>		
Were all samples received intact ⁽¹⁾ ?	<u>X</u>			
Was adequate sample volume provided ⁽¹⁾ ?	<u>X</u>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<u>X</u>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<u>X</u>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<u>X</u>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<u>X</u>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<u>X</u>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<u>X</u>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)				
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

12-19-13 1920
Date/Time Reviewed

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB26@34'

12/19/2013 11:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312202-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	3L19012	12/19/2013	12/19/2013	
Surrogate: o-Terphenyl	99.2 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	3L19011	12/19/2013	12/19/2013	
Benzene	ND	0.0020	"	"	"	"	"	
Toluene	ND	0.0020	"	"	"	"	"	
Ethylbenzene	ND	0.0020	"	"	"	"	"	
Xylenes, total	ND	0.0020	"	"	"	"	"	
Napthalene	ND	0.0040	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	108 %	70-130			"	"	"	
Surrogate: Toluene-d8	99.8 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	95.4 %	70-130			"	"	"	

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L19011 - EPA 5030 (soil)										
Blank (3L19011-BLK1)					Prepared: 12/19/2013 Analyzed: 12/19/2013					
Gasoline Range Hydrocarbons	ND	0.20	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0020	"							
Ethylbenzene	ND	0.0020	"							
Xylenes, total	ND	0.0020	"							
Naphthalene	ND	0.0040	"							
Surrogate: 1,2-Dichloroethane-d4	59		ug/kg	62.5		94.1	70-130			
Surrogate: Toluene-d8	65		"	62.5		104	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L19011 - EPA 5030 (soil)										
LCS (3L19011-BS1)					Prepared: 12/19/2013 Analyzed: 12/19/2013					
Benzene	0.20	0.0020	mg/kg	0.200		99.5	70-130			
Toluene	0.20	0.0020	"	0.200		102	70-130			
Ethylbenzene	0.21	0.0020	"	0.200		106	70-130			
m,p-Xylene	0.42	0.0040	"	0.400		105	70-130			
o-Xylene	0.22	0.0020	"	0.200		109	70-130			
Naphthalene	0.23	0.0040	"	0.200		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	59		ug/kg	62.5		95.1	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.5	70-130			

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3L19011 - EPA 5030 (soil)

Matrix Spike (3L19011-MS1)		Source: X312204-04			Prepared: 12/19/2013 Analyzed: 12/19/2013					
Benzene	0.19	0.0020	mg/kg	0.200	ND	96.2	70-130			
Toluene	0.19	0.0020	"	0.200	ND	95.5	70-130			
Ethylbenzene	0.20	0.0020	"	0.200	ND	99.6	70-130			
m,p-Xylene	0.40	0.0040	"	0.400	ND	98.9	70-130			
o-Xylene	0.21	0.0020	"	0.200	ND	105	70-130			
Naphthalene	0.24	0.0040	"	0.200	ND	119	70-130			
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		99.4	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.4	70-130			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		93.8	70-130			

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L19011 - EPA 5030 (soil)										
Matrix Spike Dup (3L19011-MSD1)			Source: X312204-04		Prepared: 12/19/2013 Analyzed: 12/19/2013					
Benzene	0.19	0.0020	mg/kg	0.200	ND	97.0	70-130	0.829	20	
Toluene	0.20	0.0020	"	0.200	ND	98.2	70-130	2.81	20	
Ethylbenzene	0.20	0.0020	"	0.200	ND	102	70-130	2.72	20	
m,p-Xylene	0.40	0.0040	"	0.400	ND	101	70-130	1.92	20	
o-Xylene	0.21	0.0020	"	0.200	ND	107	70-130	1.98	20	
Naphthalene	0.24	0.0040	"	0.200	ND	118	70-130	0.700	20	
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		98.9	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		95.2	70-130			

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3L19012 - EPA 3580

Blank (3L19012-BLK1)

Prepared: 12/19/2013 Analyzed: 12/19/2013

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 57 g 50.0 113 59-131

LCS (3L19012-BS1)

Prepared: 12/19/2013 Analyzed: 12/19/2013

Diesel (C10-C28) 1090 50.0 mg/kg 1000 109 64-121

Surrogate: o-Terphenyl 60 g 50.0 120 59-131

Matrix Spike (3L19012-MS1)

Source: X312204-01

Prepared: 12/19/2013 Analyzed: 12/19/2013

Diesel (C10-C28) 1110 50.0 mg/kg 1000 ND 111 53-125

Surrogate: o-Terphenyl 61 g 50.0 123 59-131

Matrix Spike Dup (3L19012-MSD1)

Source: X312204-01

Prepared: 12/19/2013 Analyzed: 12/19/2013

Diesel (C10-C28) 947 50.0 mg/kg 1000 ND 94.7 53-125 15.9 20

Surrogate: o-Terphenyl 50 g 50.0 100 59-131

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.

4600 West 60th Avenue

Arvada CO 80003

Chris Roy

Project Number: 008313095

Project: Noble - Fri 2-18

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



December 23, 2013

LT Environmental, Inc.

Chris Roy

4600 West 60th Avenue

Arvada

CO 80003

Project Name - Noble - Fri 2-18

Project Number - 008313095

Attached are your analytical results for Noble - Fri 2-18 received by Origins Laboratory, Inc. December 20, 2013. This project is associated with Origins project number X312219-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods specified in SW-846. The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB21	X312219-01	Water	December 20, 2013 12:00	12/20/2013 15:00
SB22	X312219-02	Water	December 20, 2013 10:15	12/20/2013 15:00
SB23	X312219-03	Water	December 20, 2013 11:40	12/20/2013 15:00
SB24	X312219-04	Water	December 20, 2013 10:40	12/20/2013 15:00
SB26	X312219-05	Water	December 20, 2013 11:00	12/20/2013 15:00

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

www.originslaboratory.com

page 1 of 1

X312219

ORIGINS
LABORATORY, INC

Client: LTE
Address: 7
Project Manager: Chris Roy
Project Name: Fri 2-18
Project Number: 008313095
Samples Collected By: Chris Roy
Telephone Number: 303-433-9788
Email Address: Corey@env.com

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #	Other			
SB21	12/20/13	1200	3	X				X					X BTEX	1
SB22		1015	1											2
SB23		1140	3											3
SB24		1046	3											4
SB26		1100	3											5
														6
														7
														8
														9
														10

Relinquished By: <u>[Signature]</u>	Date: <u>12/20/13</u>	Time: <u>1500</u>	Received By: <u>[Signature]</u>	Date: <u>12/20/13</u>	Time: <u>15:00</u>
Relinquished By: <u>[Signature]</u>	Date: <u>12/20/13</u>	Time: <u>15:00</u>	Received By: <u>[Signature]</u>	Date: <u>12/20/13</u>	Time: <u>15:00</u>

Turnaround Time:	Same Day <input checked="" type="checkbox"/>	24 Hr <input type="checkbox"/>
	48 Hr <input type="checkbox"/>	72 Hr <input type="checkbox"/>
	Standard <input type="checkbox"/>	

Chris Roy/Chris Roy

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X31229

Client: LT

Client Project ID: FRI 2-18

Checklist Completed by: [Signature]

Shipped Via: H/D
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 12/20/13 15:03

Airbill #: N/A

Matrix(s) Received: (Check all that apply): X Soil/Solid X Water Other:

Cooler Number/Temperature: 2.7 °C °C °C (Describe)

Thermometer ID: 1002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<u>X</u>			
Is there ice present (document if blue ice is used)	<u>X</u>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<u>X</u>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<u>X</u>		
Were all samples received intact ⁽¹⁾ ?	<u>X</u>			
Was adequate sample volume provided ⁽¹⁾ ?	<u>X</u>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<u>X</u>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<u>X</u>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<u>X</u>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<u>X</u>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<u>X</u>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<u>X</u>	<u>N/A</u>		
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)		<u>X</u>		SB-21 (A,B,C), SB-24 (C)
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) [Signature]

Date/Time Reviewed 12.22.13
20.03

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Chris Roy
 Project Number: 008313095
 Project: Noble - Fri 2-18

SB21

12/20/2013 12:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312219-01 (Water)

BTEX by EPA 8260C

Benzene	256000	25000	ug/L	25000	3L20011	12/20/2013	12/23/2013
Toluene	3580000	25000	"	"	"	"	"
Ethylbenzene	307000	25000	"	"	"	"	"
Xylenes, total	5040000	25000	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	94.1 %	84-121			"	"	"
Surrogate: Toluene-d8	110 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	92.8 %	84-114			"	"	"

Origins Laboratory, Inc.

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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Chris Roy
 Project Number: 008313095
 Project: Noble - Fri 2-18

SB22

12/20/2013 10:15:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312219-02 (Water)

BTEX by EPA 8260C

Benzene	23.6	4.0	ug/L	4	3L20011	12/20/2013	12/23/2013
Toluene	15.7	4.0	"	"	"	"	"
Ethylbenzene	9.84	4.0	"	"	"	"	"
Xylenes, total	158	4.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	95.1 %	84-121			"	"	"
Surrogate: Toluene-d8	101 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	92.6 %	84-114			"	"	"

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Chris Roy
 Project Number: 008313095
 Project: Noble - Fri 2-18

SB23

12/20/2013 11:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. X312219-03 (Water)

BTEX by EPA 8260C

Benzene	9140	500	ug/L	500	3L20011	12/20/2013	12/23/2013
Toluene	44800	500	"	"	"	"	"
Ethylbenzene	2160	500	"	"	"	"	"
Xylenes, total	51900	500	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	95.2 %	84-121			"	"	"
Surrogate: Toluene-d8	100 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	89.4 %	84-114			"	"	"

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB24

12/20/2013 10:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. X312219-04 (Water)

BTEX by EPA 8260C

Benzene	ND	4.0	ug/L	4	3L20011	12/20/2013	12/23/2013
Toluene	ND	4.0	"	"	"	"	"
Ethylbenzene	ND	4.0	"	"	"	"	"
Xylenes, total	ND	4.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	94.0 %	84-121			"	"	"
Surrogate: Toluene-d8	100 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	92.9 %	84-114			"	"	"

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB26

12/20/2013 11:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312219-05 (Water)

BTEX by EPA 8260C

Benzene	ND	4.0	ug/L	4	3L20011	12/20/2013	12/23/2013
Toluene	ND	4.0	"	"	"	"	"
Ethylbenzene	ND	4.0	"	"	"	"	"
Xylenes, total	ND	4.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	93.4 %	84-121			"	"	"
Surrogate: Toluene-d8	100 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	92.1 %	84-114			"	"	"

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L20011 - EPA 5030B (Water)										
Blank (3L20011-BLK1)					Prepared: 12/20/2013 Analyzed: 12/21/2013					
Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		96.9	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.1	84-114			

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L20011 - EPA 5030B (Water)										
LCS (3L20011-BS1)					Prepared: 12/20/2013 Analyzed: 12/21/2013					
Benzene	52.7	1.0	ug/L	50.0		105	74-130			
Toluene	52.7	1.0	"	50.0		105	76-128			
Ethylbenzene	54.6	1.0	"	50.0		109	78-130			
m,p-Xylene	109	2.0	"	100		109	75-134			
o-Xylene	54.6	1.0	"	50.0		109	76-129			
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		95.1	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.4	84-114			

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3L20011 - EPA 5030B (Water)

Matrix Spike (3L20011-MS1)		Source: X312182-01			Prepared: 12/20/2013 Analyzed: 12/21/2013					
Benzene	57.3	1.0	ug/L	50.0	8.0	98.6	74-130			
Toluene	51.2	1.0	"	50.0	1.1	100	73-131			
Ethylbenzene	80.2	1.0	"	50.0	25.0	110	76-132			
m,p-Xylene	174	2.0	"	100	65.7	109	69-139			
o-Xylene	60.3	1.0	"	50.0	7.5	106	74-131			
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		92.6	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	56		"	62.5		90.0	84-114			

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L20011 - EPA 5030B (Water)										
Matrix Spike Dup (3L20011-MSD1)	Source: X312182-01				Prepared: 12/20/2013 Analyzed: 12/21/2013					
Benzene	55.9	1.0	ug/L	50.0	8.0	95.8	74-130	2.49	20	
Toluene	50.2	1.0	"	50.0	1.1	98.1	73-131	2.03	20	
Ethylbenzene	78.6	1.0	"	50.0	25.0	107	76-132	2.08	20	
m,p-Xylene	171	2.0	"	100	65.7	105	69-139	1.96	20	
o-Xylene	59.2	1.0	"	50.0	7.5	103	74-131	1.81	20	
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		92.6	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	57		"	62.5		90.9	84-114			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.

4600 West 60th Avenue

Arvada CO 80003

Chris Roy

Project Number: 008313095

Project: Noble - Fri 2-18

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



December 31, 2013

LT Environmental, Inc.

Chris Roy

4600 West 60th Avenue

Arvada CO 80003

Project Name - Noble - Fri 2-18

Project Number - 008313095

Attached are your analytical results for Noble - Fri 2-18 received by Origins Laboratory, Inc. December 31, 2013. This project is associated with Origins project number X312284-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB27 @ 32'	X312284-01	Soil	December 31, 2013 10:25	12/31/2013 16:40
SB27 @ 48'	X312284-02	Soil	December 31, 2013 11:35	12/31/2013 16:40
SB28 @ 36'	X312284-03	Soil	December 31, 2013 14:05	12/31/2013 16:40
SB28 @ 48'	X312284-04	Soil	December 31, 2013 14:50	12/31/2013 16:40

Origins Laboratory, Inc.



Noelle E Doyle, President

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Client: LTE
Address:
Telephone Number:
Email Address:
Project Manager: C. Roy
Project Name: Fri 2-18
Project Number: 068313095
Samples Collected By: C. Roy

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa			Other
5627032'	12-31-13	1035	1	X									1
5627048'	12-31-13	1135	1	X									2
5628036	12-31-13	1405	1	X									3
5628048'	12-31-13	1450	1	X									4
													5
													6
													7
													8
													9
													10

Analysis: BTEX, GR0, DRO, Naphthalene

Turnaround Time: ☒ Same Day ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr

Received By: [Signature] Date: 12/31/13 Time: 1640

Relinquished By: [Signature] Date: 12-31-13 Time: 1440

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Origins Laboratory, Inc.

Noelle E Doyle

Noelle E Doyle, President

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X312284

Client: LTE

Client Project ID: 008313095

Checklist Completed by: MT

Shipped Via: 4/D

Date/time completed: 12/31 1649

Airbill #: (UPS, FedEx, Hand Delivery, Pick-up, etc.)

Matrix(s) Received: (Check all that apply): X Soil/Solid

Water

Other:

Cooler Number/Temperature: 128 °C

°C

°C

(Describe)

Thermometer ID: T002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾²		X		SAME DAY
Is there ice present (document if blue ice is used)		X		
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ⁽¹⁾²	X			
Was adequate sample volume provided ⁽¹⁾²	X			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾²		X		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾²	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾²	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾²	X			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾²	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative			X	SOIL
Are samples preserved that require preservation and was it checked? (note ID of confirmation, assay used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) (pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			X	SOIL
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date, time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

12/31/14 16:55
Date/Time Reviewed

Origins Laboratory, Inc.

Noelle E Doyle, President

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB27 @ 32'

12/31/2013 10:25:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312284-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	3L31005	12/31/2013	12/31/2013
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Surrogate: <i>o</i> -Terphenyl	100 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.40	mg/kg	1	3L30009	12/31/2013	12/31/2013
Benzene	ND	0.0040	"	"	"	"	"
Toluene	ND	0.0040	"	"	"	"	"
Ethylbenzene	ND	0.0040	"	"	"	"	"
Xylenes, total	ND	0.0040	"	"	"	"	"
Naphthalene	ND	0.0080	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	126 %	70-130			"	"	" S-GC
Surrogate: Toluene-d8	107 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	92.7 %	70-130			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle E Doyle, President

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB27 @ 48'

12/31/2013 11:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312284-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	3L31005	12/31/2013	12/31/2013
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	105 %	59-131			"	"	"
------------------------	-------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.40	mg/kg	1	3L30009	12/31/2013	12/31/2013
Benzene	ND	0.0040	"	"	"	"	"
Toluene	ND	0.0040	"	"	"	"	"
Ethylbenzene	ND	0.0040	"	"	"	"	"
Xylenes, total	ND	0.0040	"	"	"	"	"
Naphthalene	ND	0.0080	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	136 %	70-130			"	"	" S-GC
Surrogate: Toluene-d8	107 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	92.0 %	70-130			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle E Doyle, President

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB28 @ 36'

12/31/2013 2:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312284-03 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	3L31005	12/31/2013	12/31/2013
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Surrogate: o-Terphenyl	103 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.40	mg/kg	1	3L30009	12/31/2013	12/31/2013
Benzene	ND	0.0040	"	"	"	"	"
Toluene	ND	0.0040	"	"	"	"	"
Ethylbenzene	ND	0.0040	"	"	"	"	"
Xylenes, total	ND	0.0040	"	"	"	"	"
Naphthalene	ND	0.0080	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	134 %	70-130			"	"	" S-GC
Surrogate: Toluene-d8	105 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	92.0 %	70-130			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle E Doyle, President

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB28 @ 48'

12/31/2013 2:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X312284-04 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	3L31005	12/31/2013	12/31/2013
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	105 %	59-131			"	"	"
------------------------	-------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.40	mg/kg	1	3L30009	12/31/2013	12/31/2013
Benzene	ND	0.0040	"	"	"	"	"
Toluene	ND	0.0040	"	"	"	"	"
Ethylbenzene	ND	0.0040	"	"	"	"	"
Xylenes, total	ND	0.0040	"	"	"	"	"
Naphthalene	ND	0.0080	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	135 %	70-130			"	"	" S-GC
Surrogate: Toluene-d8	110 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	91.7 %	70-130			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle E Doyle, President

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L30009 - EPA 5030 (soil)										
Blank (3L30009-BLK1)					Prepared: 12/30/2013 Analyzed: 12/31/2013					
Gasoline Range Hydrocarbons	ND	0.4	mg/kg							
Benzene	ND	0.004	"							
Toluene	ND	0.004	"							
Ethylbenzene	ND	0.004	"							
Xylenes, total	ND	0.004	"							
Naphthalene	ND	0.008	"							
Surrogate: 1,2-Dichloroethane-d4	84		ug/kg	62.5		134	70-130			S-GC
Surrogate: Toluene-d8	71		"	62.5		113	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.6	70-130			

Origins Laboratory, Inc.



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Noelle E Doyle, President

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 3L30009 - EPA 5030 (soil)

LCS (3L30009-BS1)

Prepared: 12/30/2013 Analyzed: 12/31/2013

Benzene	0.2	0.004	mg/kg	0.200	101	70-130
Toluene	0.2	0.004	"	0.200	109	70-130
Ethylbenzene	0.2	0.004	"	0.200	112	70-130
m,p-Xylene	0.4	0.008	"	0.400	110	70-130
o-Xylene	0.2	0.004	"	0.200	110	70-130
Naphthalene	0.2	0.008	"	0.200	93.8	70-130
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5	103	70-130
Surrogate: Toluene-d8	61		"	62.5	97.4	70-130
Surrogate: 4-Bromofluorobenzene	62		"	62.5	99.8	70-130

Origins Laboratory, Inc.



Noelle E Doyle, President

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3L30009 - EPA 5030 (soil)

Matrix Spike (3L30009-MS1)		Source: X312242-01			Prepared: 12/30/2013 Analyzed: 12/31/2013					
Benzene	0.2	0.004	mg/kg	0.200	ND	86.3	70-130			
Toluene	0.2	0.004	"	0.200	ND	82.6	70-130			
Ethylbenzene	0.2	0.004	"	0.200	ND	93.5	70-130			
m,p-Xylene	0.4	0.008	"	0.400	ND	89.9	70-130			
o-Xylene	0.2	0.004	"	0.200	ND	91.4	70-130			
Naphthalene	0.2	0.008	"	0.200	ND	77.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	58		"	62.5		93.5	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



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Noelle E Doyle, President

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3L30009 - EPA 5030 (soil)										
Matrix Spike Dup (3L30009-MSD1)		Source: X312242-01			Prepared: 12/30/2013 Analyzed: 12/31/2013					
Benzene	0.2	0.004	mg/kg	0.200	ND	82.2	70-130	4.84	20	
Toluene	0.2	0.004	"	0.200	ND	80.8	70-130	2.18	20	
Ethylbenzene	0.2	0.004	"	0.200	ND	79.0	70-130	16.8	20	
m,p-Xylene	0.3	0.008	"	0.400	ND	80.8	70-130	10.7	20	
o-Xylene	0.2	0.004	"	0.200	ND	83.1	70-130	9.53	20	
Naphthalene	0.1	0.008	"	0.200	ND	64.0	70-130	18.7	20	QM-05
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.7	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.8	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle E Doyle, President

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3L31005 - EPA 3580

Blank (3L31005-BLK1)

Prepared: 12/31/2013 Analyzed: 12/31/2013

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 58 g 50.0 116 59-131

LCS (3L31005-BS1)

Prepared: 12/31/2013 Analyzed: 12/31/2013

Diesel (C10-C28) 1110 50.0 mg/kg 1000

111 64-121

Surrogate: o-Terphenyl 61 g 50.0 122 59-131

LCS Dup (3L31005-BSD1)

Prepared: 12/31/2013 Analyzed: 12/31/2013

Diesel (C10-C28) 1110 50.0 mg/kg 1000

111 64-121 0.331 20

Surrogate: o-Terphenyl 61 g 50.0 122 59-131

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle E Doyle, President

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Notes and Definitions

- S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference

Origins Laboratory, Inc.



Noelle E Doyle, President

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



January 03, 2014

LT Environmental, Inc.

Chris Roy

4600 West 60th Avenue

Arvada

CO 80003

Project Name - Noble - Fri 2-18

Project Number - 008313095

Attached are your analytical results for Noble - Fri 2-18 received by Origins Laboratory, Inc. January 02, 2014. This project is associated with Origins project number X401010-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB17	X401010-01	Water	January 2, 2014 12:15	01/02/2014 16:00
SB19	X401010-02	Water	January 2, 2014 12:00	01/02/2014 16:00

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

www.originslaboratory.com

page 1 of 1

ORIGINS
LABORATORY, INC

X901010

Client: LTE
Address:
Project Manager: Chris Roy
Project Name: Fri 2-18
Project Number: 008313095
Samples Collected By: D. Byler
Telephone Number: 303-433-9788
Email Address: clay@ltenv.com

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #	Other			
SB17	1/2/14	12:5	1	X				X						1
SB19	1/2/14	12:50	3	X				X						2
														3
														4
														5
														6
														7
														8
														9
														10
Relinquished By: <u>[Signature]</u>	Date: <u>1/2/14</u>	Time: <u>1600</u>												Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>
Relinquished By: <u>[Signature]</u>	Date: <u>1/2/14</u>	Time: <u>16:00</u>												

DATA QUALITY STANDARD 1/17/14

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X401010

Client: LTE

Client Project ID: Noble - Fri 2-18

Checklist Completed by: Jeff Smith

Shipped Via: H/D

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 1/14 16:10

Airbill #: NA

Matrix(s) Received: (Check all that apply): Soil/Solid ☒ Water ☐ Other ☐ (Describe)

Cooler Number/Temperature: 5.1 °C / °C / °C / °C

Thermometer ID: 700

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) (pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date, time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

12-1/3/14 7:05
Date/Time Reviewed

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB17

1/2/2014 12:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc. X401010-01 (Water)

BTEX by EPA 8260C

Benzene	ND	4.0	ug/L	4	4A02007	01/02/2014	01/02/2014
Toluene	ND	4.0	"	"	"	"	"
Ethylbenzene	ND	4.0	"	"	"	"	"
Xylenes, total	ND	4.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	99.4 %	84-121			"	"	"
Surrogate: Toluene-d8	103 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	93.5 %	84-114			"	"	"

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

SB19

1/2/2014 12:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc. X401010-02 (Water)

BTEX by EPA 8260C

Benzene	ND	4.0	ug/L	4	4A02007	01/02/2014	01/02/2014
Toluene	ND	4.0	"	"	"	"	"
Ethylbenzene	ND	4.0	"	"	"	"	"
Xylenes, total	ND	4.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	104 %	84-121			"	"	"
Surrogate: Toluene-d8	103 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	96.8 %	84-114			"	"	"

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 4A02007 - EPA 5030B (Water)

Blank (4A02007-BLK1)

Prepared: 01/02/2014 Analyzed: 01/02/2014

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		94.7	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.2	84-114			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 4A02007 - EPA 5030B (Water)

Blank (4A02007-BLK2)

Prepared: 01/02/2014 Analyzed: 01/02/2014

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5	93.8		84-121			
Surrogate: Toluene-d8	64		"	62.5	102		85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5	98.5		84-114			

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4A02007 - EPA 5030B (Water)										
LCS (4A02007-BS1)					Prepared: 01/02/2014 Analyzed: 01/02/2014					
Benzene	43.2	1.0	ug/L	50.0		86.3	74-130			
Toluene	47.2	1.0	"	50.0		94.4	76-128			
Ethylbenzene	44.0	1.0	"	50.0		88.0	78-130			
m,p-Xylene	93.5	2.0	"	100		93.5	75-134			
o-Xylene	45.7	1.0	"	50.0		91.5	76-129			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.6	84-121			
Surrogate: Toluene-d8	65		"	62.5		104	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	84-114			

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 4A02007 - EPA 5030B (Water)

LCS (4A02007-BS2)

Prepared: 01/02/2014 Analyzed: 01/02/2014

Benzene	44.8	1.0	ug/L	50.0		89.6	74-130			
Toluene	49.1	1.0	"	50.0		98.2	76-128			
Ethylbenzene	47.6	1.0	"	50.0		95.3	78-130			
m,p-Xylene	99.1	2.0	"	100		99.1	75-134			
o-Xylene	46.2	1.0	"	50.0		92.5	76-129			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		98.0	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.0	84-114			

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A02007 - EPA 5030B (Water)

Matrix Spike (4A02007-MS1)		Source: X312280-01			Prepared: 01/02/2014 Analyzed: 01/02/2014					
Benzene	47.8	1.0	ug/L	50.0	ND	95.6	74-130			
Toluene	51.4	1.0	"	50.0	ND	103	73-131			
Ethylbenzene	49.3	1.0	"	50.0	ND	98.6	76-132			
m,p-Xylene	103	2.0	"	100	ND	103	69-139			
o-Xylene	51.4	1.0	"	50.0	ND	103	74-131			
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		101	84-121			
Surrogate: Toluene-d8	63		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.8	84-114			

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A02007 - EPA 5030B (Water)

Matrix Spike (4A02007-MS2)		Source: X312282-03			Prepared: 01/02/2014 Analyzed: 01/02/2014					
Benzene	50.4	1.0	ug/L	50.0	ND	101	74-130			
Toluene	53.3	1.0	"	50.0	ND	107	73-131			
Ethylbenzene	52.2	1.0	"	50.0	ND	104	76-132			
m,p-Xylene	113	2.0	"	100	ND	113	69-139			
o-Xylene	54.5	1.0	"	50.0	ND	109	74-131			
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		103	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A02007 - EPA 5030B (Water)

Matrix Spike Dup (4A02007-MSD1)		Source: X312280-01			Prepared: 01/02/2014 Analyzed: 01/02/2014					
Benzene	50.7	1.0	ug/L	50.0	ND	101	74-130	5.95	20	
Toluene	54.6	1.0	"	50.0	ND	109	73-131	5.96	20	
Ethylbenzene	53.5	1.0	"	50.0	ND	107	76-132	8.15	20	
m,p-Xylene	112	2.0	"	100	ND	112	69-139	7.85	20	
o-Xylene	54.8	1.0	"	50.0	ND	110	74-131	6.23	20	
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		106	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		95.8	84-114			

Origins Laboratory, Inc.

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Chris Roy
Project Number: 008313095
Project: Noble - Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4A02007 - EPA 5030B (Water)										
Matrix Spike Dup (4A02007-MSD2)		Source: X312282-03			Prepared: 01/02/2014 Analyzed: 01/02/2014					
Benzene	44.8	1.0	ug/L	50.0	ND	89.5	74-130	11.9	20	
Toluene	49.3	1.0	"	50.0	ND	98.6	73-131	7.89	20	
Ethylbenzene	46.5	1.0	"	50.0	ND	93.0	76-132	11.5	20	
m,p-Xylene	96.8	2.0	"	100	ND	96.8	69-139	15.7	20	
o-Xylene	46.4	1.0	"	50.0	ND	92.8	74-131	16.0	20	
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		104	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.2	84-114			

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.

4600 West 60th Avenue

Arvada CO 80003

Chris Roy

Project Number: 008313095

Project: Noble - Fri 2-18

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ATTACHMENT B

Boring Logs



6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: ACI Services, Inc.

DRILLING EQUIPMENT: CME 45

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 1/29/14 - 1/29/14

TOTAL WELL DEPTH (FT. BGS): 61.24

DEPTH TO WATER (FT. BGS): 45.89 (2/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-16R

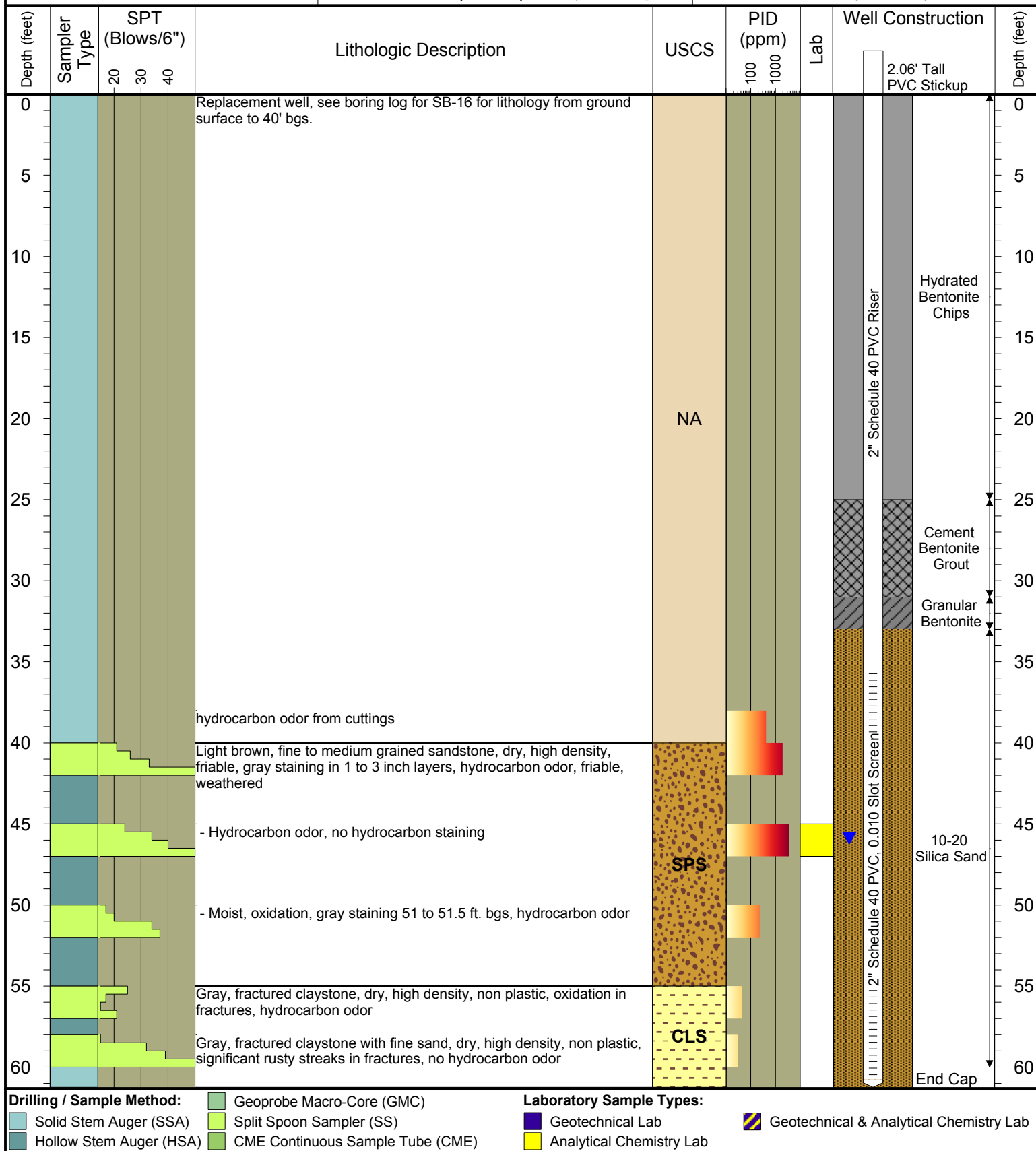
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1229000.075

EASTING (CO STATE PLANE): 3160616.735

CASING ELEVATION (FT. AMSL): 5247.8072

GROUND ELEVATION (FT. AMSL): 5245.7452





6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: Site Services

DRILLING EQUIPMENT: CME 75

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 2/7/14 - 2/7/14

TOTAL WELL DEPTH (FT. BGS): 58.81

DEPTH TO WATER (FT. BGS): DRY (2/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-20R

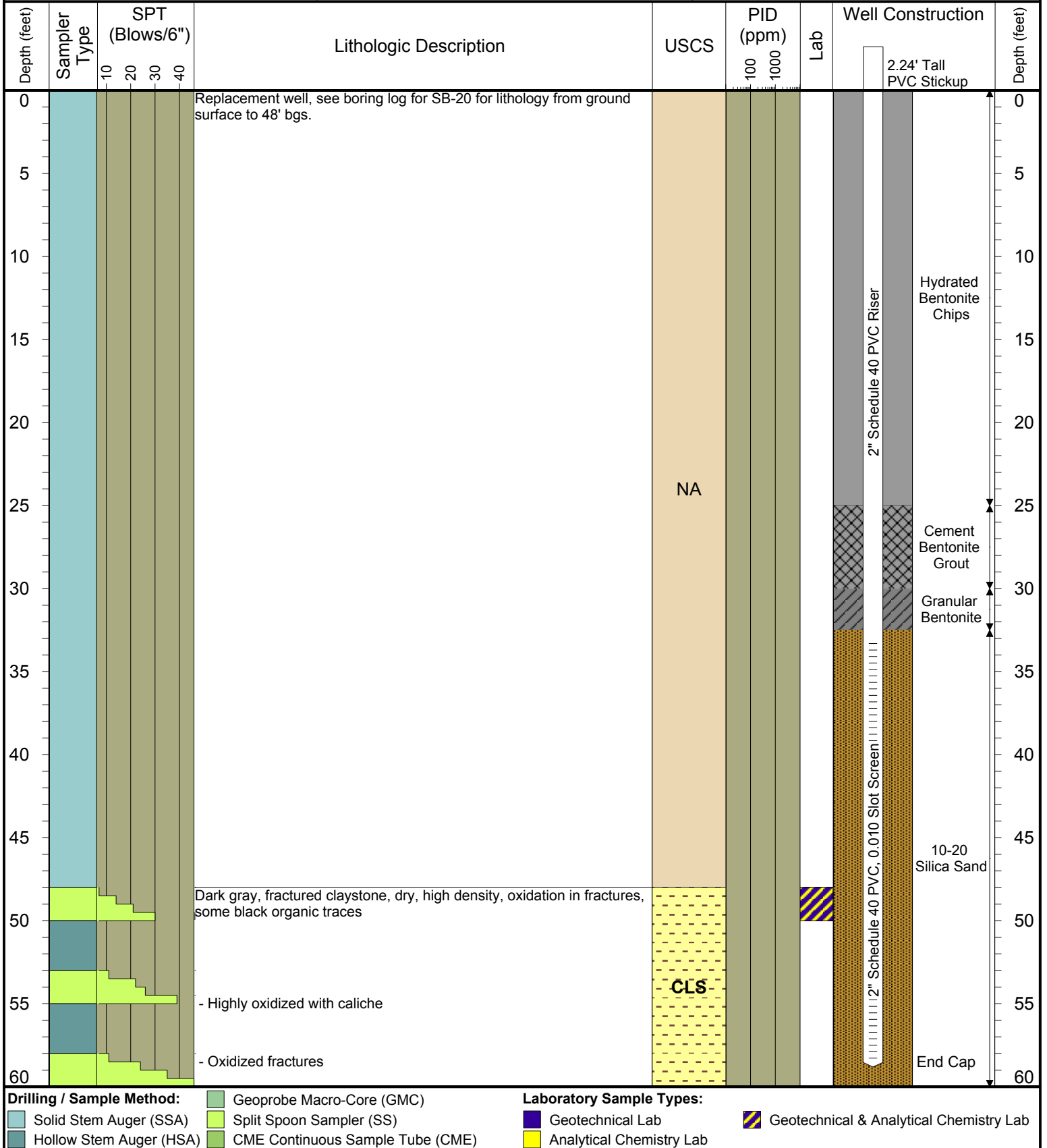
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1228912.915

EASTING (CO STATE PLANE): 3160701.855

CASING ELEVATION (FT. AMSL): 5247.8042

GROUND ELEVATION (FT. AMSL): 5245.5662





6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: ACI Services, Inc.

DRILLING EQUIPMENT: CME 45

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 2/3/14 - 2/3/14

TOTAL WELL DEPTH (FT. BGS): 60.24

DEPTH TO WATER (FT. BGS): 49.67 (2/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-22R

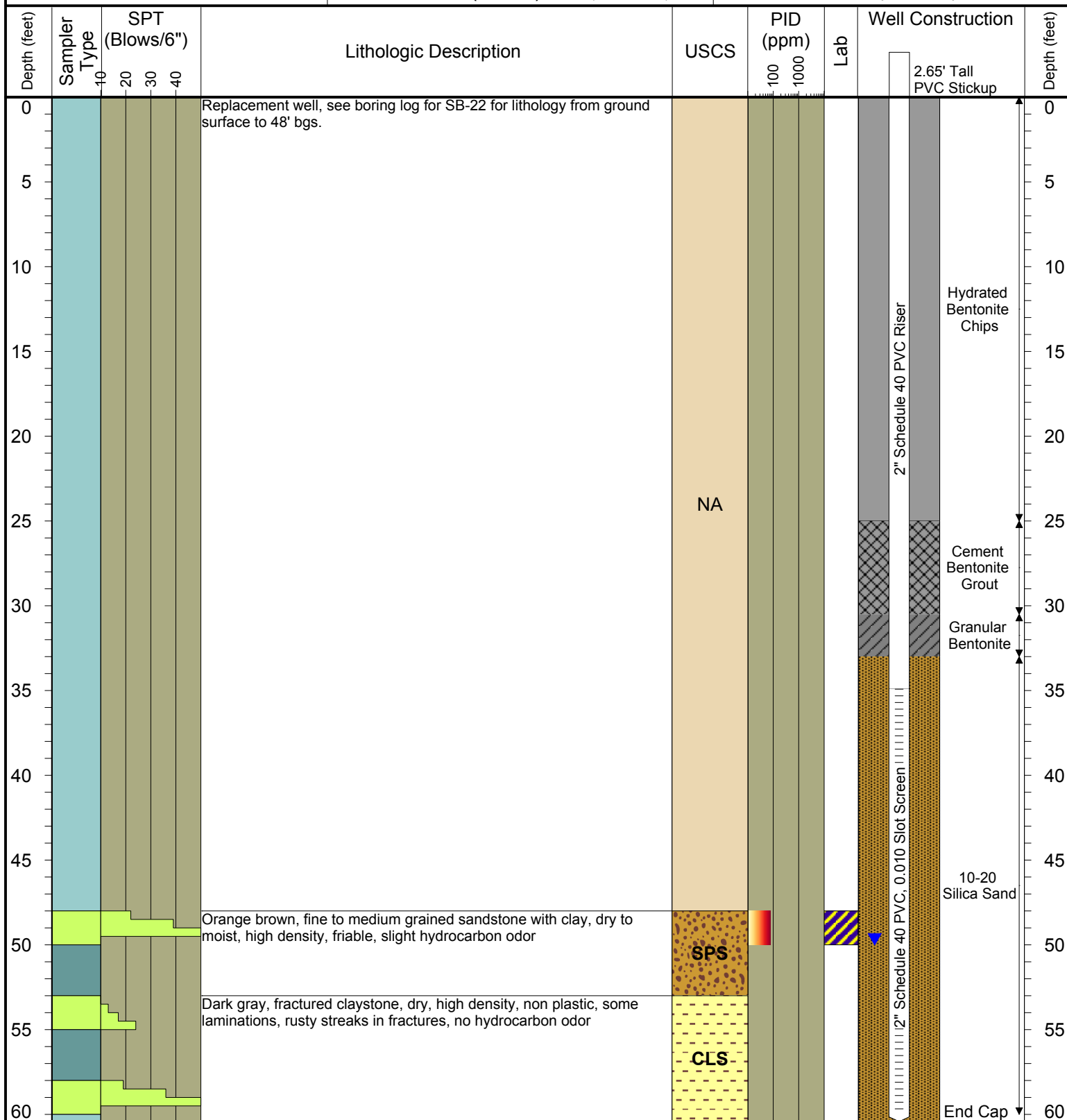
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1228906.824

EASTING (CO STATE PLANE): 3160529.97

CASING ELEVATION (FT. AMSL): 5250.6482

GROUND ELEVATION (FT. AMSL): 5247.9952



Drilling / Sample Method:

Solid Stem Auger (SSA)

Hollow Stem Auger (HSA)

Geoprobe Macro-Core (GMC)

Split Spoon Sampler (SS)

CME Continuous Sample Tube (CME)

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: ACI Services, Inc.

DRILLING EQUIPMENT: CME 45

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 2/7/14 - 2/7/14

TOTAL WELL DEPTH (FT. BGS): 60.18

DEPTH TO WATER (FT. BGS): 48.71 (2/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-24R

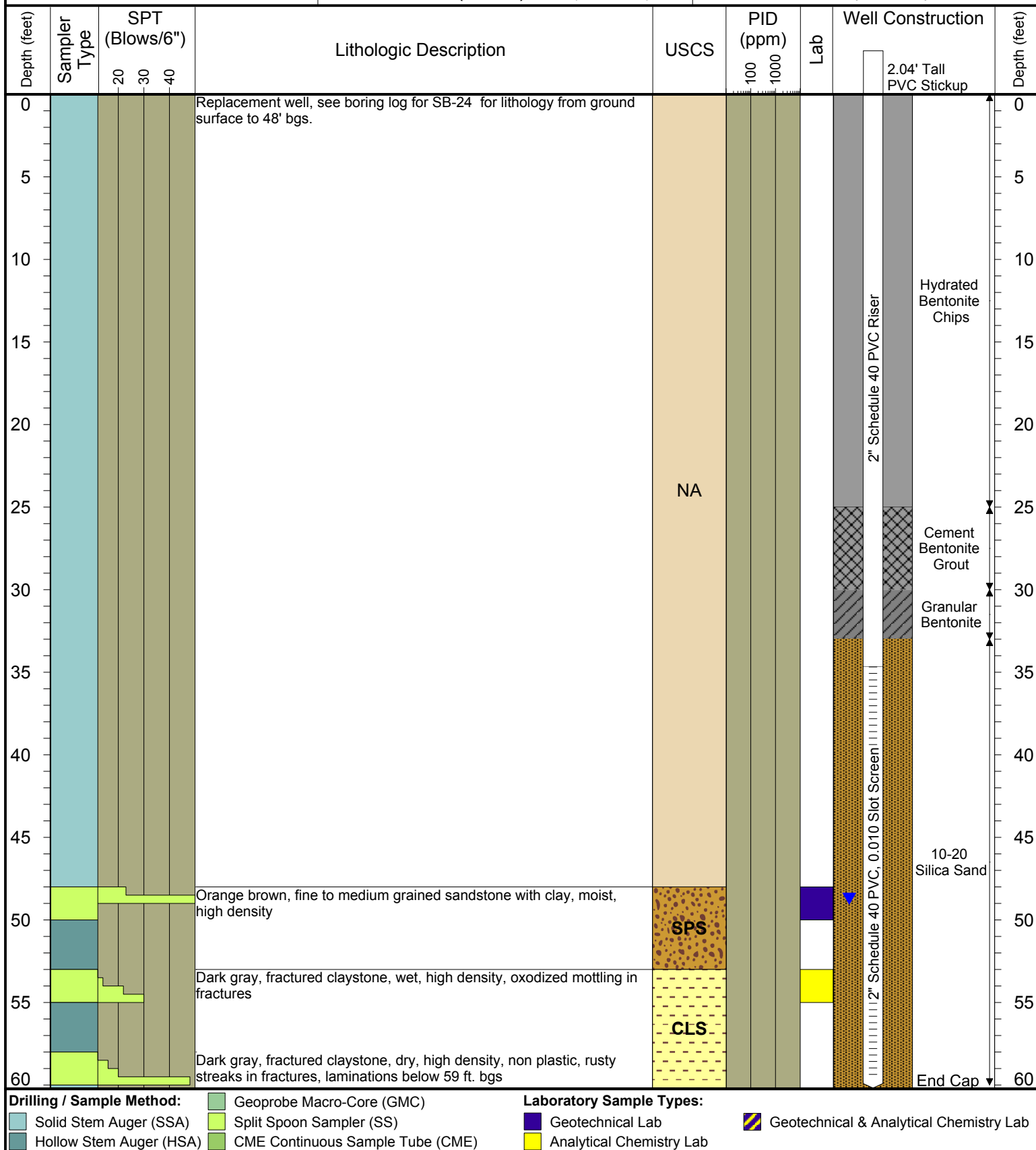
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1229027.724

EASTING (CO STATE PLANE): 3160425.121

CASING ELEVATION (FT. AMSL): 5250.0442

GROUND ELEVATION (FT. AMSL): 5248.0022





6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: ACI Services, Inc.

DRILLING EQUIPMENT: CME 45

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 1/30/14 - 1/30/14

TOTAL WELL DEPTH (FT. BGS): 65.51

DEPTH TO WATER (FT. BGS): 51.3 (2/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-25R

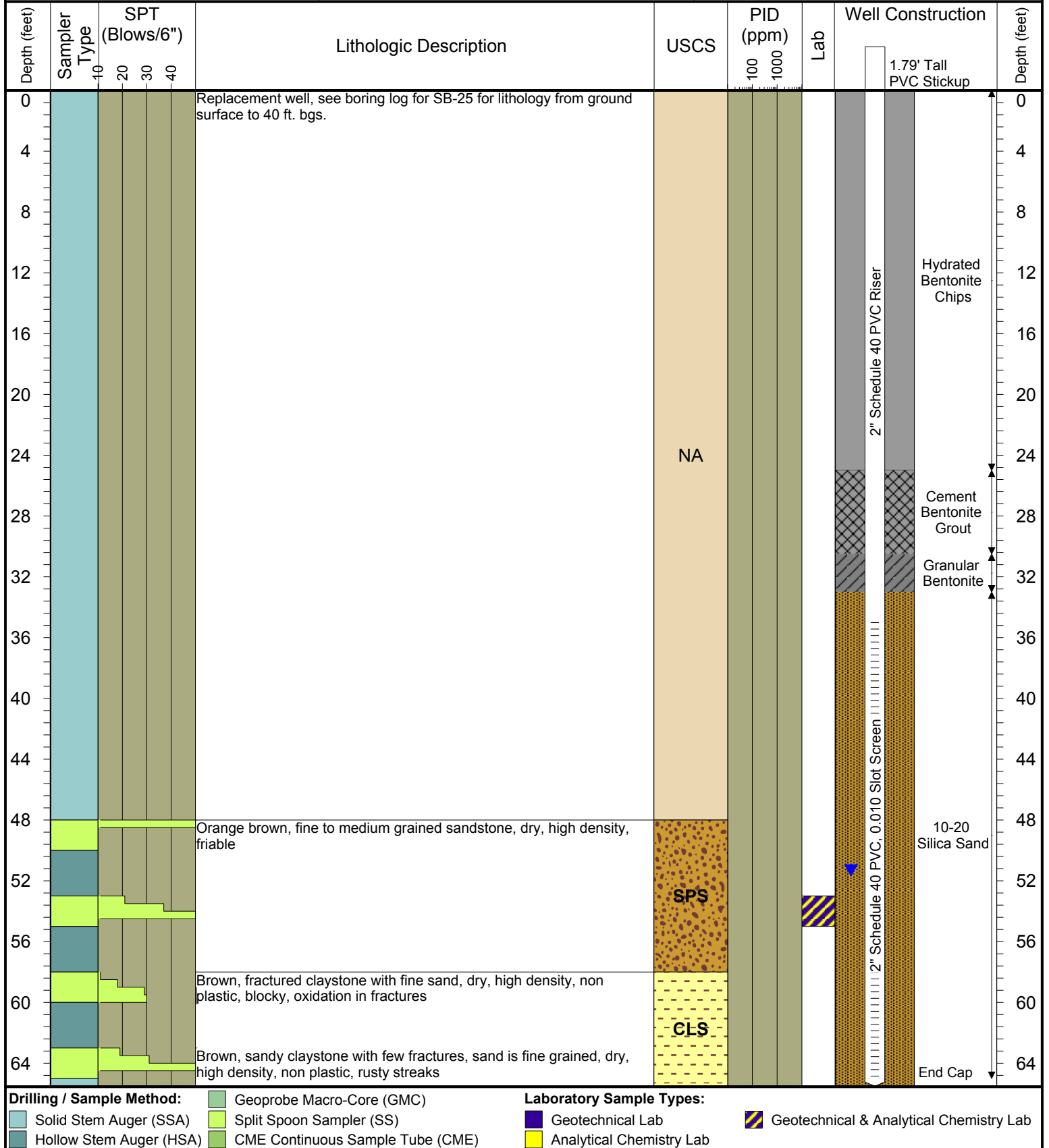
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1228814.212

EASTING (CO STATE PLANE): 3160615.786

CASING ELEVATION (FT. AMSL): 5249.3932

GROUND ELEVATION (FT. AMSL): 5247.6042





TASMAN
GEOSCIENCES

6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: ACI Services, Inc.

DRILLING EQUIPMENT: CME 45

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 1/30/14 - 2/3/14

TOTAL WELL DEPTH (FT. BGS): 65.65

DEPTH TO WATER (FT. BGS): 50.28 (2/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-27R

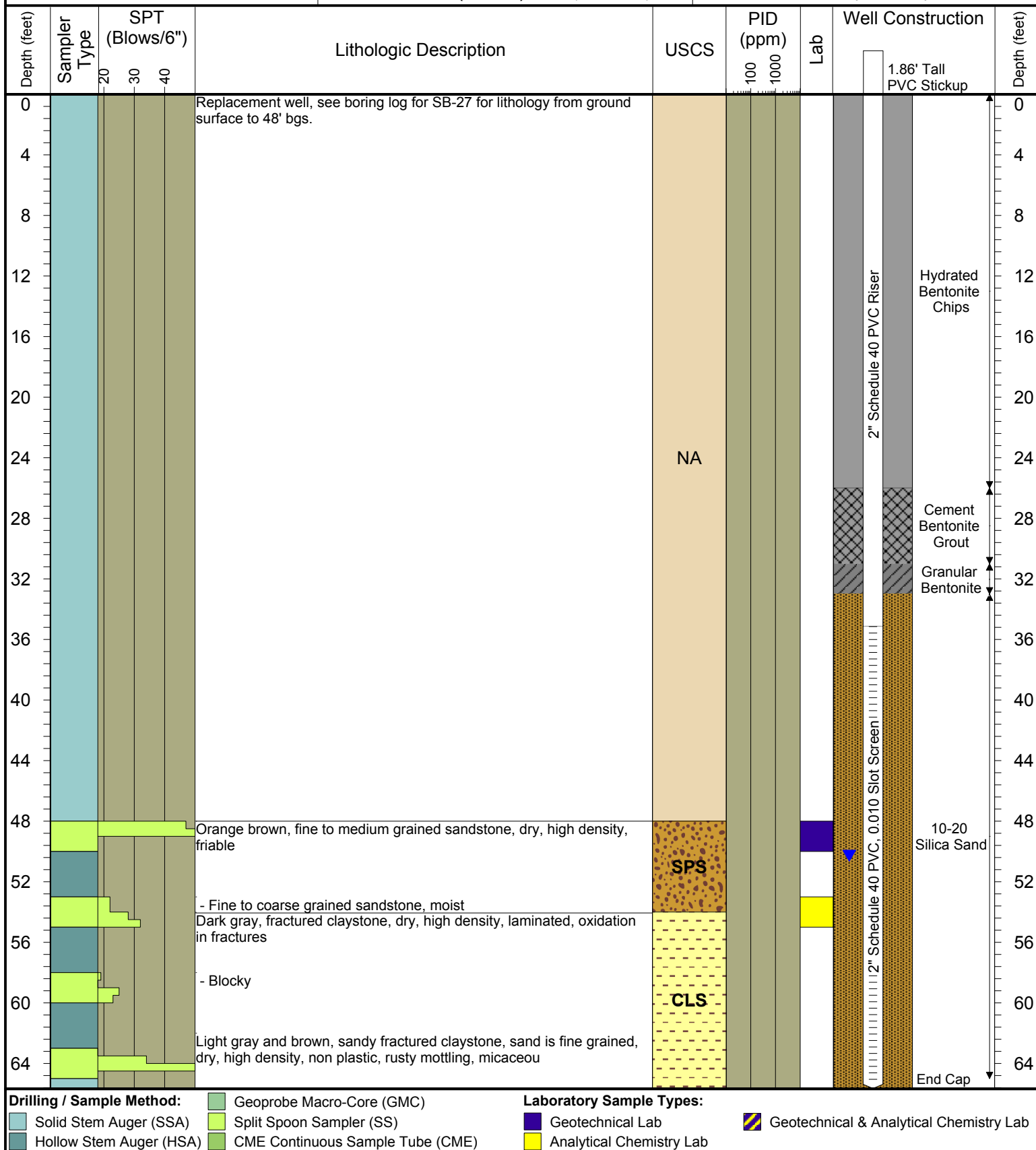
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1228808.325

EASTING (CO STATE PLANE): 3160525.665

CASING ELEVATION (FT. AMSL): 5251.2342

GROUND ELEVATION (FT. AMSL): 5249.0192





6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: ACI Services, Inc.

DRILLING EQUIPMENT: CME 45

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 2/7/14 - 2/7/14

TOTAL WELL DEPTH (FT. BGS): 60.94

DEPTH TO WATER (FT. BGS): 50.73 (2/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-28R

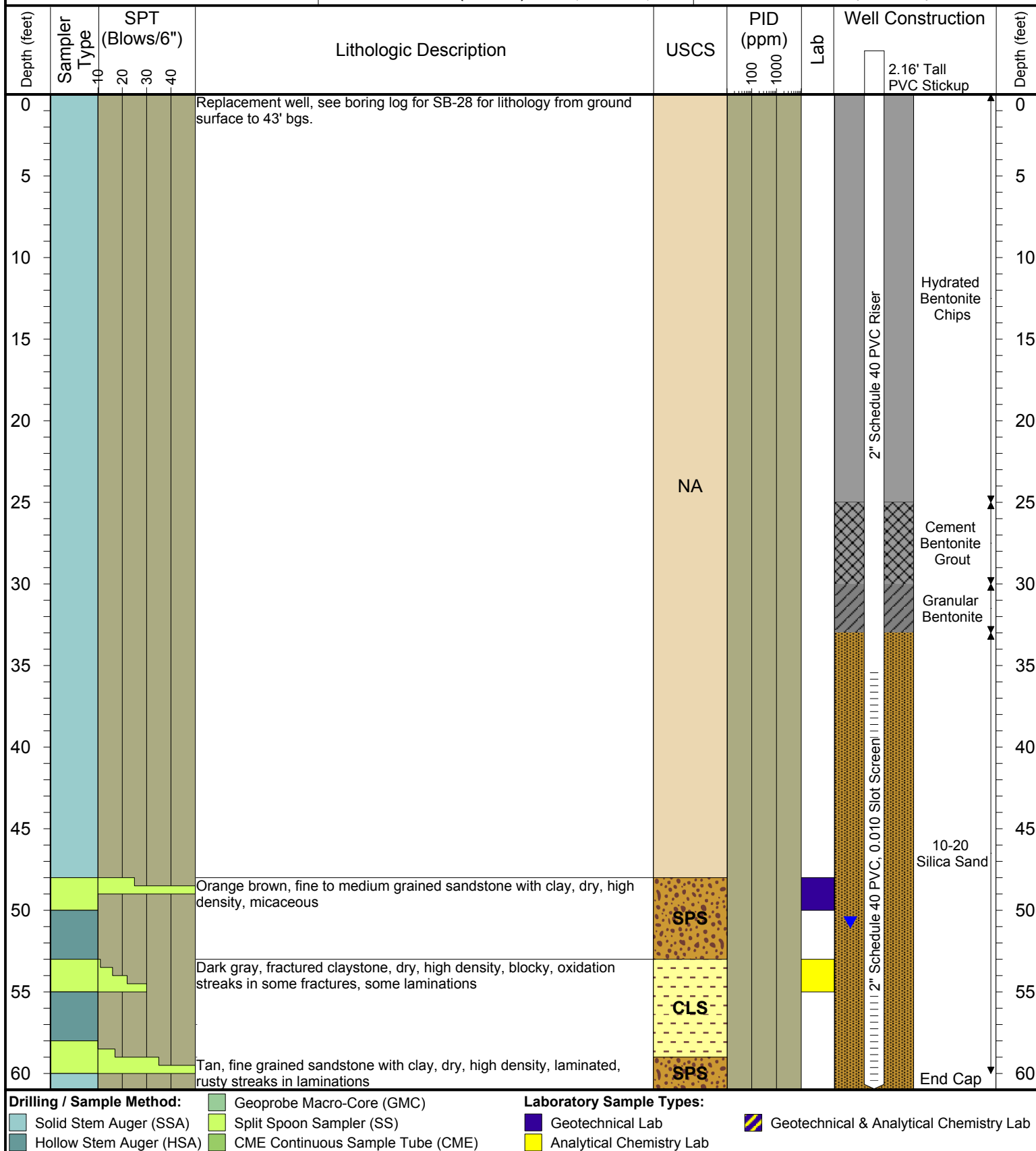
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1228904.21

EASTING (CO STATE PLANE): 3160431.862

CASING ELEVATION (FT. AMSL): 5251.4042

GROUND ELEVATION (FT. AMSL): 5249.2462





TASMAN
GEOSCIENCES

6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: Site Services

DRILLING EQUIPMENT: CME 75

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 2/6/14 - 2/6/14

TOTAL WELL DEPTH (FT. BGS): 58.24

DEPTH TO WATER (FT. BGS): 44.99 (2/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-29

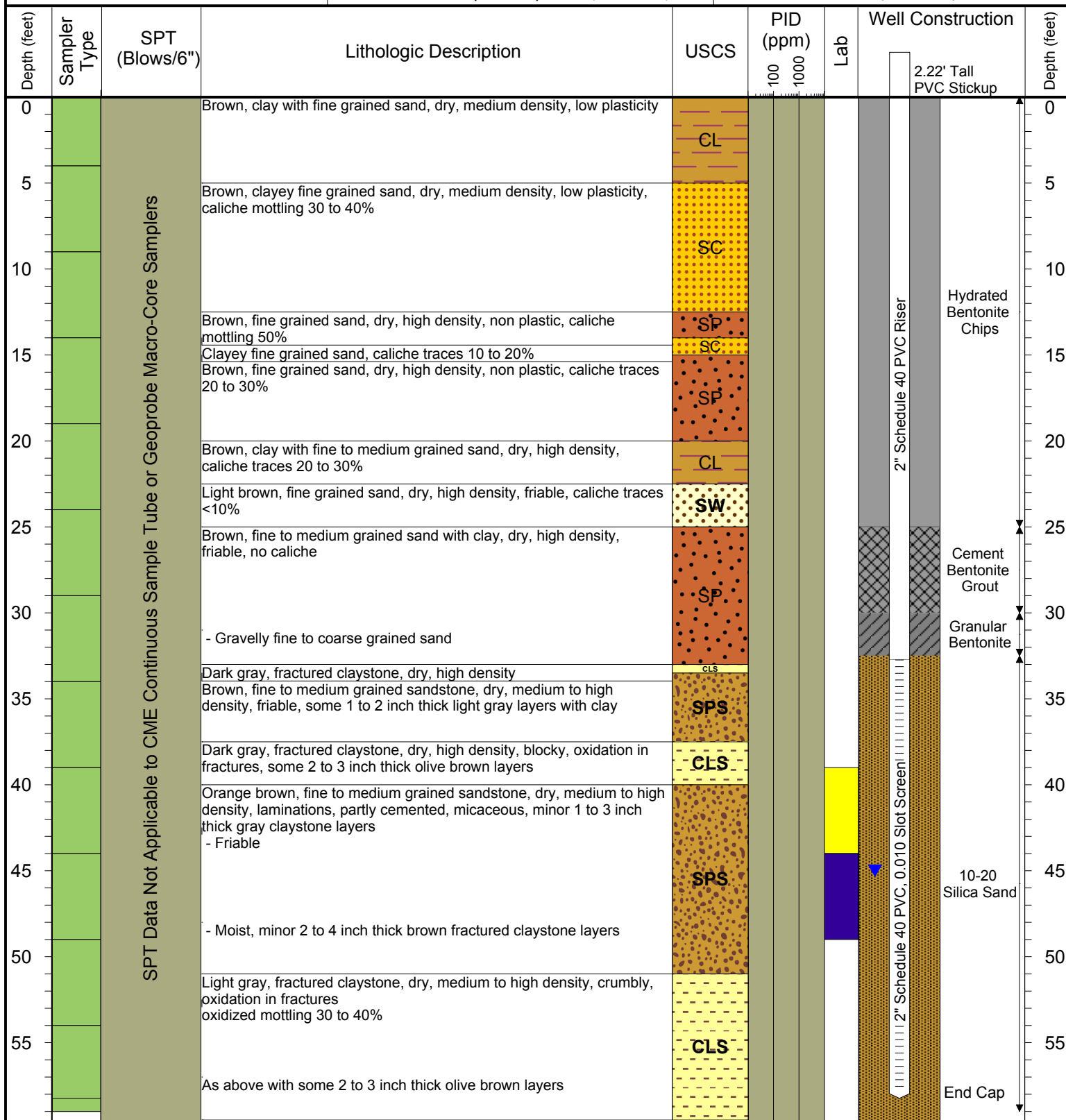
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1229081.334

EASTING (CO STATE PLANE): 3160538.47

CASING ELEVATION (FT. AMSL): 5248.0862

GROUND ELEVATION (FT. AMSL): 5245.8642



Drilling / Sample Method:

- Geoprobe Macro-Core (GMC)
- Solid Stem Auger (SSA)
- Hollow Stem Auger (HSA)
- Split Spoon Sampler (SS)
- CME Continuous Sample Tube (CME)

Laboratory Sample Types:

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: Site Services

DRILLING EQUIPMENT: CME 75

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 1/29/14 - 1/30/14

TOTAL WELL DEPTH (FT. BGS): 60.12

DEPTH TO WATER (FT. BGS): 47.39 (2/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-30

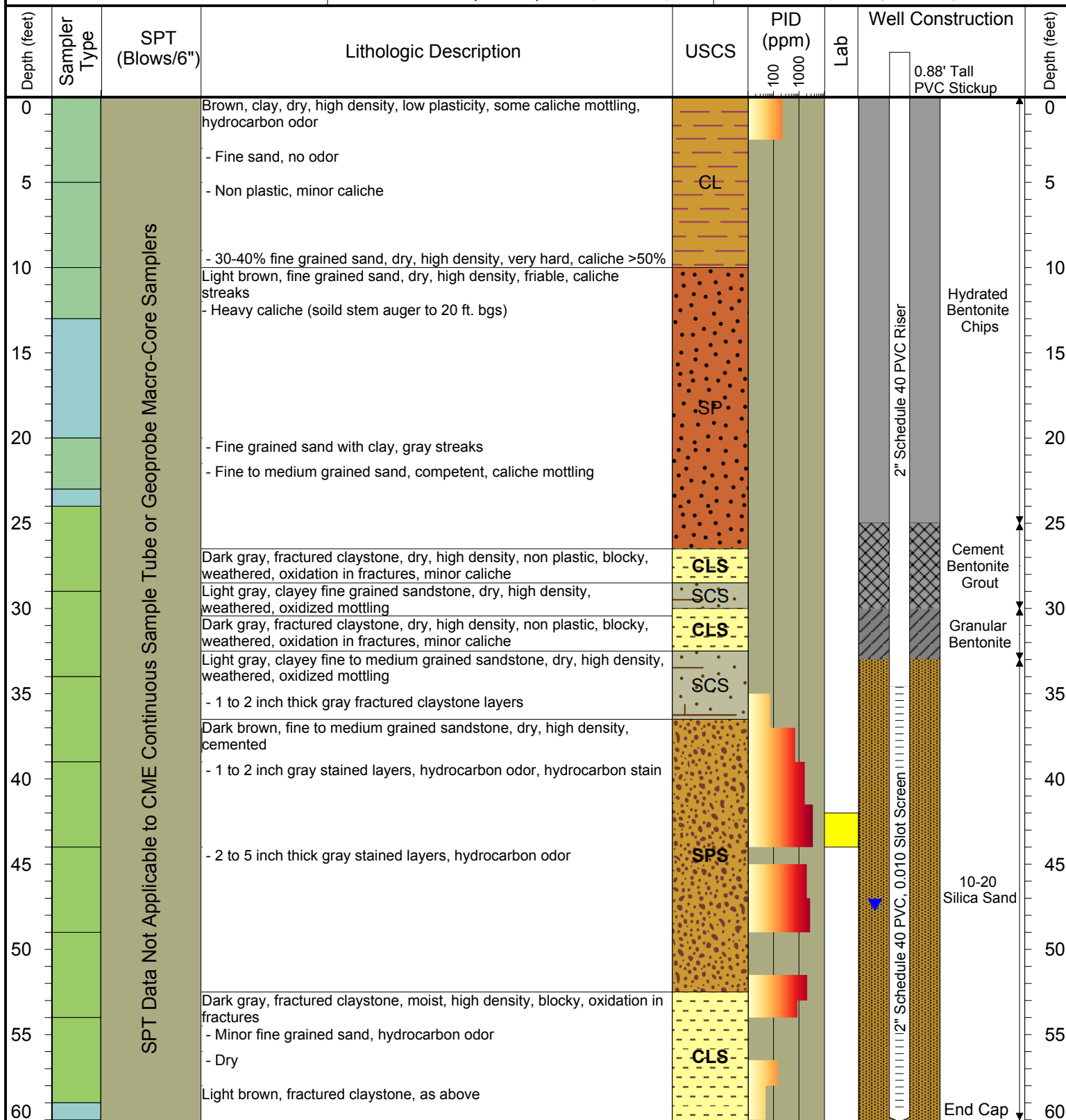
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1228954.537

EASTING (CO STATE PLANE): 3160660.485

CASING ELEVATION (FT. AMSL): 5246.2742

GROUND ELEVATION (FT. AMSL): 5245.3972



Drilling / Sample Method:

- Geoprobe Macro-Core (GMC)
- Solid Stem Auger (SSA)
- Hollow Stem Auger (HSA)
- Split Spoon Sampler (SS)
- CME Continuous Sample Tube (CME)

Laboratory Sample Types:

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



6899 Pecos Street, Unit C, Denver, Colorado 80221

TASMAN
GEOSCIENCES

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: Site Services

DRILLING EQUIPMENT: CME 75

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 1/29/14 - 1/30/14

TOTAL WELL DEPTH (FT. BGS): 60.78

DEPTH TO WATER (FT. BGS): 49.04 (2/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-31

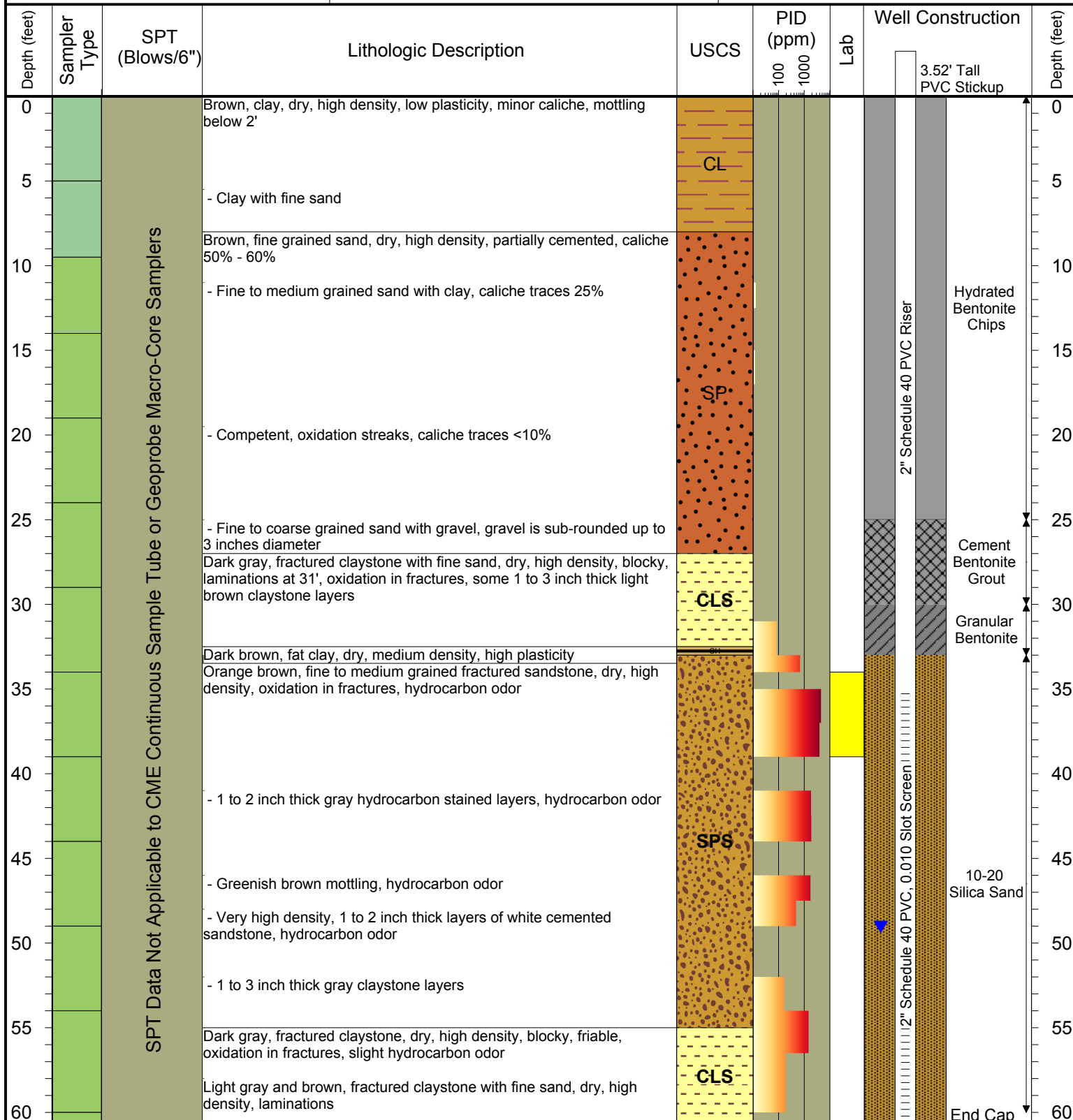
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1228953.611

EASTING (CO STATE PLANE): 3160616.855

CASING ELEVATION (FT. AMSL): 5249.5992

GROUND ELEVATION (FT. AMSL): 5246.0802



Drilling / Sample Method:

- Geoprobe Macro-Core (GMC)
- Solid Stem Auger (SSA)
- Hollow Stem Auger (HSA)
- Split Spoon Sampler (SS)
- CME Continuous Sample Tube (CME)

Laboratory Sample Types:

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



TASMAN
GEOSCIENCES

6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: Site Services

DRILLING EQUIPMENT: CME 75

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 1/29/14 - 2/5/14

TOTAL WELL DEPTH (FT. BGS): 59.8

DEPTH TO WATER (FT. BGS): 47.92 (2/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-32

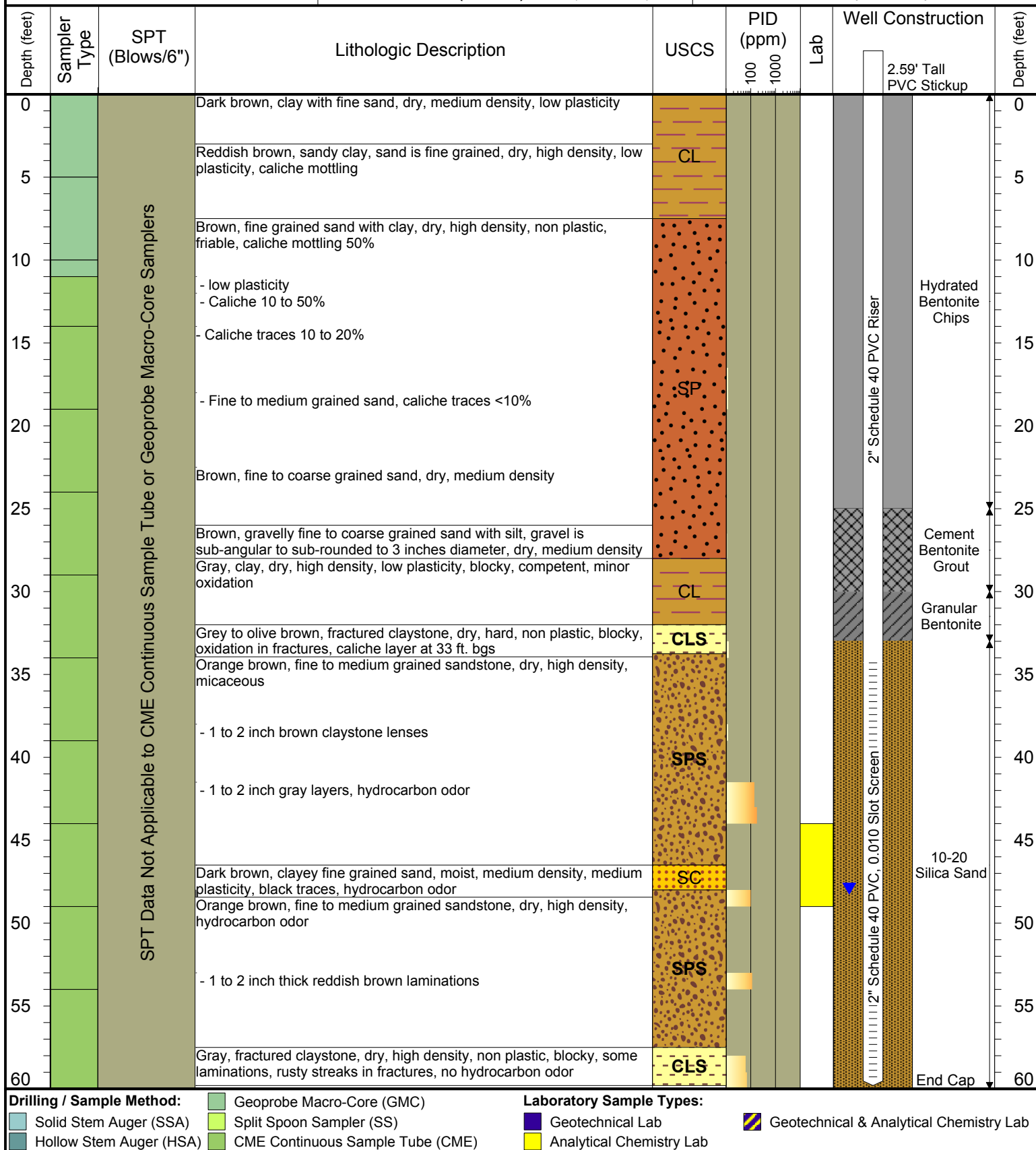
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1228965.212

EASTING (CO STATE PLANE): 3160568.572

CASING ELEVATION (FT. AMSL): 5249.3072

GROUND ELEVATION (FT. AMSL): 5246.7152





6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: ACI Services, Inc.

DRILLING EQUIPMENT: CME 45

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 2/10/14 - 2/10/14

TOTAL WELL DEPTH (FT. BGS): 60.38

DEPTH TO WATER (FT. BGS): DRY (2/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-33

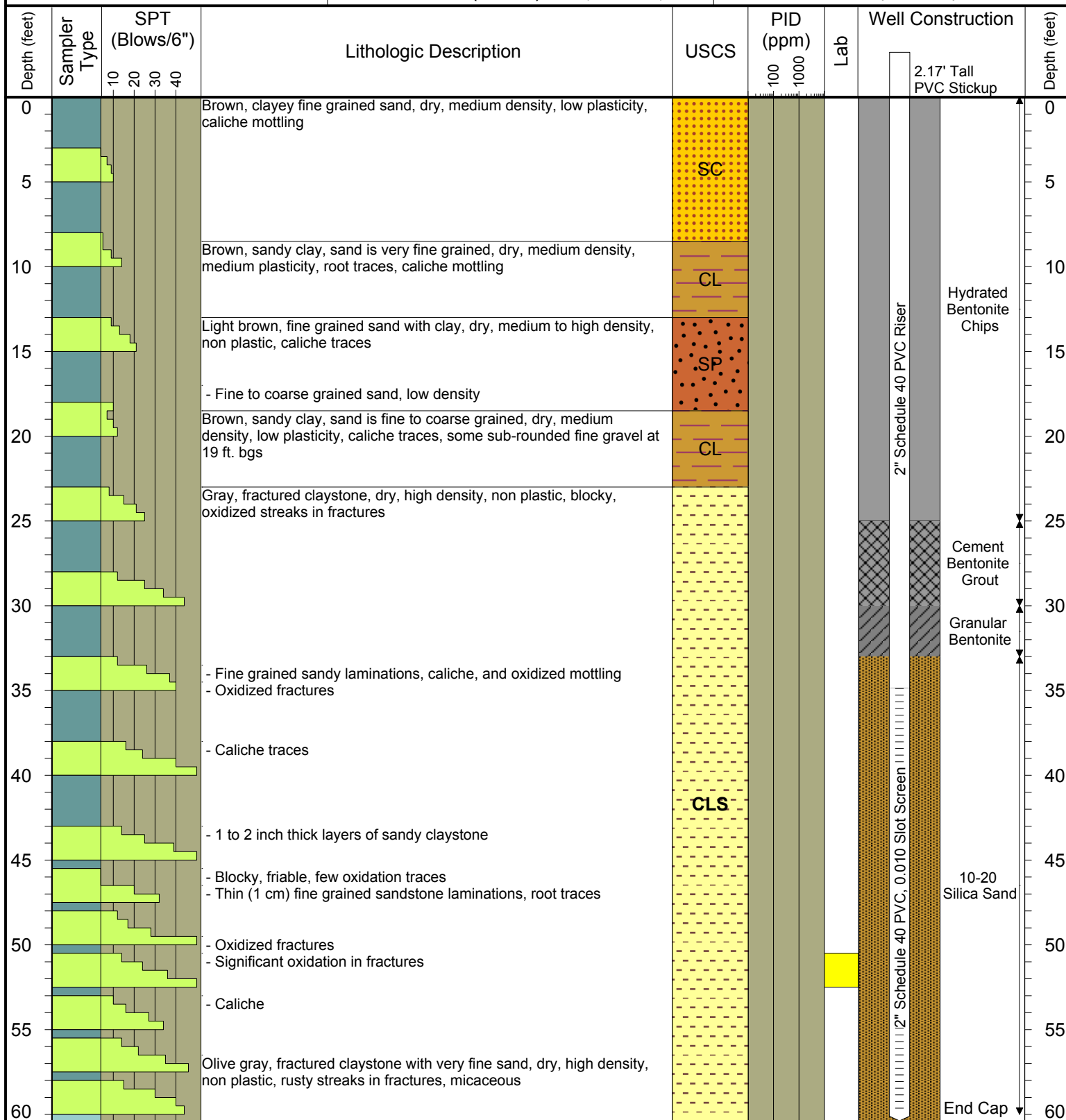
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1228809.07

EASTING (CO STATE PLANE): 3160751.213

CASING ELEVATION (FT. AMSL): 5246.1572

GROUND ELEVATION (FT. AMSL): 5243.9902



Drilling / Sample Method:

- Geoprobe Macro-Core (GMC)
- Solid Stem Auger (SSA)
- Hollow Stem Auger (HSA)
- Split Spoon Sampler (SS)
- CME Continuous Sample Tube (CME)

Laboratory Sample Types:

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: ACI Services, Inc.

DRILLING EQUIPMENT: CME 45

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 2/8/14 - 2/8/14

TOTAL WELL DEPTH (FT. BGS): 60.83

DEPTH TO WATER (FT. BGS): 54.43 (2/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-34

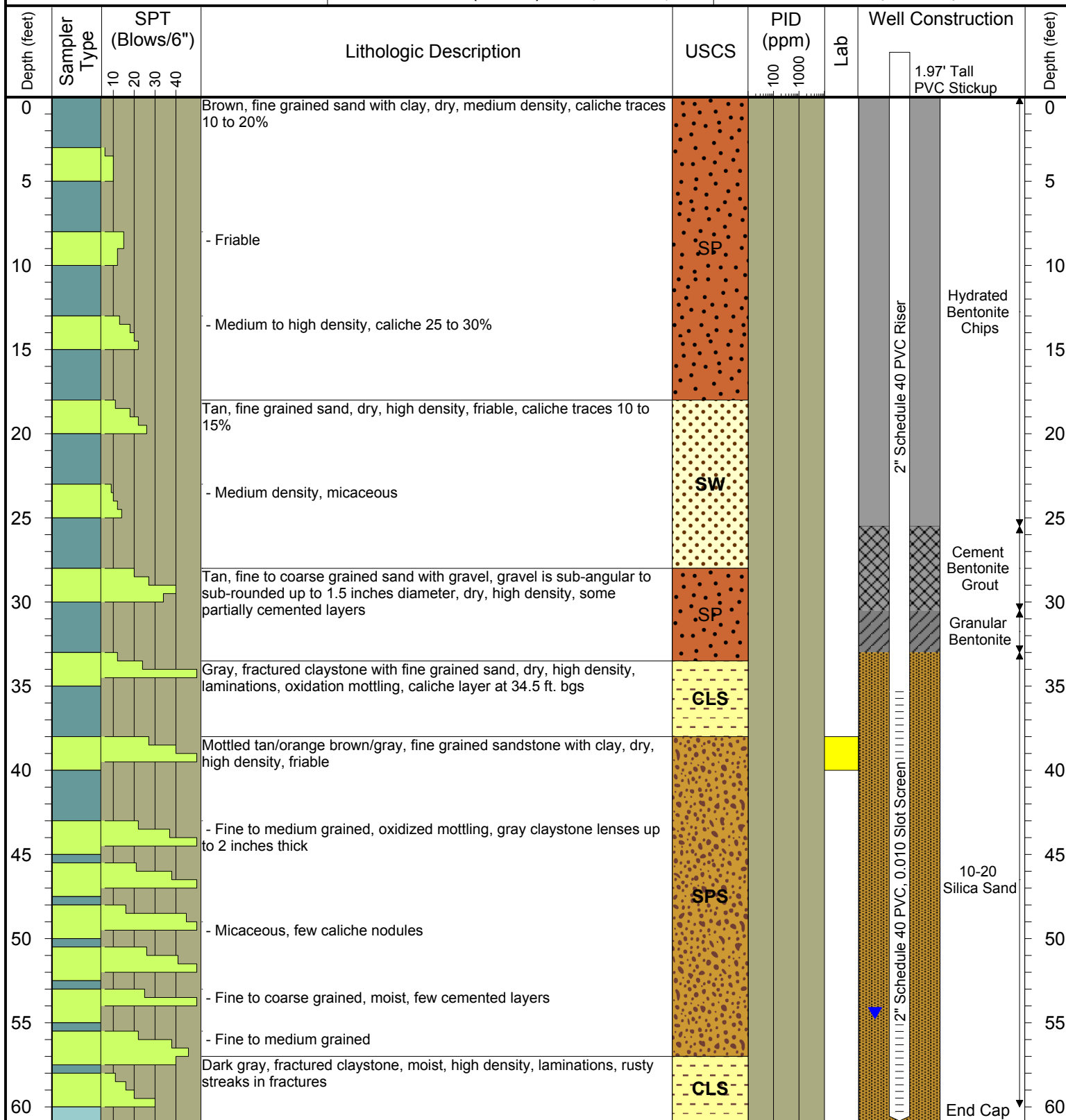
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1228812.709

EASTING (CO STATE PLANE): 3160427.991

CASING ELEVATION (FT. AMSL): 5252.5872

GROUND ELEVATION (FT. AMSL): 5250.6212



Drilling / Sample Method:

- Geoprobe Macro-Core (GMC)
- Solid Stem Auger (SSA)
- Hollow Stem Auger (HSA)
- Split Spoon Sampler (SS)
- CME Continuous Sample Tube (CME)

Laboratory Sample Types:

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



TASMAN
GEOSCIENCES

6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: Site Services

DRILLING EQUIPMENT: CME 75

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 3/6/14 - 3/6/14

TOTAL WELL DEPTH (FT. BGS): 60.54

DEPTH TO WATER (FT. BGS): 50.02 (3/28/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-35

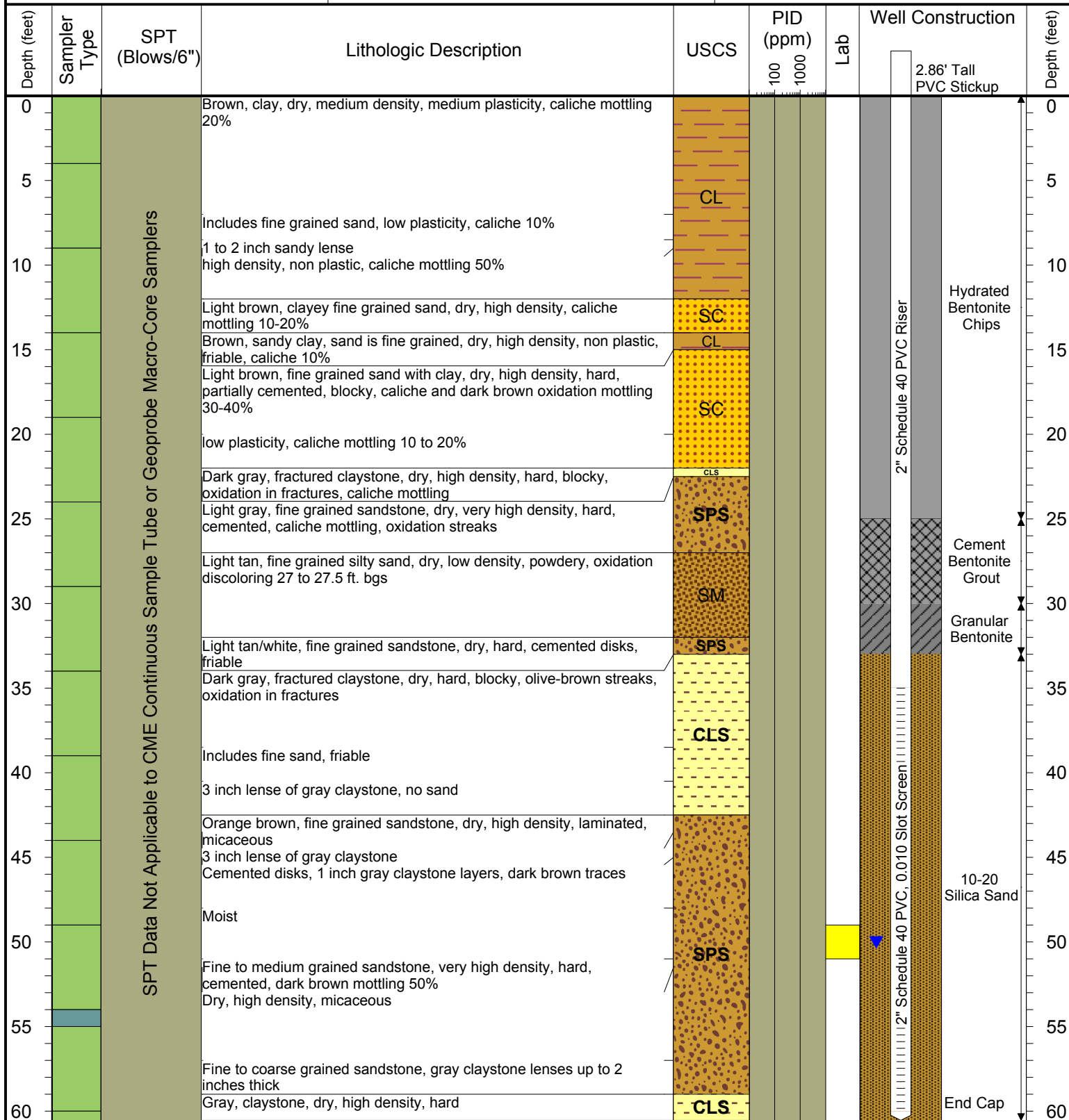
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1228807.773

EASTING (CO STATE PLANE): 3160585.231

CASING ELEVATION (FT. AMSL): 5250.712

GROUND ELEVATION (FT. AMSL): 5247.853



Drilling / Sample Method:

- Geoprobe Macro-Core (GMC)
- Solid Stem Auger (SSA)
- Hollow Stem Auger (HSA)
- Split Spoon Sampler (SS)
- CME Continuous Sample Tube (CME)

Laboratory Sample Types:

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



TASMAN
GEOSCIENCES

6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: Site Services

DRILLING EQUIPMENT: CME 75

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 3/19/14 - 3/19/14

TOTAL WELL DEPTH (FT. BGS): 59.97

DEPTH TO WATER (FT. BGS): 45.56 (3/28/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-36

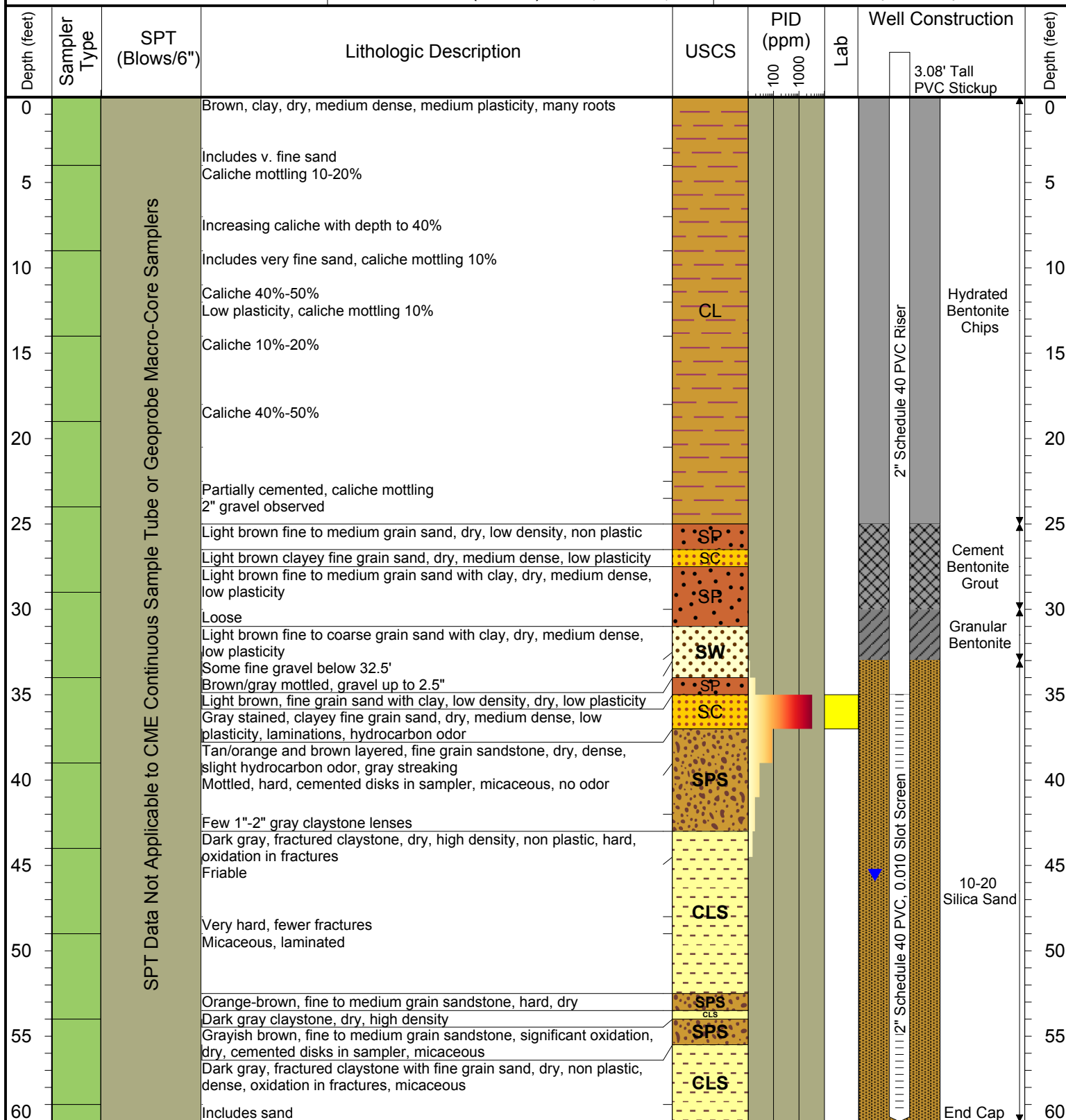
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1229294.229

EASTING (CO STATE PLANE): 3160726.436

CASING ELEVATION (FT. AMSL): 5243.065

GROUND ELEVATION (FT. AMSL): 5239.981



Drilling / Sample Method:

- Geoprobe Macro-Core (GMC)
- Solid Stem Auger (SSA)
- Hollow Stem Auger (HSA)
- Split Spoon Sampler (SS)
- CME Continuous Sample Tube (CME)

Laboratory Sample Types:

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



TASMAN
GEOSCIENCES

6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: Site Services

DRILLING EQUIPMENT: CME 75

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 3/19/14 - 3/20/14

TOTAL WELL DEPTH (FT. BGS): 65

DEPTH TO WATER (FT. BGS): 62.56 (3/28/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-37

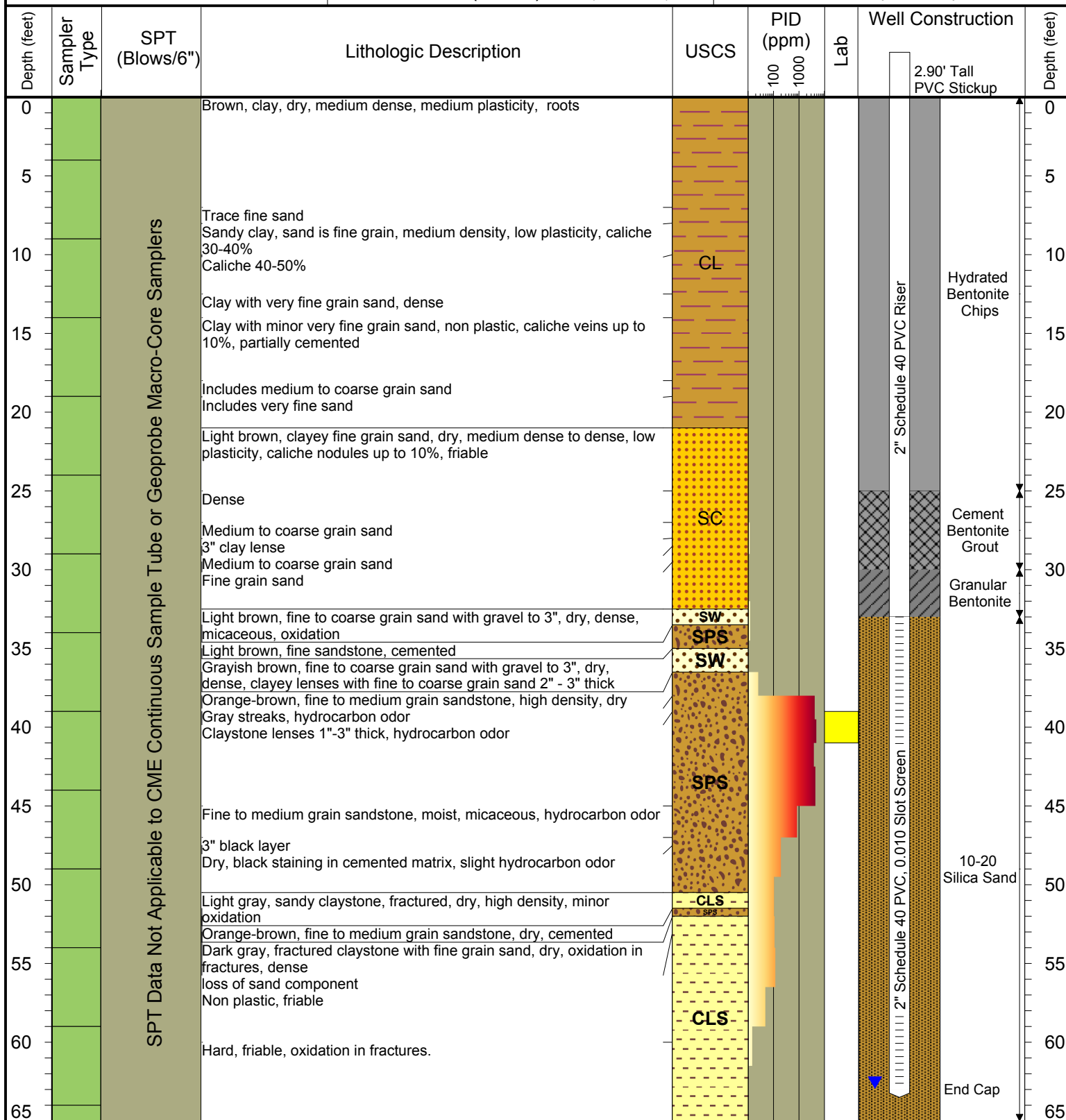
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1229023.887

EASTING (CO STATE PLANE): 3160546.298

CASING ELEVATION (FT. AMSL): 5249.245

GROUND ELEVATION (FT. AMSL): 5246.344



Drilling / Sample Method:

- Geoprobe Macro-Core (GMC)
- Solid Stem Auger (SSA)
- Hollow Stem Auger (HSA)
- Split Spoon Sampler (SS)
- CME Continuous Sample Tube (CME)

Laboratory Sample Types:

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



TASMAN
GEOSCIENCES

6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: Site Services

DRILLING EQUIPMENT: CME 75

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 3/20/14 - 3/21/14

TOTAL WELL DEPTH (FT. BGS): 60.77

DEPTH TO WATER (FT. BGS): 37.74 (3/28/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-38

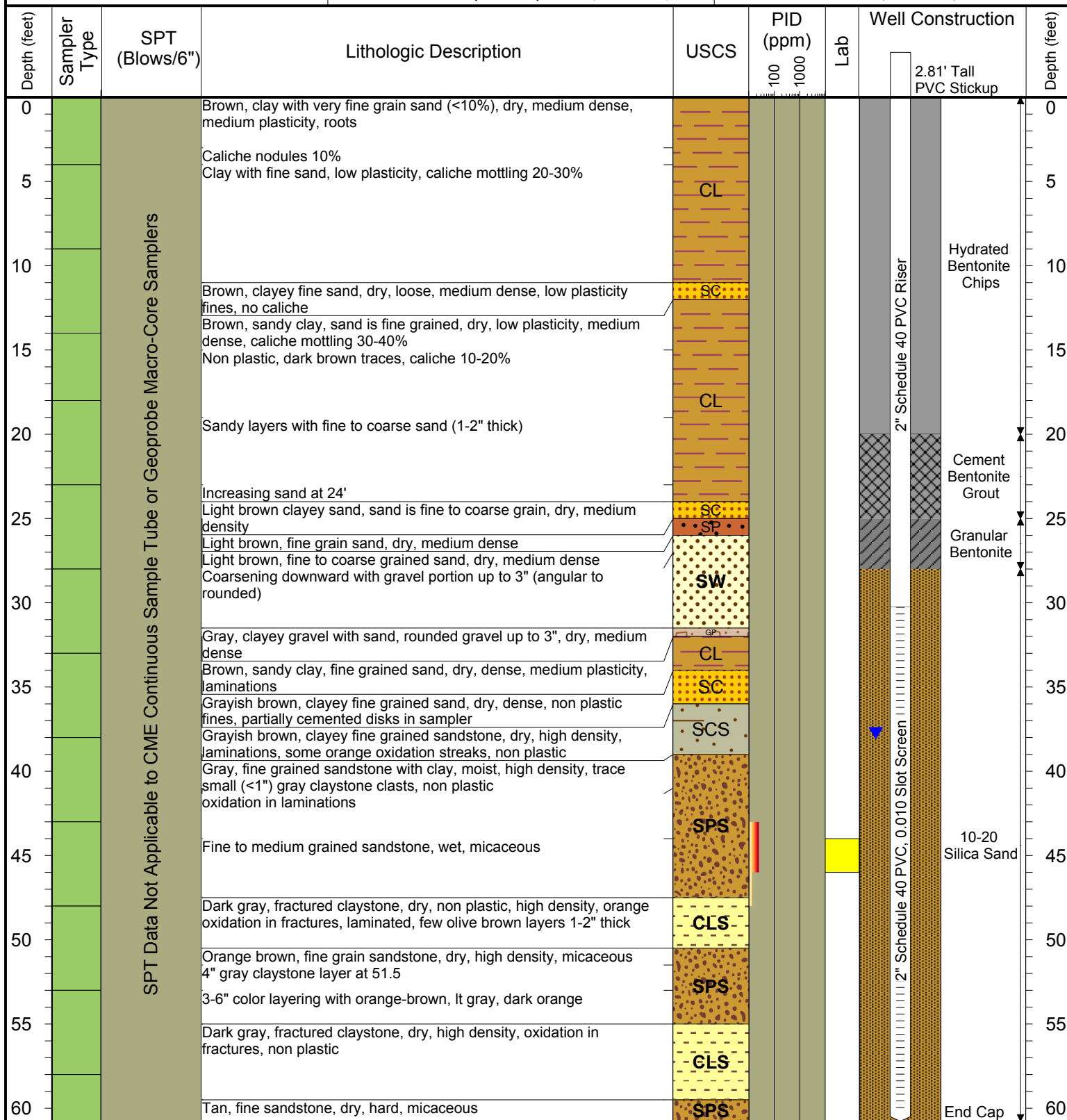
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1229297.993

EASTING (CO STATE PLANE): 3160689.555

CASING ELEVATION (FT. AMSL): 5243.609

GROUND ELEVATION (FT. AMSL): 5240.801



Drilling / Sample Method:

- Geoprobe Macro-Core (GMC)
- Solid Stem Auger (SSA)
- Hollow Stem Auger (HSA)
- Split Spoon Sampler (SS)
- CME Continuous Sample Tube (CME)

Laboratory Sample Types:

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



TASMAN
GEOSCIENCES

6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: Site Services

DRILLING EQUIPMENT: CME 55

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 4/7/14 - 4/7/14

TOTAL WELL DEPTH (FT. BGS): 59.31

DEPTH TO WATER (FT. BGS): 48.28 (4/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-39

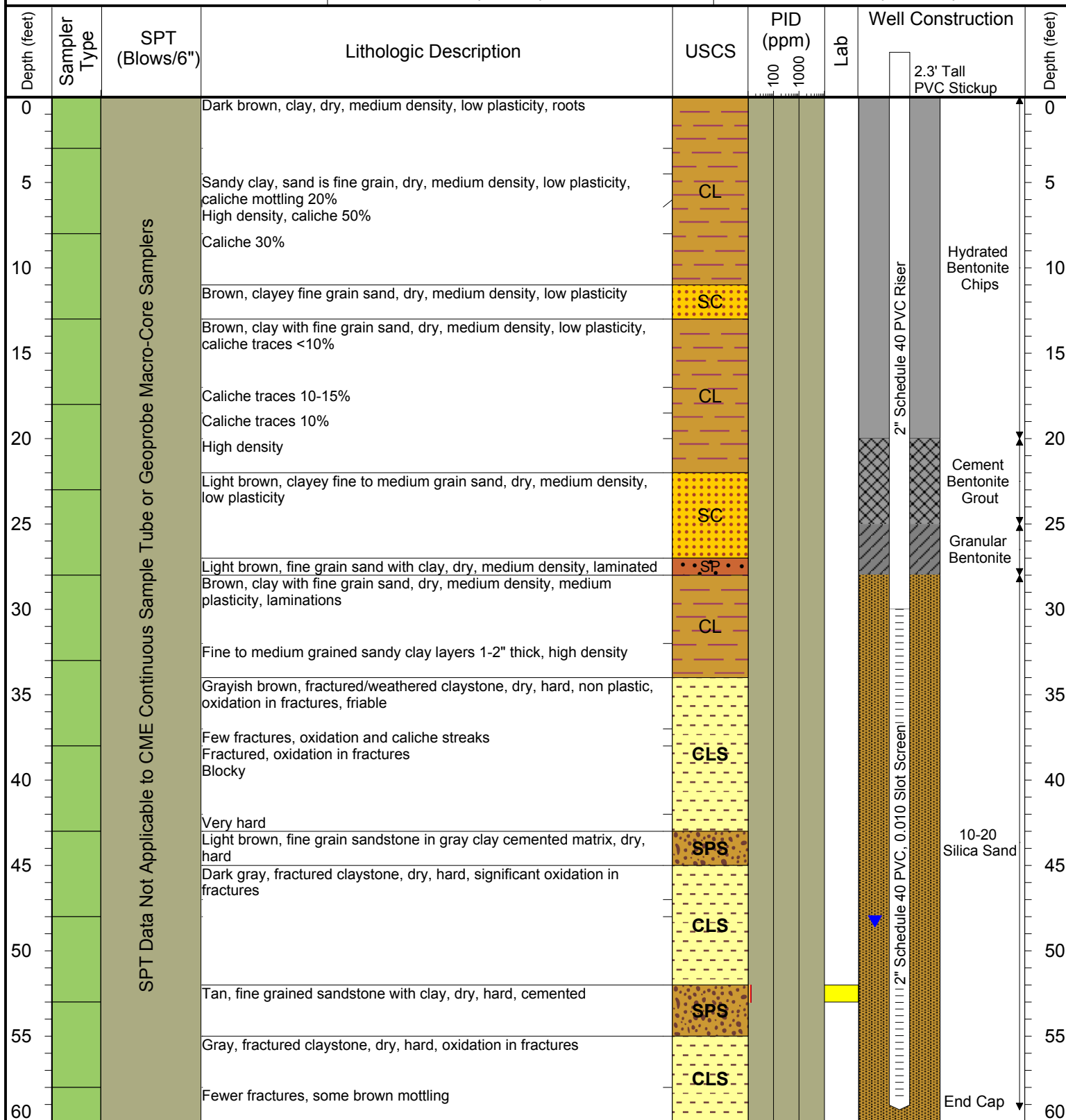
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1229256.318

EASTING (CO STATE PLANE): 3160762.125

CASING ELEVATION (FT. AMSL): 5241.8752

GROUND ELEVATION (FT. AMSL): 5239.6142



Drilling / Sample Method:

- Geoprobe Macro-Core (GMC)
- Solid Stem Auger (SSA)
- Hollow Stem Auger (HSA)
- Split Spoon Sampler (SS)
- CME Continuous Sample Tube (CME)

Laboratory Sample Types:

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



TASMAN
GEOSCIENCES

6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: Site Services

DRILLING EQUIPMENT: CME 75

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 4/8/14 - 4/8/14

TOTAL WELL DEPTH (FT. BGS): 59.84

DEPTH TO WATER (FT. BGS): 51.95 (4/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-40

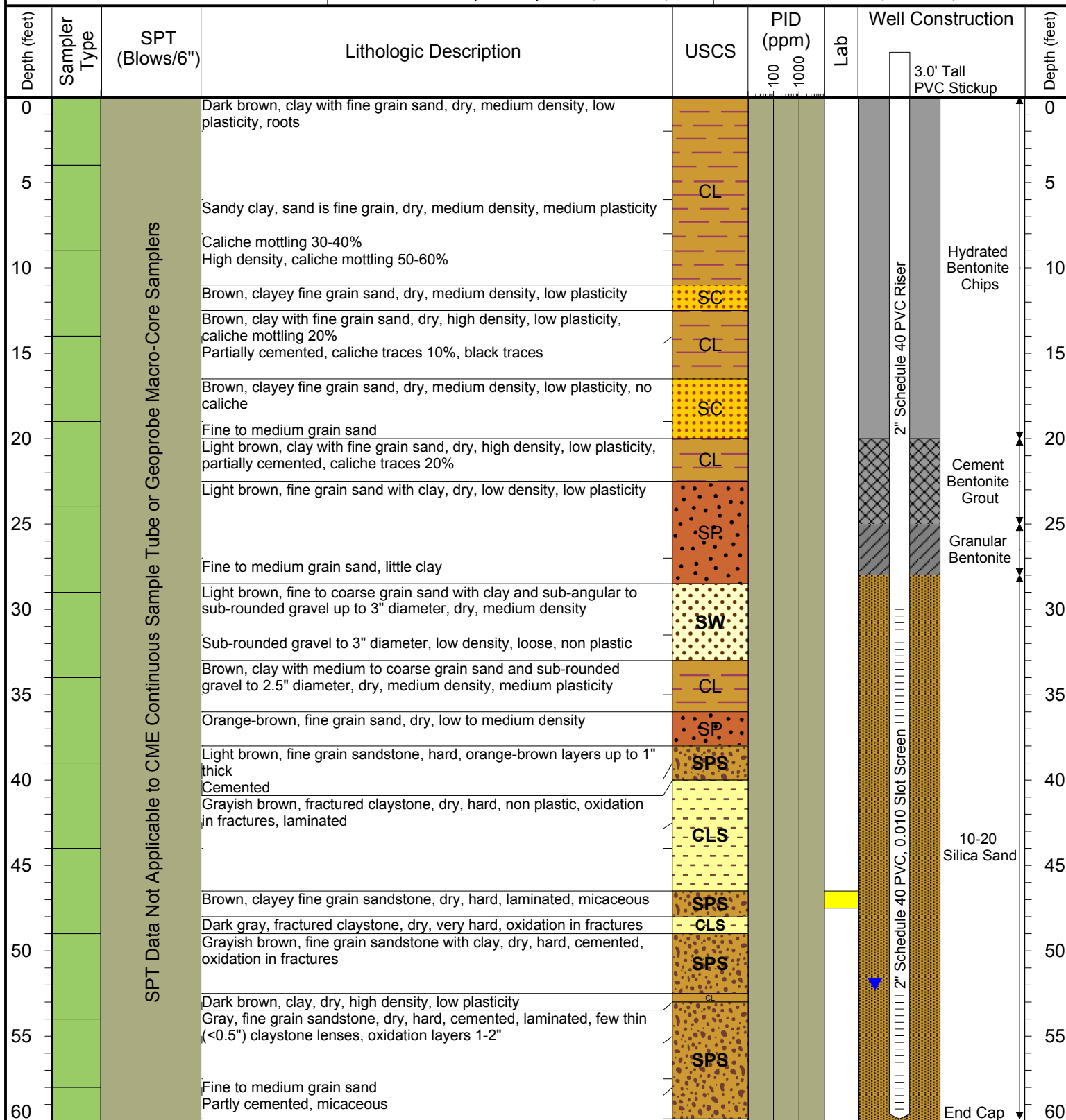
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1229365.076

EASTING (CO STATE PLANE): 3160819.027

CASING ELEVATION (FT. AMSL): 5240.6272

GROUND ELEVATION (FT. AMSL): 5237.6412



Drilling / Sample Method:

- Geoprobe Macro-Core (GMC)
- Solid Stem Auger (SSA)
- Hollow Stem Auger (HSA)
- Split Spoon Sampler (SS)
- CME Continuous Sample Tube (CME)

Laboratory Sample Types:

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



TASMAN
GEOSCIENCES

6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: Site Services

DRILLING EQUIPMENT: CME 75

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 4/8/14 - 4/9/14

TOTAL WELL DEPTH (FT. BGS): 60.03

DEPTH TO WATER (FT. BGS): 36.97 (4/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-41

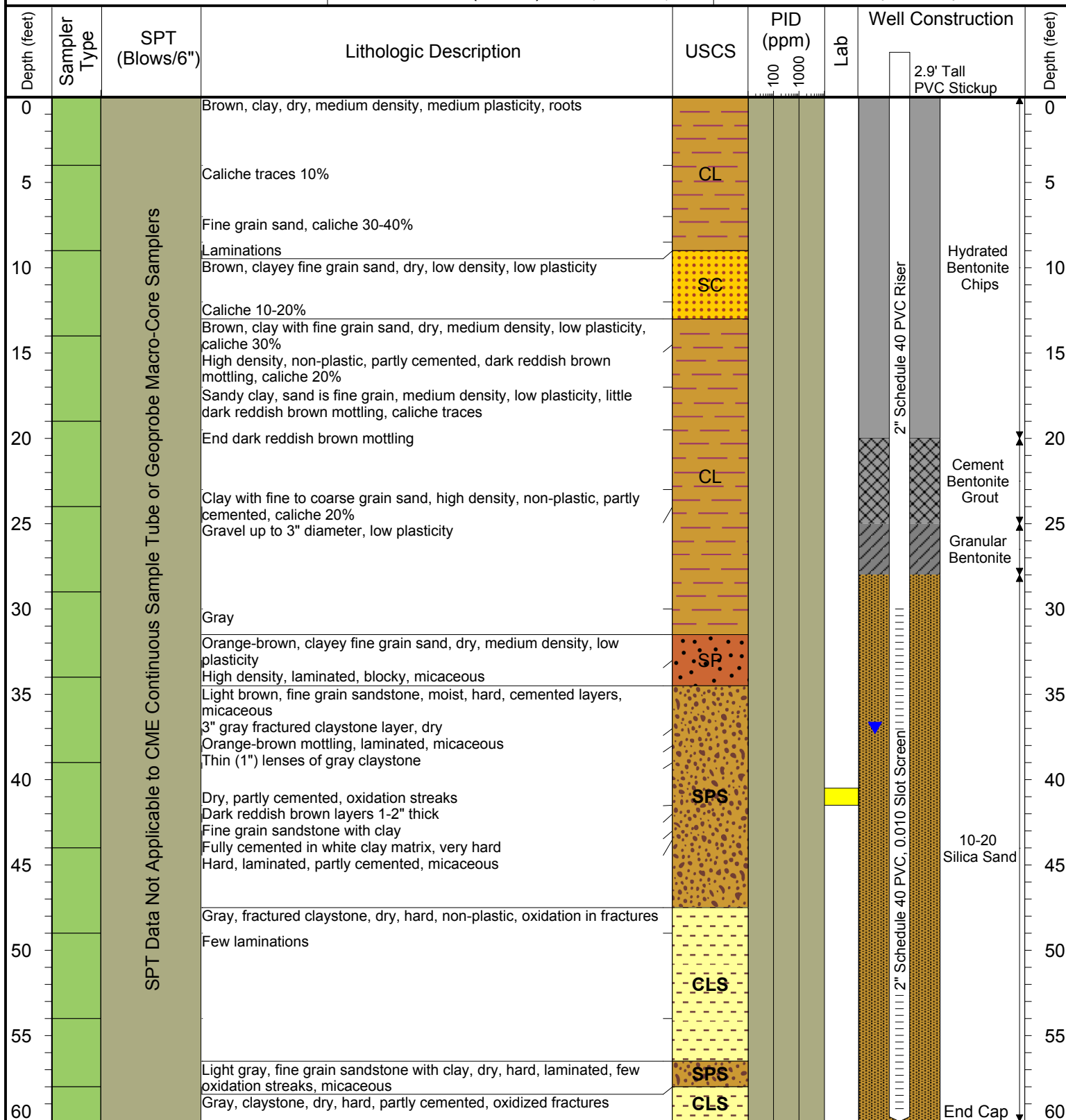
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1229369.588

EASTING (CO STATE PLANE): 3160681.308

CASING ELEVATION (FT. AMSL): 5242.9052

GROUND ELEVATION (FT. AMSL): 5239.9702



Drilling / Sample Method:

- Geoprobe Macro-Core (GMC)
- Solid Stem Auger (SSA)
- Hollow Stem Auger (HSA)
- Split Spoon Sampler (SS)
- CME Continuous Sample Tube (CME)

Laboratory Sample Types:

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



6899 Pecos Street, Unit C, Denver, Colorado 80221

CLIENT: Noble Energy, Inc.

LOGGED BY: Eric Siegel

PROJECT MANAGER: Daniel Wade P.G.

DRILLING CONTRACTOR: Site Services

DRILLING EQUIPMENT: CME 75

DRILL BIT SIZE (INCHES): 8.25

DATE STARTED - COMPLETED: 4/9/14 - 4/10/14

TOTAL WELL DEPTH (FT. BGS): 59.4

DEPTH TO WATER (FT. BGS): 39.40 (4/21/14 ▼)

Former FRI 2-18 Tank Battery

BORING / WELL ID: SB-42

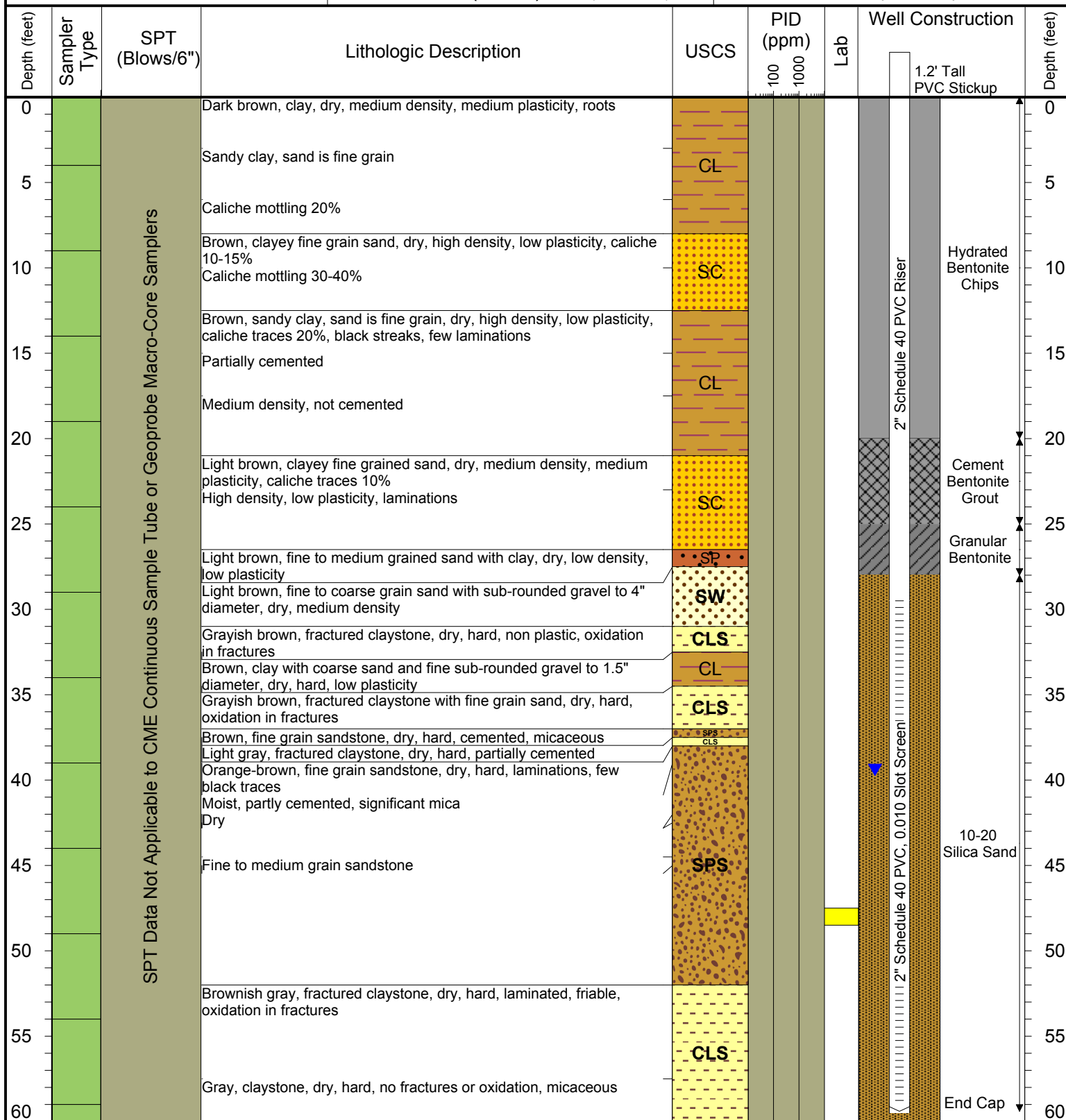
LOCATION: Thornton, Colorado

NORTHING (CO STATE PLANE): 1229175.285

EASTING (CO STATE PLANE): 3160600.321

CASING ELEVATION (FT. AMSL): 5244.3642

GROUND ELEVATION (FT. AMSL): 5243.1612



Drilling / Sample Method:

- Geoprobe Macro-Core (GMC)
- Solid Stem Auger (SSA)
- Hollow Stem Auger (HSA)
- Split Spoon Sampler (SS)
- CME Continuous Sample Tube (CME)

Laboratory Sample Types:

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab

ATTACHMENT C

LABORATORY ANALYTICAL DATA REPORTS



February 28, 2014

Tasman Geosciences

Dan Wade

6899 Pecos Street, Unit C

Denver

CO 80211

Project Name - Fri 2-18

Project Number - [none]

Attached are your analytical results for Fri 2-18 received by Origins Laboratory, Inc. January 29, 2014. This project is associated with Origins project number X401297-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB16R-45'	X401297-01	Soil	January 29, 2014 12:30	01/29/2014 15:15
SB30-43'	X401308-01	Soil	January 30, 2014 11:00	01/30/2014 16:10
SB25R-53'	X401308-02	Soil	January 30, 2014 11:30	01/30/2014 16:10
SB31-36'	X401308-03	Soil	January 30, 2014 15:20	01/30/2014 16:10
SB27R-53'	X401321-01	Soil	January 30, 2014 16:25	01/31/2014 15:20
SB22R-48'	X402026-01	Soil	February 3, 2014 14:50	02/03/2014 16:55
SB32-47'	X402049-01	Soil	February 5, 2014 12:55	02/05/2014 17:15
SB29-43'	X402052-01	Soil	February 6, 2014 12:05	02/06/2014 17:20
SB28R-53'	X402060-01	Soil	February 7, 2014 12:05	02/07/2014 17:20
SB20R-49'	X402060-02	Soil	February 7, 2014 13:30	02/07/2014 17:20
SB24R-54'	X402060-03	Soil	February 7, 2014 15:55	02/07/2014 17:20
SB34-38'	X402070-01	Soil	February 8, 2014 11:55	02/10/2014 17:30
SB33-51'	X402070-02	Soil	February 10, 2014 14:10	02/10/2014 17:30

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Dan Wade

Project Number: [none]

Project: Fri 2-18

This report has been revised to ensure that the result listed in the report and that in the electronic deliverable match and each is reported to 3 significant figures. The results in this report have not been modified from the original report. NDM 2.28.14

Any additional project notes will be listed on the sample receipt check specific to the project.

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

www.originslaboratory.com page 1 of 1

ORIGINS LABORATORY, INC

Client: Tasman Geo
Address:
Telephone Number: 303-912-2625
Email Address: dwade@tasman-geo.com

Project Manager: Dan Wade
Project Name: Fri 2-18
Project Number:
Samples Collected By: Eric Siegel

Sample ID Description: SB16R-45'
Date Sampled: 1/29/14
Time Sampled: 1230
of Containers: 1

Preservative: Unpreserved
HCl
HNO₃
Other
Groundwater:
Soil: X
Air Summa #:
Matrix:
Other:

Analysis: 8260 GTEX
Naphthalene
8015 DAO

Sample Instructions: X4612970

Relinquished By: Eric A. Siegel
Date: 1/29/14
Time: 1515

Relinquished By:
Date:
Time:

Received By:
Date: 1/29/14
Time: 1515

Received By:
Date:
Time:

Turnaround Time: ☒ Same Day ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr ☐ Standard

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X461297

Client: Tasman

Client Project ID: Fri 2-18

Checklist Completed by: Jeff Smith

Shipped Via: Pick Up

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 1/29/14

Airbill #: N/A

Matrix(s) Received: (Check all that apply): X Soil/Solid Water Other

Cooler Number/Temperature: 14.6 °C / °C / °C (Describe)

Thermometer ID: T002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<u>X</u>	<u>X</u>		<u>Sampled Same Day</u>
Is there ice present (document if blue ice is used)	<u>X</u>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<u>X</u>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<u>X</u>		
Were all samples received intact ⁽¹⁾ ?	<u>X</u>			
Was adequate sample volume provided ⁽¹⁾ ?	<u>X</u>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<u>X</u>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<u>X</u>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<u>X</u>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<u>X</u>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<u>X</u>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<u>X</u>	<u>Soil</u>
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)(pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<u>X</u>	<u>Soil</u>
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date, time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager): [Signature]

Date/Time Reviewed: 1/31/14

Origins Laboratory, Inc.

[Signature]

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

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X401308

page 1 of 1

ORIGINS
LABORATORY, INC

Client: Tasman Geosciences
Address:
Telephone Number:
Email Address: dwade@tasman-geo.com
Project Manager: Dan Wade
Project Name: Fri 2-18
Project Number:
Samples Collected By: Eric Siegel

Preservative: HCl, HNO₃, Other
Matrix: Soil, Groundwater, Air Summa, Other
Analysis: Naphthalene, 8240 GTEX, 8015 DCO

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative	Matrix	Analysis	Sample Instructions
SB30-43'	1/30/14	11:00	1	X	Soil	X	1
SB25R-53'	1/30/14	11:30	1	X	Soil	X	2
SB31-36'	1/30/14	15:20	1	X	Soil	X	3
							4
							5
							6
							7
							8
							9
							10

Relinquished By: Eric A. Siegel
Date: 1/30/14
Time: 16:10
Received By: [Signature]
Date: 1/30/14
Time: 16:10
Turnaround Time: Same Day ☒ 24 Hr ☐ 48 Hr ☐ 72 Hr ☐ Standard ☐

Date Results Needed

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: **X401308**

Client: Tasman

Client Project ID: Fri 2-18

Checklist Completed by: Scott Smith

Shipped Via: H/D

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/Time completed: 1/30/14 16:12

Airbill #: N/A

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid

☐ Water

☐ Other:

Cooler Number/Temperature: 1 123 °C 1 °C 1 °C (Describe) °C

Thermometer ID: 1002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?		X		Sampled Same Day
Is there ice present (document if blue ice is used)		X		
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		X		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	X			
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	Sd: 1
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analysis in order to insure sample integrity) (pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			X	Sd: 1
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to be taken (in the additional comments above) and the case narrative.

Reviewed by: [Signature] (Project Manager)

1-30-14 1720
Date/Time Reviewed

Origins Laboratory, Inc.

[Signature]

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Dan Wade
Project Number: [none]
Project: Fri 2-18

ORIGINS

LABORATORY, INC

www.originslaboratory.com

Client:

T. Suman Geo

Address:

Telephone Number:

Email Address:

tsuman@tsuman-geo.com
851 Sigel Rd Suman-Geo.com

Project Manager:

Dan Wade

Project Name:

Fri 2-18

Project Number:

Samples Collected By:

Eric Siegel

Sample ID Description

SB27K-53'

Date Sampled

1/30/14

Time Sampled

16:25

of Containers

1

Unpreserved

X

HCl

HNO₃

Other

Groundwater

X

Soil

X

Air Sample

Canister #

Other

Analysis

80/5 DRO

6260 GBOX

Naphthalene

Sample Instructions

1

2

3

4

5

6

7

8

9

10

Relinquished By:

Eric A. Siegel

Date:

1/31/14

Time:

15:20

Received By:

Eric A. Siegel

Date:

1/31/14

Time:

15:20

Turnaround Time:

Same Day ☒ 24 Hr ☐

48 Hr ☐ 72 Hr ☐

Standard ☐

Origins Laboratory, Inc.

BM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Origins Laboratory

F-012207-01-R1

Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: 401321 Client: TASMAN
Checklist Completed by: [Signature] Client Project ID: FRI
Date/time completed: 1/18/14 15:24 Shipped Via: A/D
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
Airbill #: N/A
Matrix(s) Received: (Check all that apply) ☒ Soil/Solid ☐ Water ☐ Other: _____
Cooler Number/Temperature: 21 °C / _____ °C / _____ °C (Describe) _____ °C
Thermometer ID: T002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input checked="" type="checkbox"/>			
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	<u>Soil</u>
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) / (pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	<u>Soil</u>
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

Date/Time Reviewed

Origins Laboratory, Inc.

[Signature]

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

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page 1 of 1

402026

ORIGINS
LABORATORY, INC

Client: Tasman Geo
Address:
Telephone Number:
Email Address: dwade@tasmangeo.com

Project Manager: Dan Wade
Project Name: Fri 2-18
Project Number:
Samples Collected By: Eric Siegel

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #			Other
SB22R-48	2/3/14	14:50	1	X					X			2015 DRO H2CO G51EX Naphthalene	1
													2
													3
													4
													5
													6
													7
													8
													9
													10
Relinquished By: <i>E. A. [signature]</i>	Date: 2/3/14	Time: 16:55										Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>	
Relinquished By:	Date:	Time:											

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X402026

Client: Tasman

Client Project ID: Fri 2-18

Checklist Completed by: Jeff Smith

Shipped Via: Pick Up

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 2/3/14 17:28

Airbill #: NA

Matrix(s) Received (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other (Describe)

Cooler Number/Temperature: 11.9 °C ☐ °C ☐ °C ☐ °C

Thermometer ID: 1202

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ^{1/2} ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ^{1/2} ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ^{1/2} ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ^{1/2} ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ^{1/2} ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ^{1/2} ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ^{1/2} ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ^{1/2} ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Seal
Are samples preserved that require preservation and was it checked ^{1/2} ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) (pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsC ₂ -NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Seal
Additional Comments (if any):				

^{1/2}If NO, then contact the client before proceeding with analysis and note date, time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

2/4/14 7:09
Date/Time Reviewed

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Dan Wade
Project Number: [none]
Project: Fri 2-18

ORIGINS

LABORATORY, INC

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X402049

page 1 of 1

Client:

Tasman Geosciences

Address:

Project Manager:

Dan Wade

Project Name:

Fri 2-18

Project Number:

Telephone Number:

Samples Collected By:

Eric Siegel

Email Address:

eric.siegel@tasman-geo.com
eric.siegel@tasman-geo.com

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #		
5832-47	2/5/14	12:55	1	X				X			8015 DRO 8260 GTR Naphthalene	1
												2
												3
												4
												5
												6
												7
												8
												9
												10

Relinquished By:	Date:	Received By:	Date:	Turnaround Time:
Eric A. Siegel	2/5/14	[Signature]	2/5/14	Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>

Fax: 303.265.9645

Phone: 303.433.1322

Denver, CO 80211

1725 Elk Place

Date Results Needed

Origins Laboratory, Inc.

BM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: 2402017

Client: Tasman

Client Project ID: Fri 2-18

Checklist Completed by: Jesse Smith

Shipped Via: Pick up
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 2/5/14 17:1

Airbill #: NA

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: _____ (Describe)

Cooler Number/Temperature: 7 / -4.1 °C 1 °C 1 °C 1 °C

Thermometer ID: 7002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 5°C ⁽¹⁾ ?		<input checked="" type="checkbox"/>		Outside Temp. -2°F
Is there ice present (document if blue ice is used)?	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	See 1
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	See 1
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to be taken in the additional comments (above) and the case narrative.

Reviewed by: [Signature] (Project Manager)

Date/Time Reviewed: 2/5/14 18:09

Origins Laboratory, Inc.

[Signature]

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dan Wade
Project Number: [none]
Project: Fri 2-18

ORIGINS

LABORATORY, INC

www.originslaboratory.com

X402052

page 1 of 1

Client: Tasman Geosciences
Address: _____

Project Manager: Dan Wade
Project Name: Fri 2-18
Project Number: _____
Samples Collected By: Eric Sigel

Telephone Number: _____
Email Address: dwade@tasman-geo.com

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #		
SB29-43'	2/6/14	12:05	1	X					X		8015 DRD 8260 GBTX Methanol	1
												2
												3
												4
												5
												6
												7
												8
												9
												10
Relinquished By: <u>Eric A. Sigel</u>	Date: <u>2/6/14</u>	Time: <u>17:20</u>		Received By: _____	Date: _____	Time: _____	Turnaround Time: <input checked="" type="checkbox"/> Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard					
Relinquished By: _____	Date: _____	Time: _____		Received By: <u>[Signature]</u>	Date: <u>2/6/14</u>	Time: <u>17:20</u>						

Fax: 303.265.9645

Phone: 303.433.1322

Denver, CO 80211

1725 Elk Place

Date Result Needed: _____

Origins Laboratory, Inc.

BM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X402052

Client: Tasman

Client Project ID: Fri 2-18

Checklist Completed by: Jane Smith

Shipped Via: H/D

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/Time completed: 2/6/14 17:22

Airbill #:

Matrix(s) Received: (Check all that apply) ☒ Soil/Solid

☐ Water

☐ Other:

(Describe)

Cooler Number/Temperature: 1 14.5 °C

1 °C

1 °C

1 °C

(Describe)

Thermometer ID: T2002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Soil
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) * (preservation is not confirmed for subcontracted analytes in order to insure sample integrity) (pH <2 for samples preserved with HNO ₃ , HCl, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Soil
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

2/6/14 HSS
Date/Time Reviewed

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Dan Wade
Project Number: [none]
Project: Fri 2-18

ORIGINS

LABORATORY, INC

www.originslaboratory.com

X402060

page 1 of 1

Client:

Tesman

Address:

Project Manager:

Dan Wade

Project Name:

Fri 2-18

Project Number:

Telephone Number:

Samples Collected By:

Eric Sigel

Email Address:

dwade@tesman-jee.com

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis	Sample Instructions		
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #	Other				
SB28R-53'	2/7/14	12:05	1	X					X			X	8260 GBTX	1	
SB20R-44'	2/7/14	13:30	1	X					X			X	Nitrofluorene	2	
SB24R-54'	2/7/14	15:55	1	X					X			X	8015 DRO	3	
														4	
														5	
														6	
														7	
														8	
														9	
														10	
Relinquished By: <i>E. A. Sigel</i>	Date: 2/7/14	Time: 1720	Received By: <i>[Signature]</i>	Date: 2/7/14	Time: 1720	Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> Standard <input type="checkbox"/>									
Relinquished By:	Date:	Time:	Received By:	Date:	Time:										

Fax: 303.265.9645

Phone: 303.433.1322

Denver, CO 80211

1725 Elk Place

Origins Laboratory, Inc.

BM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X402060

Client: Tasman

Client Project ID: _____

Checklist Completed by: Jeff Smith

Shipped Via: Pick up
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 2/7/14

Airbill #: NA

Matrix(s) Received: (Check all that apply) _____ Soil/Solid _____ Water _____ Other: _____ (Describe)

Cooler Number/Temperature: _____ / 54 °C _____ / _____ °C _____ / _____ °C _____ / _____ °C

Thermometer ID: 7002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	X			
Is there ice present (document if blue ice is used)?	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?				
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄ / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH).			X	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to be taken in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

02-07-14 [338]
Date/Time Reviewed

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

ORIGINS LABORATORY, INC

www.originslaboratory.com

page 1 of 1

X402070

Client: Tasman Geosciences
Address: _____
Telephone Number: _____
Email Address: dwade@tasman-geo.com

Project Manager: Dan Wade
Project Name: Fri 2-18
Project Number: _____
Samples Collected By: Eric Siegel

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #	Other			
SB34-38'	2/8/14	11:55	1	X									8260 GBTEX 8015 DCO Nphthalein	1
SB33-51'	2/10/14	14:10	1	X										2
														3
														4
														5
														6
														7
														8
														9
														10

Relinquished By: Eric A. Siegel
Date: 2/10/14
Time: 1730


Received By: [Signature]
Date: 2/10/14
Time: 1730

Relinquished By: _____
Date: _____
Time: _____

Received By: _____
Date: _____
Time: _____

Turnaround Time:
☒ Same Day
☐ 24 Hr
☐ 48 Hr
☐ 72 Hr
☐ Standard

Origins Laboratory, Inc.



Noelle Doyle Mathis, President

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X462070

Client: TASMAN

Client Project ID: Fri 2-18

Checklist Completed by: WI

Shipped Via: D/U

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 2/10 1744

Airbill #: _____

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid _____ Water _____ Other: _____ (Describe)

Cooler Number/Temperature: _____ / 4.9 °C _____ / _____ °C _____ / _____ °C _____ / _____ °C

Thermometer ID: 7002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	<u>SOIL</u>
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) (pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	<u>SOIL</u>
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to be taken in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

2/11/14 10:30
Date/Time Reviewed

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB16R-45'

1/29/2014 12:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X401297-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4A29011	01/29/2014	01/29/2014
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Surrogate: o-Terphenyl	90.1 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	110	10.0	mg/kg	25	4A29009	01/29/2014	01/30/2014
Benzene	0.515	0.100	"	"	"	"	"
Toluene	6.69	0.100	"	"	"	"	"
Ethylbenzene	0.587	0.100	"	"	"	"	"
Xylenes, total	8.87	0.100	"	"	"	"	"
Naphthalene	ND	0.200	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.4 %	70-130			"	"	"
Surrogate: Toluene-d8	104 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	98.2 %	70-130			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB30-43'

1/30/2014 11:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X401308-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	400	50.0	mg/kg	1	4A30010	01/30/2014	01/30/2014
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Surrogate: o-Terphenyl	81.6 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	1110	40.0	mg/kg	200	4A30006	01/30/2014	01/30/2014
Benzene	1.00	0.400	"	"	"	"	"
Toluene	29.9	0.400	"	"	"	"	"
Ethylbenzene	ND	0.200	"	100	"	"	01/30/2014
Xylenes, total	111	0.400	"	200	"	"	01/30/2014
Napthalene	2.30	0.400	"	100	"	"	01/30/2014

Surrogate: 1,2-Dichloroethane-d4	101 %	70-130			"	"	01/30/2014
Surrogate: Toluene-d8	107 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	105 %	70-130			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB25R-53'

1/30/2014 11:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X401308-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4A30010	01/30/2014	01/30/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	94.9 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	0.304	0.200	mg/kg	1	4A30006	01/30/2014	01/30/2014
Benzene	ND	0.0020	"	"	"	"	"
Toluene	ND	0.0020	"	"	"	"	"
Ethylbenzene	ND	0.0020	"	"	"	"	"
Xylenes, total	ND	0.0020	"	"	"	"	"
Napthalene	ND	0.0040	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	108 %	70-130			"	"	"
Surrogate: Toluene-d8	98.7 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB31-36'

1/30/2014 3:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X401308-03 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4A30010	01/30/2014	01/30/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	80.6 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	2.32	0.200	mg/kg	1	4A30006	01/30/2014	01/31/2014
Benzene	0.0028	0.0020	"	"	"	"	"
Toluene	0.0250	0.0020	"	"	"	"	"
Ethylbenzene	ND	0.0020	"	"	"	"	"
Xylenes, total	0.0743	0.0020	"	"	"	"	"
Napthalene	0.0142	0.0040	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	102 %	70-130			"	"	01/30/2014
Surrogate: Toluene-d8	100 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	70-130			"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB27R-53'
1/30/2014 4:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X401321-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4A31009	01/31/2014	01/31/2014
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Surrogate: o-Terphenyl	103 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4A31008	01/31/2014	01/31/2014
Benzene	ND	0.0020	"	"	"	"	"
Toluene	ND	0.0020	"	"	"	"	"
Ethylbenzene	ND	0.0020	"	"	"	"	"
Xylenes, total	ND	0.0020	"	"	"	"	"
Naphthalene	ND	0.0040	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	103 %	70-130			"	"	"
Surrogate: Toluene-d8	98.1 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB22R-48'

2/3/2014 2:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402026-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4B03008	02/03/2014	02/03/2014
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Surrogate: o-Terphenyl	83.8 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	1.30	0.200	mg/kg	1	4B03009	02/03/2014	02/03/2014
Benzene	ND	0.0020	"	"	"	"	"
Toluene	0.0234	0.0020	"	"	"	"	"
Ethylbenzene	ND	0.0020	"	"	"	"	"
Xylenes, total	0.113	0.0020	"	"	"	"	"
Naphthalene	ND	0.0040	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	107 %	70-130			"	"	"
Surrogate: Toluene-d8	95.6 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	106 %	70-130			"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB32-47'
2/5/2014 12:55:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402049-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	819	50.0	mg/kg	1	4B05008	02/05/2014	02/05/2014
------------------	-----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	71.2 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	1040	40.0	mg/kg	200	4B05012	02/05/2014	02/05/2014
Benzene	1.20	0.400	"	"	"	"	"
Toluene	35.6	0.400	"	"	"	"	"
Ethylbenzene	6.48	0.400	"	"	"	"	"
Xylenes, total	88.6	0.400	"	"	"	"	"
Naphthalene	2.03	0.800	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.8 %	70-130			"	"	"
Surrogate: Toluene-d8	109 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB29-43'
2/6/2014 12:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402052-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4B06007	02/06/2014	02/06/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: <i>o</i> -Terphenyl	75.2 %	59-131			"	"	"
--------------------------------	--------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.100	mg/kg	1	4B06006	02/06/2014	02/06/2014
Benzene	ND	0.0010	"	"	"	"	"
Toluene	ND	0.0010	"	"	"	"	"
Ethylbenzene	ND	0.0010	"	"	"	"	"
Xylenes, total	ND	0.0010	"	"	"	"	"
Naphthalene	ND	0.0040	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	112 %	70-130			"	"	"
Surrogate: Toluene-d8	101 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB28R-53'
2/7/2014 12:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402060-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4B07007	02/07/2014	02/07/2014
------------------	----	------	-------	---	---------	------------	------------

<i>Surrogate: o-Terphenyl</i>	71.1 %	59-131			"	"	"
-------------------------------	--------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4B07006	02/07/2014	02/07/2014
Benzene	ND	0.0020	"	"	"	"	"
Toluene	ND	0.0020	"	"	"	"	"
Ethylbenzene	ND	0.0020	"	"	"	"	"
Xylenes, total	ND	0.0020	"	"	"	"	"
Naphthalene	ND	0.0080	"	"	"	"	"

<i>Surrogate: 1,2-Dichloroethane-d4</i>	112 %	70-130			"	"	"
<i>Surrogate: Toluene-d8</i>	98.9 %	70-130			"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>	102 %	70-130			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB20R-49'

2/7/2014 1:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402060-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4B07007	02/07/2014	02/07/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	68.1 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4B07006	02/07/2014	02/07/2014
Benzene	ND	0.0020	"	"	"	"	"
Toluene	ND	0.0020	"	"	"	"	"
Ethylbenzene	ND	0.0020	"	"	"	"	"
Xylenes, total	ND	0.0020	"	"	"	"	"
Naphthalene	ND	0.0080	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	121 %	70-130			"	"	"
Surrogate: Toluene-d8	102 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	70-130			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB24R-54'
2/7/2014 3:55:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402060-03 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4B07007	02/07/2014	02/07/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	72.1 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4B07006	02/07/2014	02/07/2014
Benzene	ND	0.0020	"	"	"	"	"
Toluene	ND	0.0020	"	"	"	"	"
Ethylbenzene	ND	0.0020	"	"	"	"	"
Xylenes, total	ND	0.0020	"	"	"	"	"
Naphthalene	ND	0.0080	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	121 %	70-130			"	"	"
Surrogate: Toluene-d8	99.9 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB34-38'
2/8/2014 11:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402070-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4B10010	02/10/2014	02/11/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	70.6 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.100	mg/kg	1	4B10009	02/10/2014	02/11/2014
Benzene	ND	0.0010	"	"	"	"	"
Toluene	ND	0.0010	"	"	"	"	"
Ethylbenzene	ND	0.0010	"	"	"	"	"
Xylenes, total	ND	0.0010	"	"	"	"	"
Naphthalene	ND	0.0040	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	103 %	70-130			"	"	"
Surrogate: Toluene-d8	101 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"

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Tasman Geosciences
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Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB33-51'

2/10/2014 2:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402070-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4B10010	02/10/2014	02/11/2014
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Surrogate: o-Terphenyl	85.2 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.100	mg/kg	1	4B10009	02/10/2014	02/11/2014
Benzene	ND	0.0010	"	"	"	"	"
Toluene	ND	0.0010	"	"	"	"	"
Ethylbenzene	ND	0.0010	"	"	"	"	"
Xylenes, total	ND	0.0010	"	"	"	"	"
Naphthalene	ND	0.0040	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	110 %	70-130			"	"	"
Surrogate: Toluene-d8	102 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A29009 - EPA 5030 (soil)

Blank (4A29009-BLK1)

Prepared: 01/29/2014 Analyzed: 01/30/2014

Gasoline Range Hydrocarbons	ND	0.4	mg/kg							
Benzene	ND	0.004	"							
Toluene	ND	0.004	"							
Ethylbenzene	ND	0.004	"							
Xylenes, total	ND	0.004	"							
Naphthalene	ND	0.008	"							
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		97.3	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.4	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A29009 - EPA 5030 (soil)

LCS (4A29009-BS1)

Prepared: 01/29/2014 Analyzed: 01/30/2014

Benzene	0.2	0.004	mg/kg	0.200		107	70-130			
Toluene	0.2	0.004	"	0.200		109	70-130			
Ethylbenzene	0.2	0.004	"	0.200		110	70-130			
m,p-Xylene	0.4	0.008	"	0.400		103	70-130			
o-Xylene	0.2	0.004	"	0.200		108	70-130			
Naphthalene	0.2	0.008	"	0.200		94.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	58		ug/kg	62.5		92.1	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.0	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A29009 - EPA 5030 (soil)

LCS Dup (4A29009-BSD1)

Prepared: 01/29/2014 Analyzed: 01/30/2014

Benzene	0.2	0.004	mg/kg	0.200		110	70-130	2.58	20	
Toluene	0.2	0.004	"	0.200		113	70-130	4.20	20	
Ethylbenzene	0.2	0.004	"	0.200		113	70-130	2.28	20	
m,p-Xylene	0.4	0.008	"	0.400		105	70-130	2.29	20	
o-Xylene	0.2	0.004	"	0.200		110	70-130	2.07	20	
Naphthalene	0.2	0.008	"	0.200		99.1	70-130	5.28	20	
Surrogate: 1,2-Dichloroethane-d4	60		ug/kg	62.5		95.4	70-130			
Surrogate: Toluene-d8	65		"	62.5		104	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.3	70-130			

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Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A30006 - EPA 5030 (soil)

Blank (4A30006-BLK1)

Prepared: 01/30/2014 Analyzed: 01/30/2014

Gasoline Range Hydrocarbons	ND	0.4	mg/kg							
Benzene	ND	0.004	"							
Toluene	ND	0.004	"							
Ethylbenzene	ND	0.004	"							
Xylenes, total	ND	0.004	"							
Naphthalene	ND	0.008	"							
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.4	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A30006 - EPA 5030 (soil)

LCS (4A30006-BS1)

Prepared: 01/30/2014 Analyzed: 01/30/2014

Benzene	0.2	0.004	mg/kg	0.200		97.9	70-130			
Toluene	0.2	0.004	"	0.200		104	70-130			
Ethylbenzene	0.2	0.004	"	0.200		99.2	70-130			
m,p-Xylene	0.4	0.008	"	0.400		107	70-130			
o-Xylene	0.2	0.004	"	0.200		100	70-130			
Naphthalene	0.2	0.008	"	0.200		87.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.8	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4A30006 - EPA 5030 (soil)										
Matrix Spike (4A30006-MS1)		Source: X401273-01			Prepared: 01/30/2014 Analyzed: 01/30/2014					
Benzene	0.2	0.004	mg/kg	0.200	ND	91.1	70-130			QM-07
Toluene	0.1	0.004	"	0.200	ND	55.3	70-130			
Ethylbenzene	0.2	0.004	"	0.200	ND	92.7	70-130			
m,p-Xylene	0.4	0.008	"	0.400	ND	104	70-130			
o-Xylene	0.2	0.004	"	0.200	ND	92.7	70-130			
Naphthalene	0.1	0.008	"	0.200	ND	73.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.1	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4A30006 - EPA 5030 (soil)										
Matrix Spike Dup (4A30006-MSD1)		Source: X401273-01			Prepared: 01/30/2014 Analyzed: 01/30/2014					
Benzene	0.2	0.004	mg/kg	0.200	ND	95.7	70-130	4.93	20	
Toluene	0.2	0.004	"	0.200	ND	99.5	70-130	57.1	20	QR-03
Ethylbenzene	0.2	0.004	"	0.200	ND	95.4	70-130	2.85	20	
m,p-Xylene	0.4	0.008	"	0.400	ND	98.6	70-130	5.06	20	
o-Xylene	0.2	0.004	"	0.200	ND	96.0	70-130	3.56	20	
Naphthalene	0.1	0.008	"	0.200	ND	62.2	70-130	16.9	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.2	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A31008 - EPA 5030 (soil)

Blank (4A31008-BLK1)

Prepared: 01/31/2014 Analyzed: 01/31/2014

Gasoline Range Hydrocarbons	ND	0.2	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Naphthalene	ND	0.004	"							
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A31008 - EPA 5030 (soil)

LCS (4A31008-BS1)

Prepared: 01/31/2014 Analyzed: 01/31/2014

Benzene	0.2	0.002	mg/kg	0.200		95.0	70-130			
Toluene	0.2	0.002	"	0.200		104	70-130			
Ethylbenzene	0.2	0.002	"	0.200		96.9	70-130			
m,p-Xylene	0.4	0.004	"	0.400		108	70-130			
o-Xylene	0.2	0.002	"	0.200		99.9	70-130			
Naphthalene	0.1	0.004	"	0.200		74.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.7	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		103	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A31008 - EPA 5030 (soil)

Matrix Spike (4A31008-MS1)		Source: X401310-01			Prepared: 01/31/2014 Analyzed: 01/31/2014					
Benzene	0.2	0.002	mg/kg	0.200	ND	92.4	70-130			
Toluene	0.2	0.002	"	0.200	ND	97.5	70-130			
Ethylbenzene	0.2	0.002	"	0.200	ND	91.7	70-130			
m,p-Xylene	0.4	0.004	"	0.400	ND	112	70-130			
o-Xylene	0.2	0.002	"	0.200	ND	94.5	70-130			
Naphthalene	0.1	0.004	"	0.200	ND	72.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4A31008 - EPA 5030 (soil)										
Matrix Spike Dup (4A31008-MSD1)		Source: X401310-01			Prepared: 01/31/2014 Analyzed: 01/31/2014					
Benzene	0.2	0.002	mg/kg	0.200	ND	98.4	70-130	6.30	20	
Toluene	0.2	0.002	"	0.200	ND	102	70-130	4.13	20	
Ethylbenzene	0.2	0.002	"	0.200	ND	95.9	70-130	4.47	20	
m,p-Xylene	0.5	0.004	"	0.400	ND	115	70-130	2.88	20	
o-Xylene	0.2	0.002	"	0.200	ND	99.6	70-130	5.24	20	
Naphthalene	0.2	0.004	"	0.200	ND	84.3	70-130	15.1	20	
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.0	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B03009 - EPA 5030 (soil)

Blank (4B03009-BLK1)

Prepared: 02/03/2014 Analyzed: 02/03/2014

Gasoline Range Hydrocarbons	ND	0.2	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Naphthalene	ND	0.004	"							
Surrogate: 1,2-Dichloroethane-d4	66		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.8	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		105	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B03009 - EPA 5030 (soil)

LCS (4B03009-BS1)

Prepared: 02/03/2014 Analyzed: 02/03/2014

Benzene	0.09	0.002	mg/kg	0.100		86.4	70-130			
Toluene	0.08	0.002	"	0.100		84.8	70-130			
Ethylbenzene	0.08	0.002	"	0.100		78.8	70-130			
m,p-Xylene	0.2	0.004	"	0.200		90.0	70-130			
o-Xylene	0.08	0.002	"	0.100		80.6	70-130			
Naphthalene	0.08	0.004	"				70-130			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		100	70-130			
Surrogate: Toluene-d8	61		"	62.5		96.9	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		107	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B03009 - EPA 5030 (soil)

Matrix Spike (4B03009-MS1)		Source: X402006-01			Prepared: 02/03/2014 Analyzed: 02/03/2014					
Benzene	0.1	0.002	mg/kg	0.100	ND	111	70-130			
Toluene	0.1	0.002	"	0.100	ND	110	70-130			
Ethylbenzene	0.1	0.002	"	0.100	ND	103	70-130			
m,p-Xylene	0.2	0.004	"	0.200	ND	110	70-130			
o-Xylene	0.1	0.002	"	0.100	ND	103	70-130			
Naphthalene	0.07	0.004	"		ND		70-130			
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		98.8	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.7	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

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Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B03009 - EPA 5030 (soil)										
Matrix Spike Dup (4B03009-MSD1)		Source: X402006-01			Prepared: 02/03/2014 Analyzed: 02/03/2014					
Benzene	0.1	0.002	mg/kg	0.100	ND	103	70-130	7.80	20	
Toluene	0.1	0.002	"	0.100	ND	103	70-130	6.27	20	
Ethylbenzene	0.09	0.002	"	0.100	ND	94.7	70-130	8.77	20	
m,p-Xylene	0.2	0.004	"	0.200	ND	99.0	70-130	10.8	20	
o-Xylene	0.09	0.002	"	0.100	ND	94.0	70-130	8.98	20	
Naphthalene	0.1	0.004	"		ND		70-130	40.4	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		97.8	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.7	70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		108	70-130			

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B05012 - EPA 5030 (soil)

Blank (4B05012-BLK1)

Prepared: 02/05/2014 Analyzed: 02/05/2014

Gasoline Range Hydrocarbons	ND	0.2	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Naphthalene	ND	0.004	"							
Surrogate: 1,2-Dichloroethane-d4	57		ug/kg	62.5		91.8	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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Dan Wade
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Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B05012 - EPA 5030 (soil)										
LCS (4B05012-BS1)					Prepared: 02/05/2014 Analyzed: 02/05/2014					
Benzene	0.1	0.002	mg/kg	0.100		105	70-130			
Toluene	0.1	0.002	"	0.100		103	70-130			
Ethylbenzene	0.1	0.002	"	0.100		105	70-130			
m,p-Xylene	0.2	0.004	"	0.200		106	70-130			
o-Xylene	0.1	0.002	"	0.100		106	70-130			
Naphthalene	0.1	0.004	"	0.100		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	60		ug/kg	62.5		96.8	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.8	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B05012 - EPA 5030 (soil)										
LCS Dup (4B05012-BSD1)					Prepared: 02/05/2014 Analyzed: 02/05/2014					
Benzene	0.1	0.002	mg/kg	0.100		97.1	70-130	7.57	20	
Toluene	0.1	0.002	"	0.100		96.2	70-130	6.97	20	
Ethylbenzene	0.1	0.002	"	0.100		101	70-130	3.93	20	
m,p-Xylene	0.2	0.004	"	0.200		101	70-130	5.38	20	
o-Xylene	0.1	0.002	"	0.100		102	70-130	3.72	20	
Naphthalene	0.1	0.004	"	0.100		115	70-130	12.2	20	
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		99.8	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.9	70-130			

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Dan Wade
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Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B06006 - EPA 5030 (soil)

Blank (4B06006-BLK1)

Prepared: 02/06/2014 Analyzed: 02/06/2014

Gasoline Range Hydrocarbons	ND	0.1	mg/kg							
Benzene	ND	0.001	"							
Toluene	ND	0.001	"							
Ethylbenzene	ND	0.001	"							
Xylenes, total	ND	0.001	"							
Naphthalene	ND	0.004	"							
Surrogate: 1,2-Dichloroethane-d4	67		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B06006 - EPA 5030 (soil)

LCS (4B06006-BS1)

Prepared: 02/06/2014 Analyzed: 02/06/2014

Benzene	0.1	0.001	mg/kg	0.100		109	70-130			
Toluene	0.1	0.001	"	0.100		114	70-130			
Ethylbenzene	0.1	0.001	"	0.100		118	70-130			
m,p-Xylene	0.2	0.002	"	0.200		116	70-130			
o-Xylene	0.1	0.001	"	0.100		116	70-130			
Naphthalene	0.1	0.004	"	0.100		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		99.3	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B06006 - EPA 5030 (soil)

Matrix Spike (4B06006-MS1)		Source: X402050-01			Prepared: 02/06/2014 Analyzed: 02/06/2014					
Benzene	0.1	0.001	mg/kg	0.100	ND	101	70-130			
Toluene	0.1	0.001	"	0.100	ND	104	70-130			
Ethylbenzene	0.1	0.001	"	0.100	ND	108	70-130			
m,p-Xylene	0.2	0.002	"	0.200	ND	110	70-130			
o-Xylene	0.1	0.001	"	0.100	ND	109	70-130			
Naphthalene	0.1	0.004	"	0.100	ND	103	70-130			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		100	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		103	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B06006 - EPA 5030 (soil)

Matrix Spike Dup (4B06006-MSD1)		Source: X402050-01			Prepared: 02/06/2014 Analyzed: 02/06/2014					
Benzene	0.1	0.001	mg/kg	0.100	ND	101	70-130	0.0993	20	
Toluene	0.1	0.001	"	0.100	ND	105	70-130	0.785	20	
Ethylbenzene	0.1	0.001	"	0.100	ND	110	70-130	1.03	20	
m,p-Xylene	0.2	0.002	"	0.200	ND	110	70-130	0.681	20	
o-Xylene	0.1	0.001	"	0.100	ND	110	70-130	0.948	20	
Naphthalene	0.1	0.004	"	0.100	ND	108	70-130	4.02	20	
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		99.4	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.4	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B07006 - EPA 5030 (soil)

Blank (4B07006-BLK1)

Prepared: 02/07/2014 Analyzed: 02/07/2014

Gasoline Range Hydrocarbons	ND	0.1	mg/kg							
Benzene	ND	0.001	"							
Toluene	ND	0.001	"							
Ethylbenzene	ND	0.001	"							
Xylenes, total	ND	0.001	"							
Naphthalene	ND	0.004	"							
Surrogate: 1,2-Dichloroethane-d4	66		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	62		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B07006 - EPA 5030 (soil)										
LCS (4B07006-BS1)					Prepared: 02/07/2014 Analyzed: 02/07/2014					
Benzene	0.09	0.001	mg/kg	0.100		88.2	70-130			
Toluene	0.09	0.001	"	0.100		90.4	70-130			
Ethylbenzene	0.1	0.001	"	0.100		95.7	70-130			
m,p-Xylene	0.2	0.002	"	0.200		96.2	70-130			
o-Xylene	0.1	0.001	"	0.100		95.3	70-130			
Naphthalene	0.09	0.004	"	0.100		90.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.4	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B07006 - EPA 5030 (soil)

LCS Dup (4B07006-BSD1)

Prepared: 02/07/2014 Analyzed: 02/07/2014

Benzene	0.09	0.001	mg/kg	0.100		93.0	70-130	5.39	20	
Toluene	0.1	0.001	"	0.100		96.4	70-130	6.38	20	
Ethylbenzene	0.1	0.001	"	0.100		102	70-130	5.96	20	
m,p-Xylene	0.2	0.002	"	0.200		102	70-130	5.70	20	
o-Xylene	0.1	0.001	"	0.100		100	70-130	5.27	20	
Naphthalene	0.09	0.004	"	0.100		94.7	70-130	4.73	20	
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.7	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

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Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B10009 - EPA 5030 (soil)

Blank (4B10009-BLK1)

Prepared: 02/10/2014 Analyzed: 02/10/2014

Gasoline Range Hydrocarbons	ND	0.1	mg/kg							
Benzene	ND	0.001	"							
Toluene	ND	0.001	"							
Ethylbenzene	ND	0.001	"							
Xylenes, total	ND	0.001	"							
Naphthalene	ND	0.004	"							
Surrogate: 1,2-Dichloroethane-d4	69		ug/kg	62.5		111	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B10009 - EPA 5030 (soil)

LCS (4B10009-BS1)

Prepared: 02/10/2014 Analyzed: 02/10/2014

Benzene	0.1	0.001	mg/kg	0.100		98.7	70-130			
Toluene	0.1	0.001	"	0.100		103	70-130			
Ethylbenzene	0.1	0.001	"	0.100		106	70-130			
m,p-Xylene	0.2	0.002	"	0.200		106	70-130			
o-Xylene	0.1	0.001	"	0.100		109	70-130			
Naphthalene	0.1	0.004	"	0.100		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

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Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B10009 - EPA 5030 (soil)

LCS Dup (4B10009-BSD1)

Prepared: 02/10/2014 Analyzed: 02/10/2014

Benzene	0.1	0.001	mg/kg	0.100		99.9	70-130	1.19	20	
Toluene	0.1	0.001	"	0.100		103	70-130	0.00	20	
Ethylbenzene	0.1	0.001	"	0.100		106	70-130	0.0754	20	
m,p-Xylene	0.2	0.002	"	0.200		107	70-130	0.861	20	
o-Xylene	0.1	0.001	"	0.100		110	70-130	0.713	20	
Naphthalene	0.1	0.004	"	0.100		119	70-130	12.7	20	
Surrogate: 1,2-Dichloroethane-d4	66		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

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Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A29011 - EPA 3580

Blank (4A29011-BLK1)

Prepared: 01/29/2014 Analyzed: 01/29/2014

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 45 g 50.0 90.1 59-131

LCS (4A29011-BS1)

Prepared: 01/29/2014 Analyzed: 01/29/2014

Diesel (C10-C28) 756 50.0 mg/kg 1000 75.6 64-121

Surrogate: o-Terphenyl 39 g 50.0 77.5 59-131

LCS Dup (4A29011-BSD1)

Prepared: 01/29/2014 Analyzed: 01/29/2014

Diesel (C10-C28) 759 50.0 mg/kg 1000 75.9 64-121 0.401 20

Surrogate: o-Terphenyl 39 g 50.0 77.9 59-131

Batch 4A30010 - EPA 3580

Blank (4A30010-BLK1)

Prepared: 01/30/2014 Analyzed: 01/30/2014

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 39 g 50.0 78.5 59-131

LCS (4A30010-BS1)

Prepared: 01/30/2014 Analyzed: 01/30/2014

Diesel (C10-C28) 731 50.0 mg/kg 1000 73.1 64-121

Surrogate: o-Terphenyl 38 g 50.0 75.2 59-131

Matrix Spike (4A30010-MS1)

Source: X401295-03

Prepared: 01/30/2014 Analyzed: 01/30/2014

Diesel (C10-C28) 775 50.0 mg/kg 1000 415 36.0 53-125 QM-07

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Project: Fri 2-18

Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4A30010 - EPA 3580										
Matrix Spike (4A30010-MS1)	Source: X401295-03			Prepared: 01/30/2014 Analyzed: 01/30/2014						
Surrogate: o-Terphenyl	39		g	50.0		77.7	59-131			
Matrix Spike Dup (4A30010-MSD1)	Source: X401295-03			Prepared: 01/30/2014 Analyzed: 01/30/2014						
Diesel (C10-C28)	751	50.0	mg/kg	1000	415	33.6	53-125	3.12	20	QM-07
Surrogate: o-Terphenyl	38		g	50.0		76.7	59-131			
Batch 4A31009 - EPA 3580										
Blank (4A31009-BLK1)	Prepared: 01/31/2014 Analyzed: 01/31/2014									
Diesel (C10-C28)	ND	50.0	mg/kg							
Surrogate: o-Terphenyl	47		g	50.0		93.5	59-131			
LCS (4A31009-BS1)	Prepared: 01/31/2014 Analyzed: 01/31/2014									
Diesel (C10-C28)	1070	50.0	mg/kg	1000		107	64-121			
Surrogate: o-Terphenyl	44		g	50.0		88.9	59-131			
Matrix Spike (4A31009-MS1)	Source: X401310-01			Prepared: 01/31/2014 Analyzed: 01/31/2014						
Diesel (C10-C28)	1400	50.0	mg/kg	1000	34.2	137	53-125			QM-07
Surrogate: o-Terphenyl	57		g	50.0		114	59-131			
Matrix Spike Dup (4A31009-MSD1)	Source: X401310-01			Prepared: 01/31/2014 Analyzed: 01/31/2014						
Diesel (C10-C28)	1150	50.0	mg/kg	1000	34.2	111	53-125	19.7	20	
Surrogate: o-Terphenyl	47		g	50.0		93.4	59-131			
Batch 4B03008 - EPA 3580										
Blank (4B03008-BLK1)	Prepared: 02/03/2014 Analyzed: 02/03/2014									
Diesel (C10-C28)	ND	50.0	mg/kg							

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Dan Wade
Project Number: [none]
Project: Fri 2-18

Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B03008 - EPA 3580										
Blank (4B03008-BLK1)					Prepared: 02/03/2014 Analyzed: 02/03/2014					
Surrogate: o-Terphenyl	42		g	50.0		83.0	59-131			
LCS (4B03008-BS1)					Prepared: 02/03/2014 Analyzed: 02/03/2014					
Diesel (C10-C28)	961	50.0	mg/kg	1000		96.1	64-121			
Surrogate: o-Terphenyl	38		g	50.0		76.8	59-131			
Matrix Spike (4B03008-MS1)					Source: X402006-02	Prepared: 02/03/2014 Analyzed: 02/03/2014				
Diesel (C10-C28)	1180	50.0	mg/kg	1000	ND	118	53-125			
Surrogate: o-Terphenyl	39		g	50.0		77.6	59-131			
Matrix Spike Dup (4B03008-MSD1)					Source: X402006-02	Prepared: 02/03/2014 Analyzed: 02/03/2014				
Diesel (C10-C28)	1150	50.0	mg/kg	1000	ND	115	53-125	2.02	20	
Surrogate: o-Terphenyl	38		g	50.0		76.9	59-131			
Batch 4B05008 - EPA 3580										
Blank (4B05008-BLK1)					Prepared: 02/05/2014 Analyzed: 02/05/2014					
Diesel (C10-C28)	ND	50.0	mg/kg							
Surrogate: o-Terphenyl	38		g	50.0		76.6	59-131			
LCS (4B05008-BS1)					Prepared: 02/05/2014 Analyzed: 02/05/2014					
Diesel (C10-C28)	901	50.0	mg/kg	1000		90.1	64-121			
Surrogate: o-Terphenyl	37		g	50.0		73.7	59-131			
LCS Dup (4B05008-BSD1)					Prepared: 02/05/2014 Analyzed: 02/05/2014					
Diesel (C10-C28)	986	50.0	mg/kg	1000		98.6	64-121	9.02	20	
Surrogate: o-Terphenyl	41		g	50.0		81.3	59-131			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B06007 - EPA 3580										
Blank (4B06007-BLK1)					Prepared: 02/06/2014 Analyzed: 02/06/2014					
Diesel (C10-C28)	ND	50.0	mg/kg							
Surrogate: o-Terphenyl	39		g	50.0		77.5	59-131			
LCS (4B06007-BS1)					Prepared: 02/06/2014 Analyzed: 02/06/2014					
Diesel (C10-C28)	931	50.0	mg/kg	1000		93.1	64-121			
Surrogate: o-Terphenyl	37		g	50.0		74.9	59-131			
Matrix Spike (4B06007-MS1)					Source: X402050-01		Prepared: 02/06/2014 Analyzed: 02/06/2014			
Diesel (C10-C28)	912	50.0	mg/kg	1000	ND	91.2	53-125			
Surrogate: o-Terphenyl	37		g	50.0		74.4	59-131			
Matrix Spike Dup (4B06007-MSD1)					Source: X402050-01		Prepared: 02/06/2014 Analyzed: 02/06/2014			
Diesel (C10-C28)	913	50.0	mg/kg	1000	ND	91.3	53-125	0.117	20	
Surrogate: o-Terphenyl	37		g	50.0		74.4	59-131			
Batch 4B07007 - EPA 3580										
Blank (4B07007-BLK1)					Prepared: 02/07/2014 Analyzed: 02/07/2014					
Diesel (C10-C28)	ND	50.0	mg/kg							
Surrogate: o-Terphenyl	41		g	50.0		81.6	59-131			
LCS (4B07007-BS1)					Prepared: 02/07/2014 Analyzed: 02/07/2014					
Diesel (C10-C28)	881	50.0	mg/kg	1000		88.1	64-121			
Surrogate: o-Terphenyl	35		g	50.0		70.4	59-131			
LCS Dup (4B07007-BSD1)					Prepared: 02/07/2014 Analyzed: 02/07/2014					
Diesel (C10-C28)	878	50.0	mg/kg	1000		87.8	64-121	0.308	20	
Surrogate: o-Terphenyl	36		g	50.0		72.1	59-131			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B10010 - EPA 3580										
Blank (4B10010-BLK1)					Prepared: 02/10/2014 Analyzed: 02/11/2014					
Diesel (C10-C28)	ND	50.0	mg/kg							
Surrogate: o-Terphenyl	41		g	50.0		81.1	59-131			
LCS (4B10010-BS1)					Prepared: 02/10/2014 Analyzed: 02/11/2014					
Diesel (C10-C28)	974	50.0	mg/kg	1000		97.4	64-121			
Surrogate: o-Terphenyl	38		g	50.0		75.5	59-131			
Matrix Spike (4B10010-MS1)					Source: X402070-01		Prepared: 02/10/2014 Analyzed: 02/11/2014			
Diesel (C10-C28)	1160	50.0	mg/kg	1000	ND	116	53-125			
Surrogate: o-Terphenyl	39		g	50.0		79.0	59-131			
Matrix Spike Dup (4B10010-MSD1)					Source: X402070-01		Prepared: 02/10/2014 Analyzed: 02/11/2014			
Diesel (C10-C28)	1070	50.0	mg/kg	1000	ND	107	53-125	7.80	20	
Surrogate: o-Terphenyl	36		g	50.0		71.3	59-131			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President



February 28, 2014

Tasman Geosciences

Mike Lindstrom

6899 Pecos Street, Unit C

Denver

CO 80211

Project Name - Fri 2-18

Project Number - [none]

Attached are your analytical results for Fri 2-18 received by Origins Laboratory, Inc. February 24, 2014. This project is associated with Origins project number X402225-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB01	X402225-01	Water	February 24, 2014 13:00	02/24/2014 17:45
SB02	X402225-02	Water	February 24, 2014 12:45	02/24/2014 17:45
SB03	X402225-03	Water	February 24, 2014 12:35	02/24/2014 17:45
SB04	X402225-04	Water	February 24, 2014 12:20	02/24/2014 17:45
SB06	X402225-05	Water	February 24, 2014 13:50	02/24/2014 17:45
SB07	X402225-06	Water	February 24, 2014 14:25	02/24/2014 17:45
SB11	X402225-07	Water	February 24, 2014 14:10	02/24/2014 17:45
SB12	X402225-08	Water	February 24, 2014 12:10	02/24/2014 17:45
SB13	X402225-09	Water	February 24, 2014 13:25	02/24/2014 17:45
SB14	X402225-10	Water	February 24, 2014 13:35	02/24/2014 17:45
SB15	X402225-11	Water	February 24, 2014 11:30	02/24/2014 17:45
SB17	X402225-12	Water	February 24, 2014 11:50	02/24/2014 17:45
SB18	X402225-13	Water	February 24, 2014 11:40	02/24/2014 17:45
SB19	X402225-14	Water	February 24, 2014 11:20	02/24/2014 17:45

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB22R	X402225-15	Water	February 24, 2014 10:20	02/24/2014 17:45
SB24R	X402225-16	Water	February 24, 2014 10:40	02/24/2014 17:45
SB25R	X402225-17	Water	February 24, 2014 14:40	02/24/2014 17:45
SB26	X402225-18	Water	February 24, 2014 11:00	02/24/2014 17:45
SB27R	X402225-19	Water	February 24, 2014 9:41	02/24/2014 17:45
SB28R	X402225-20	Water	February 24, 2014 9:45	02/24/2014 17:45
SB29	X402225-21	Water	February 24, 2014 10:45	02/24/2014 17:45
SB32	X402225-22	Water	February 24, 2014 11:10	02/24/2014 17:45
SB34	X402225-23	Water	February 24, 2014 9:30	02/24/2014 17:45
DUP	X402225-24	Water	February 24, 2014 13:55	02/24/2014 17:45
Trip Blank	X402225-25	Water	February 24, 2014 0:00	02/24/2014 17:45

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Mike Lindstrom

Project Number: [none]

Project: Fri 2-18

This report has been revised to ensure that the result listed in the report and that in the electronic deliverable match and each is reported to 3 significant figures. The results in this report have not been modified from the original report. NDM 2.28.14

D. Wade/Tasman requested that the sample ID for SB-35 be changed to DUP, this is noted on the sample receipt check list. RSH 2.26.14

D. Wade/Tasman was notified that there was insufficient sample to run TSS and TS on all the samples. He specified that TS was the priority. DPM 2.24.14

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

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LABORATORY, INC

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X402225
page 1 of 3

Client: Tasman
Address: 6899 Pecos St
Telephone Number: (303) 912-2625
Project Manager/Send Report To: Mike Lindstrom
Email Address: mlindstrom@tasman-gi.com
Project Name/Number: Fri 2-18
Samples Collected By: Devin

Fax: 303.265.9645

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis/Method	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #			
SB01	2/24/2014	13:00	4	1	3						X	TSB	1
SB02	2/24/2014	12:45	4	1	3						X	TSB	2
SB03	2/24/2014	12:35	4	1	3						X	TSB	3
SB04	2/24/2014	12:20	4	1	3						X	TSB	4
SB06	2/24/2014	13:50	4	1	3						X	TSB	5
SB07	2/24/2014	14:25	4	1	3						X	TSB	6
SB11	2/24/2014	14:10	4	1	3						X	TSB	7
SB12	2/24/2014	12:10	4	1	3						X	TSB	8
SB13	2/24/2014	13:25	4	1	3						X	TSB	9
SB14	2/24/2014	13:35	4	1	3						X	TSB	10
Relinquished By:	Date:	Time:	Time:	Received By:	Date:	Time:	Time:	Received By:	Date:	Time:	Time:	Turnaround Time:	
	2/24/14	1745	1745		2/24/14	1745	1745		2/24/14	1745	1745	24 Hr <input type="checkbox"/>	
												48 Hr <input type="checkbox"/>	
												Standard <input type="checkbox"/>	

Field Bottle Manual

Comments:

Origins Laboratory, Inc.

Noelle Doyle Mathis, President

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

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page 2 of 3

X402225

Client: Tasman
Address: 6899 Pecos St.
Denver, CO 80221
Telephone Number: (303) 412-2625
Project Manager/Send Report To: Mike Lindstrom
Email Address: Mike.Lindstrom@Tasman-geo.com
Project Name/Number: Fri 2-18
Samples Collected By: Dog

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis/Method	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #		
SB15	2/24/2014	1130	4	1	3							1
SB17	2/24/2014	1150	4	1	3							2
SB18	2/24/2014	1140	4	1	3							3
SB19	2/24/2014	1120	4	1	3							4
SB22R	2/24/2014	1020	4	1	3							5
SB24R	2/24/2014	1040	4	1	3							6
SB25R	2/24/2014	1440	4	1	3							7
SB26	2/24/2014	1100	4	1	3							8
SB27R	2/24/2014	941	4	1	3							9
SB28R	2/24/2014	945	4	1	3							10
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:						
	2/24/14	1745		2/24/14	1745	Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/>						
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	48 Hr <input type="checkbox"/> Standard <input type="checkbox"/>						

Delta Beville Mandant

Comments:

Origins Laboratory, Inc.

Noelle Doyle Mathis, President

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

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page 3 of 3

X402225

Client: Tasman

Project Manager/Send Report To: Mike Lindstrom

Address: 6899 peros st

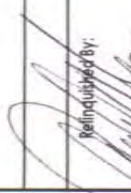
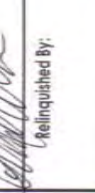
Email Address: lindstrom@tasman-gas.com

Yarrow, CO 80721

Project Name/Number: 50: 2-16

Telephone Number: (303) 912-2625

Samples Collected By: Jack

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis/Method	Sample Instructions		
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #			Other	
SB24	2/24/2014	1045	4	1	3						2 R X	1		
SB32	2/24/2014	1110	4	1	3						2 R X	2		
SB34	2/24/2014	1300	4	1	3						2 R X	3		
SB35	2/24/2014	1355	4	1	3						2 R X	4		
Trip Blank	2/24/2014		2	2							2 X	5		
												6		
												7		
												8		
												9		
												10		
Relinquished By: 	Date: 2/24/14	Time: 1745		Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #	Other	Date: 2/24/14	Time: 1745	Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>
Relinquished By: 	Date: 2/24/14	Time: 1745										Date: 2/24/14	Time: 1745	

Origins Laboratory, Inc.

BM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

Origins Laboratory F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X402225 Client: Tasman
Client Project ID: Fri 2-18

Checklist Completed by: DAVID MATHIS Shipped Via: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
Date/time completed: 02-24-14 1817 Airbill #: _____

Matrix(s) Received: (Check all that apply): _____ Soil/Solid ☒ Water _____ Other: _____
(Describe)

Cooler Number/Temperature: 15.8°C _____ °C _____ °C _____ °C
(Describe)

Thermometer ID: T002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄ / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input checked="" type="checkbox"/>			HCL
Additional Comments (if any): <u>CLIENT REQUESTED DBSS BE CHANGED TO DUP, VIA EMAIL.</u>				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) [Signature] Date/Time Reviewed 02-24-14 1812

Origins Laboratory, Inc.

[Signature]

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB01

2/24/2014 1:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc.
X402225-01 (Water)

BTEX by EPA 8260C

Benzene	1.5	1.0	ug/L	1	4B24011	02/24/2014	02/24/2014
Toluene	13.5	1.0	"	"	"	"	"
Ethylbenzene	1.2	1.0	"	"	"	"	"
Xylenes, total	33.8	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4
Surrogate: Toluene-d8
Surrogate: 4-Bromofluorobenzene

97.8 % 84-121
101 % 85-115
104 % 84-114

" " "
" " "
" " "

Total Residue by SM2540B

Total Residue	4030	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	4030	5	mg/L	1	934951	"	02/25/2014
Total Solids by	4030	5	"	"	"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB02

2/24/2014 12:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc.
X402225-02 (Water)

BTEX by EPA 8260C

Benzene	25.1	4.0	ug/L	4	4B24011	02/24/2014	02/24/2014
Toluene	ND	4.0	"	"	"	"	"
Ethylbenzene	ND	4.0	"	"	"	"	"
Xylenes, total	ND	4.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	97.0 %	84-121			"	"	"
Surrogate: Toluene-d8	101 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	104 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	1660	5	mg/L	1	934951	02/25/2014	02/25/2014
---------------	------	---	------	---	--------	------------	------------

Total Solids by SM2540B

Total Solids	1660	5	mg/L	1	934951	"	02/25/2014
Total Solids by	1660	5	"	"	"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB03

2/24/2014 12:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-03 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/24/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	95.5 %	84-121			"	"	"
Surrogate: Toluene-d8	99.4 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	105 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	1380	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	1380	5	mg/L	1	934951	"	02/25/2014
Total Solids by	1380	5	"	"	"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB04

2/24/2014 12:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-04 (Water)

BTEX by EPA 8260C

Benzene	72.3	1.0	ug/L	1	4B24011	02/24/2014	02/24/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	97.2 %	84-121			"	"	"
Surrogate: Toluene-d8	102 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	104 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	2320	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	2320	5	mg/L	1	934951	"	02/25/2014
Total Solids by	2320	5	"	"	"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB06

2/24/2014 1:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-05 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/24/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.8 %	84-121			"	"	"
Surrogate: Toluene-d8	101 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	105 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	4170	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	4170	5	mg/L	1	934951	"	02/25/2014
Total Solids by	4170	5	"	"	"	"	"

TSS by SM2540D

Total Suspended Solids	1020	4	mg/L	1	934832	"	02/25/2014
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Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB07

2/24/2014 2:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-06 (Water)

BTEX by EPA 8260C

Benzene	8600	200	ug/L	200	4B24011	02/24/2014	02/25/2014
Toluene	9910	200	"	"	"	"	"
Ethylbenzene	54.0	4.0	"	4	"	"	02/24/2014
Xylenes, total	1800	4.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4
Surrogate: Toluene-d8
Surrogate: 4-Bromofluorobenzene

93.7 % 84-121
104 % 85-115
102 % 84-114

" " "
" " "
" " "

Total Residue by SM2540B

Total Residue	5100	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	5100	5	mg/L	1	934951	"	02/25/2014
Total Solids by	5100	5	"	"	"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB11

2/24/2014 2:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. X402225-07 (Water)

BTEX by EPA 8260C

Benzene	1550	200	ug/L	200	4B24011	02/24/2014	02/25/2014
Toluene	ND	1.0	"	1	"	"	02/24/2014
Ethylbenzene	127	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.1 %	84-121			"	"	"
Surrogate: Toluene-d8	99.9 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	1440	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	1440	5	mg/L	1	934951	"	02/25/2014
Total Solids by	1440	5	"	"	"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB12

2/24/2014 12:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-08 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/24/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	97.0 %	84-121			"	"	"
Surrogate: Toluene-d8	101 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	104 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	5330	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	5330	5	mg/L	1	934951	"	02/25/2014
Total Solids by	5330	5	"	"	"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB13

2/24/2014 1:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. X402225-09 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	1.4	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.5 %	84-121			"	"	"
Surrogate: Toluene-d8	100 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	106 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	3710	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	3710	5	mg/L	1	934951	"	02/25/2014
Total Solids by	3710	5	"	"	"	"	"

TSS by SM2540D

Total Suspended Solids	980	4	mg/L	1	934832	"	02/25/2014
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Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB14

2/24/2014 1:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. X402225-10 (Water)

BTEX by EPA 8260C

Benzene	1220	200	ug/L	200	4B24011	02/24/2014	02/25/2014
Toluene	62.4	1.0	"	1	"	"	02/25/2014
Ethylbenzene	88.3	1.0	"	"	"	"	"
Xylenes, total	314	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4
Surrogate: Toluene-d8
Surrogate: 4-Bromofluorobenzene

95.7 % 84-121
101 % 85-115
103 % 84-114

" " "
" " "
" " "

Total Residue by SM2540B

Total Residue	1290	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	1290	5	mg/L	1	934951	"	02/25/2014
Total Solids by	1290	5	"	"	"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB15

2/24/2014 11:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-11 (Water)

BTEX by EPA 8260C

Benzene	4610	200	ug/L	200	4B24011	02/24/2014	02/25/2014
Toluene	8690	200	"	"	"	"	"
Ethylbenzene	553	4.0	"	4	"	"	02/25/2014
Xylenes, total	10900	200	"	200	"	"	02/25/2014

Surrogate: 1,2-Dichloroethane-d4	96.0 %	84-121			"	"	02/25/2014
Surrogate: Toluene-d8	106 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	105 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	2190	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	2190	5	mg/L	1	934951	"	02/25/2014
Total Solids by	2190	5	"	"	"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB17

2/24/2014 11:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-12 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4
Surrogate: Toluene-d8
Surrogate: 4-Bromofluorobenzene

97.9 % 84-121
101 % 85-115
104 % 84-114

" " "
" " "
" " "

Total Residue by SM2540B

Total Residue	5350	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	5350	5	mg/L	1	934951	"	02/25/2014
Total Solids by	5350	5	"	"	"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB18

2/24/2014 11:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-13 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

<i>Surrogate: 1,2-Dichloroethane-d4</i>	98.2 %	84-121			"	"	"
<i>Surrogate: Toluene-d8</i>	99.3 %	85-115			"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>	103 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	4940	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	4940	5	mg/L	1	934951	"	02/25/2014
Total Solids by	4940	5	"	"	"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB19

2/24/2014 11:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-14 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.9 %	84-121			"	"	"
Surrogate: Toluene-d8	101 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	106 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	5000	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	5000	5	mg/L	1	934951	"	02/25/2014
Total Solids by	5000	5	"	"	"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB22R

2/24/2014 10:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-15 (Water)

BTEX by EPA 8260C

Benzene	270	200	ug/L	200	4B24011	02/24/2014	02/25/2014
Toluene	1190	200	"	"	"	"	"
Ethylbenzene	6.9	1.0	"	1	"	"	02/25/2014
Xylenes, total	598	200	"	200	"	"	02/25/2014

Surrogate: 1,2-Dichloroethane-d4	97.6 %	84-121			"	"	02/25/2014
Surrogate: Toluene-d8	104 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	104 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	2080	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	2080	5	mg/L	1	934951	"	02/25/2014
Total Solids by	2080	5	"	"	"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB24R

2/24/2014 10:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-16 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	97.7 %	84-121			"	"	"
Surrogate: Toluene-d8	99.9 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	105 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	2180	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	2180	5	mg/L	1	934951	"	02/25/2014
Total Solids by	2180	5	"	"	"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB25R
2/24/2014 2:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-17 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.4 %	84-121			"	"	"
Surrogate: Toluene-d8	101 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	105 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	2200	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	2200	5	mg/L	1	934951	"	02/25/2014
Total Solids by	2200	5	"	"	"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB26

2/24/2014 11:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.
X402225-18 (Water)**

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.6 %	84-121			"	"	"
Surrogate: Toluene-d8	101 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	105 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	2430	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	2430	5	mg/L	1	934951	"	02/25/2014
Total Solids by	2430	5	"	"	"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB27R
2/24/2014 9:41:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-19 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	95.8 %	84-121			"	"	"
Surrogate: Toluene-d8	101 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	104 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	2310	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	2310	5	mg/L	1	934951	"	02/25/2014
Total Solids by	2310	5	"	"	"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB28R
2/24/2014 9:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-20 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	95.0 %	84-121			"	"	"
Surrogate: Toluene-d8	100 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	105 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	1560	5	mg/L	1	934951	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	1560	5	mg/L	1	934951	"	02/25/2014
Total Solids by	1560	5	"	"	"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB29

2/24/2014 10:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-21 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.3 %	84-121			"	"	"
Surrogate: Toluene-d8	100 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	105 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	1970	5	mg/L	1	934952	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	1970	5	mg/L	1	934952	"	02/25/2014
Total Solids by	1970	5	"	"	"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB32

2/24/2014 11:10:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-22 (Water)

BTEX by EPA 8260C

Benzene	1.1	1.0	ug/L	1	4B24011	02/24/2014	02/25/2014
Toluene	6.2	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	7.3	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.4 %	84-121			"	"	"
Surrogate: Toluene-d8	102 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	107 %	84-114			"	"	"

Total Residue by SM2540B

Total Residue	1970	5	mg/L	1	934952	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	1970	5	mg/L	1	934952	"	02/25/2014
Total Solids by	1970	5	"	"	"	"	"

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

SB34

2/24/2014 9:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-23 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4
Surrogate: Toluene-d8
Surrogate: 4-Bromofluorobenzene

97.0 % 84-121
100 % 85-115
106 % 84-114

" " "
" " "
" " "

Total Residue by SM2540B

Total Residue	1700	5	mg/L	1	934952	02/25/2014	02/25/2014
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Total Solids by SM2540B

Total Solids	1700	5	mg/L	1	934952	"	02/25/2014
Total Solids by	1700	5	"	"	"	"	"

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

DUP
2/24/2014 1:55:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402225-24 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4
Surrogate: Toluene-d8
Surrogate: 4-Bromofluorobenzene

95.5 % 84-121
102 % 85-115
105 % 84-114

" " "
" " "
" " "

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

Trip Blank

2/24/2014 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. X402225-25 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4B24011	02/24/2014	02/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4
Surrogate: Toluene-d8
Surrogate: 4-Bromofluorobenzene

96.4 % 84-121
99.6 % 85-115
106 % 84-114

" " "
" " "
" " "

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B24011 - EPA 5030B (Water)

Blank (4B24011-BLK1)

Prepared: 02/24/2014 Analyzed: 02/24/2014

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5	97.6		84-121			
Surrogate: Toluene-d8	63		"	62.5	100		85-115			
Surrogate: 4-Bromofluorobenzene	67		"	62.5	107		84-114			

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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B24011 - EPA 5030B (Water)

Blank (4B24011-BLK2)

Prepared: 02/24/2014 Analyzed: 02/24/2014

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5	96.5		84-121			
Surrogate: Toluene-d8	64		"	62.5	102		85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5	103		84-114			

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B24011 - EPA 5030B (Water)

LCS (4B24011-BS1)

Prepared: 02/24/2014 Analyzed: 02/24/2014

Benzene	46.6	1.0	ug/L	50.0		93.3	74-130			
Toluene	47.4	1.0	"	50.0		94.8	76-128			
Ethylbenzene	48.1	1.0	"	50.0		96.3	78-130			
m,p-Xylene	96.0	2.0	"	100		96.0	75-134			
o-Xylene	49.1	1.0	"	50.0		98.2	76-129			
Surrogate: 1,2-Dichloroethane-d4	57		"	62.5		90.9	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B24011 - EPA 5030B (Water)

LCS (4B24011-BS2)

Prepared: 02/24/2014 Analyzed: 02/24/2014

Benzene	44.4	1.0	ug/L	50.0		88.9	74-130			
Toluene	43.5	1.0	"	50.0		87.1	76-128			
Ethylbenzene	42.8	1.0	"	50.0		85.5	78-130			
m,p-Xylene	86.4	2.0	"	100		86.4	75-134			
o-Xylene	46.0	1.0	"	50.0		91.9	76-129			
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		92.0	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.9	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	84-114			

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B24011 - EPA 5030B (Water)

Matrix Spike (4B24011-MS1)		Source: X402225-01			Prepared: 02/24/2014 Analyzed: 02/24/2014					
Benzene	51.2	1.0	ug/L	50.0	1.5	99.3	74-130			
Toluene	62.3	1.0	"	50.0	13.5	97.6	73-131			
Ethylbenzene	53.1	1.0	"	50.0	1.2	104	76-132			
m,p-Xylene	114	2.0	"	100	13.6	101	69-139			
o-Xylene	69.4	1.0	"	50.0	20.2	98.4	74-131			
Surrogate: 1,2-Dichloroethane-d4	56		"	62.5		89.6	84-121			
Surrogate: Toluene-d8	64		"	62.5		103	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	84-114			

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B24011 - EPA 5030B (Water)

Matrix Spike (4B24011-MS2)		Source: X402225-17			Prepared: 02/24/2014 Analyzed: 02/24/2014					
Benzene	48.2	1.0	ug/L	50.0	ND	96.3	74-130			
Toluene	47.7	1.0	"	50.0	ND	95.4	73-131			
Ethylbenzene	49.5	1.0	"	50.0	ND	98.9	76-132			
m,p-Xylene	98.2	2.0	"	100	ND	98.2	69-139			
o-Xylene	48.9	1.0	"	50.0	ND	97.8	74-131			
Surrogate: 1,2-Dichloroethane-d4	57		"	62.5		91.3	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	84-114			

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B24011 - EPA 5030B (Water)

Matrix Spike Dup (4B24011-MSD1)		Source: X402225-01			Prepared: 02/24/2014 Analyzed: 02/24/2014					
Benzene	48.6	1.0	ug/L	50.0	1.5	94.2	74-130	5.17	20	
Toluene	57.9	1.0	"	50.0	13.5	88.8	73-131	7.28	20	
Ethylbenzene	48.6	1.0	"	50.0	1.2	94.9	76-132	8.89	20	
m,p-Xylene	107	2.0	"	100	13.6	93.3	69-139	6.72	20	
o-Xylene	64.6	1.0	"	50.0	20.2	88.8	74-131	7.21	20	
Surrogate: 1,2-Dichloroethane-d4	57		"	62.5		91.4	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	84-114			

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4B24011 - EPA 5030B (Water)

Matrix Spike Dup (4B24011-MSD2)		Source: X402225-17			Prepared: 02/24/2014 Analyzed: 02/24/2014					
Benzene	48.6	1.0	ug/L	50.0	ND	97.1	74-130	0.806	20	
Toluene	48.3	1.0	"	50.0	ND	96.6	73-131	1.25	20	
Ethylbenzene	49.4	1.0	"	50.0	ND	98.8	76-132	0.182	20	
m,p-Xylene	98.3	2.0	"	100	ND	98.3	69-139	0.143	20	
o-Xylene	49.1	1.0	"	50.0	ND	98.3	74-131	0.428	20	
Surrogate: 1,2-Dichloroethane-d4	57		"	62.5		91.9	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	84-114			

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Total Solids by SM2540B - Quality Control
XENCO

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 934951 - NONE

LCS (934951-1-BKS)		Source: 934951-1-BKS			Prepared: 02/25/2014 Analyzed: 02/25/2014					
Total Solids by	986	5	mg/L	1000	<5.00	99	80-120		20	
Total Solids	986	5	"	1000	<5.00	99	80-120		20	
BLANK (934951-1-BLK)		Source: 934951-1-BLK			Prepared: 02/25/2014 Analyzed: 02/25/2014					
Total Solids by	ND	5	mg/L	1000			-		20	
LCSD (934951-1-BSD)		Source: 934951-1-BSD			Prepared: 02/25/2014 Analyzed: 02/25/2014					
Total Solids by	1030	5	mg/L	1000	<5.00	103	80-120	4	20	
Total Solids	1030	5	"	1000	<5.00	103	80-120	4	20	

Batch 934952 - NONE

LCS (934952-1-BKS)		Source: 934952-1-BKS			Prepared: 02/25/2014 Analyzed: 02/25/2014					
Total Solids	1040	5	mg/L	1000	<5.00	104	80-120		20	
Total Solids by	1040	5	"	1000	<5.00	104	80-120		20	
BLANK (934952-1-BLK)		Source: 934952-1-BLK			Prepared: 02/25/2014 Analyzed: 02/25/2014					
Total Solids	ND	5	mg/L	1000			-		20	
Total Solids by	ND	5	"	1000			-		20	
LCSD (934952-1-BSD)		Source: 934952-1-BSD			Prepared: 02/25/2014 Analyzed: 02/25/2014					
Total Solids by	1000	5	mg/L	1000	<5.00	100	80-120	4	20	
Total Solids	1000	5	"	1000	<5.00	100	80-120	4	20	

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Mike Lindstrom
Project Number: [none]
Project: Fri 2-18

**Total Residue by SM2540B - Quality Control
XENCO**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 934951 - NONE										
LCS (934951-1-BKS)	Source: 934951-1-BKS				Prepared: 02/25/2014 Analyzed: 02/25/2014					
Total Residue	986	5	mg/L	1000	<5.00	99	80-120		20	
BLANK (934951-1-BLK)	Source: 934951-1-BLK				Prepared: 02/25/2014 Analyzed: 02/25/2014					
Total Residue	ND	5	mg/L	1000			-		20	
LCSD (934951-1-BSD)	Source: 934951-1-BSD				Prepared: 02/25/2014 Analyzed: 02/25/2014					
Total Residue	1030	5	mg/L	1000	<5.00	103	80-120	4	20	
Batch 934952 - NONE										
LCS (934952-1-BKS)	Source: 934952-1-BKS				Prepared: 02/25/2014 Analyzed: 02/25/2014					
Total Residue	1040	5	mg/L	1000	<5.00	104	80-120		20	
BLANK (934952-1-BLK)	Source: 934952-1-BLK				Prepared: 02/25/2014 Analyzed: 02/25/2014					
Total Residue	ND	5	mg/L	1000			-		20	
LCSD (934952-1-BSD)	Source: 934952-1-BSD				Prepared: 02/25/2014 Analyzed: 02/25/2014					
Total Residue	1000	5	mg/L	1000	<5.00	100	80-120	4	20	

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Noelle Doyle Mathis, President

Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Mike Lindstrom

Project Number: [none]

Project: Fri 2-18

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

March 07, 2014

Tasman Geosciences

Dan Wade

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - Fri 2-18

Project Number - [none]

Attached are your analytical results for Fri 2-18 received by Origins Laboratory, Inc. March 06, 2014. This project is associated with Origins project number X403057-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB35-50'	X403057-01	Soil	March 6, 2014 13:00	03/06/2014 16:45

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dan Wade
Project Number: [none]
Project: Fri 2-18

ORIGINS

LABORATORY, INC

www.originslaboratory.com

X403057

page 1 of 1

Client: Tasman Geosciences
 Address: 6844 Pecos St, UNIC, Denver
 Telephone Number:
 Email Address: dward@tasman-geo.com

Project Manager: Dan Wade
 Project Name: Fri 2-18
 Project Number:
 Samples Collected By: Eric Siegel

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Alt Summa Canister #	Other		
SB35-50'	3/6/14	1300	1	X					X			8015 DR0 8260 GRCO 8260 BTEX Naphthalene	X
Relinquished By: <u>G.A. Reid</u>	Date: <u>3/6/14</u>	Time: <u>1645</u>	Time: <u>1645</u>	Received By: <u>[Signature]</u>				Date: <u>3/6/14</u>	Time: <u>1645</u>	Turnaround Time: <u>Same Day</u> <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard			
Relinquished By:	Date:	Time:	Time:	Received By:				Date:	Time:				

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Origins Laboratory F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: **X403657** Client: Tasman
Client Project ID: Fri 2-18
Checklist Completed by: Jeff Smith Shipped Via: Pick up
Date/time completed: 3/6/14 17:25 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
Airbill #: NA
Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: _____
Cooler Number/Temperature: 10-8 °C 1 °C 1 °C (Describe) °C
Thermometer ID: 1002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?		<input checked="" type="checkbox"/>		Sampled Same Day
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	Soil
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	Soil
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

Date/Time Reviewed

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB35-50'

3/6/2014 1:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X403057-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4C06010	03/06/2014	03/06/2014
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Surrogate: o-Terphenyl	103 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.100	mg/kg	1	4C06009	03/06/2014	03/06/2014
Benzene	ND	0.0010	"	"	"	"	"
Toluene	ND	0.0010	"	"	"	"	"
Ethylbenzene	ND	0.0010	"	"	"	"	"
Xylenes, total	ND	0.0010	"	"	"	"	"
Napthalene	ND	0.0040	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	108 %	70-130			"	"	"
Surrogate: Toluene-d8	101 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	70-130			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C06009 - EPA 5030 (soil)										
Blank (4C06009-BLK1)					Prepared: 03/06/2014 Analyzed: 03/06/2014					
Gasoline Range Hydrocarbons	ND	0.100	mg/kg							
Benzene	ND	0.0010	"							
Toluene	ND	0.0010	"							
Ethylbenzene	ND	0.0010	"							
Xylenes, total	ND	0.0010	"							
Naphthalene	ND	0.0040	"							
Surrogate: 1,2-Dichloroethane-d4	69		ug/kg	62.5		111	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C06009 - EPA 5030 (soil)										
LCS (4C06009-BS1)					Prepared: 03/06/2014 Analyzed: 03/06/2014					
Benzene	0.0959	0.0010	mg/kg	0.100		95.9	70-130			
Toluene	0.0972	0.0010	"	0.100		97.2	70-130			
Ethylbenzene	0.0923	0.0010	"	0.100		92.3	70-130			
m,p-Xylene	0.180	0.0020	"	0.200		90.1	70-130			
o-Xylene	0.0960	0.0010	"	0.100		96.0	70-130			
Naphthalene	0.114	0.0040	"	0.100		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C06009 - EPA 5030 (soil)										
Matrix Spike (4C06009-MS1)		Source: X403040-01			Prepared: 03/06/2014 Analyzed: 03/06/2014					
Benzene	0.0684	0.0010	mg/kg	0.100	ND	68.4	70-130			QM-07
Toluene	0.0643	0.0010	"	0.100	ND	64.3	70-130			QM-07
Ethylbenzene	0.0594	0.0010	"	0.100	ND	59.4	70-130			QM-07
m,p-Xylene	0.107	0.0020	"	0.200	ND	53.6	70-130			QM-07
o-Xylene	0.0595	0.0010	"	0.100	ND	59.5	70-130			QM-07
Naphthalene	0.0469	0.0040	"	0.100	ND	46.9	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	71		ug/kg	62.5		113	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.4	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C06009 - EPA 5030 (soil)										
Matrix Spike Dup (4C06009-MSD1)			Source: X403040-01		Prepared: 03/06/2014 Analyzed: 03/06/2014					
Benzene	0.0707	0.0010	mg/kg	0.100	ND	70.7	70-130	3.28	20	
Toluene	0.0655	0.0010	"	0.100	ND	65.5	70-130	1.94	20	QM-07
Ethylbenzene	0.0581	0.0010	"	0.100	ND	58.1	70-130	2.18	20	QM-07
m,p-Xylene	0.103	0.0020	"	0.200	ND	51.5	70-130	4.05	20	QM-07
o-Xylene	0.0574	0.0010	"	0.100	ND	57.4	70-130	3.66	20	QM-07
Naphthalene	0.0380	0.0040	"	0.100	ND	38.0	70-130	21.0	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	73		ug/kg	62.5		116	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.7	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4C06010 - EPA 3580

Blank (4C06010-BLK1)

Prepared: 03/06/2014 Analyzed: 03/06/2014

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 55 g 50.0 109 59-131

LCS (4C06010-BS1)

Prepared: 03/06/2014 Analyzed: 03/06/2014

Diesel (C10-C28) 978 50.0 mg/kg 1000 97.8 64-121

Surrogate: o-Terphenyl 44 g 50.0 88.3 59-131

Matrix Spike (4C06010-MS1)

Source: X403026-02

Prepared: 03/06/2014 Analyzed: 03/07/2014

Diesel (C10-C28) 1090 50.0 mg/kg 1000 ND 109 53-125

Surrogate: o-Terphenyl 48 g 50.0 96.7 59-131

Matrix Spike Dup (4C06010-MSD1)

Source: X403026-02

Prepared: 03/06/2014 Analyzed: 03/07/2014

Diesel (C10-C28) 1120 50.0 mg/kg 1000 ND 112 53-125 2.68 20

Surrogate: o-Terphenyl 49 g 50.0 98.2 59-131

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



March 19, 2014

Tasman Geosciences

Dan Wade

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - Fri 2-18

Project Number - [none]

Attached are your analytical results for Fri 2-18 received by Origins Laboratory, Inc. March 19, 2014. This project is associated with Origins project number X403178-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB 36-36'	X403178-01	Soil	March 19, 2014 10:50	03/19/2014 13:00

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dan Wade
Project Number: [none]
Project: Fri 2-18

ORIGINS

LABORATORY, INC

www.originslaboratory.com

X403176

page 1 of 1

Client:

Tasman Noble Energy

Address:

6849 Leeds St, Denver CO

Telephone Number:

303-912-2625

Email Address:

dward@tasman-gas.com

Project Manager:

Dan Wade

Project Name:

Fri 2-18

Project Number:

Samples Collected By:

Eric Siegel

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Sampling Container #	Other		
5B36-36'	3/19/14	1050	1	X					X			8015 DRK 8260 BTEX 8260 GEO Naphthalene	1
													2
													3
													4
													5
													6
													7
													8
													9
													10
Relinquished By: Eric A. Siegel	Date: 3/19/14	Time: 1300	Received By: 	Date: 3/19/14	Time: 1300	Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>							
Relinquished By:	Date:	Time:	Received By:	Date:	Time:								

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X403178

Client: TASMAN

Client Project ID: FRI 2-18

Checklist Completed by: MT

Shipped Via: PU

Date/time completed: 3/19 1321

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #:

Matrix(s) Received: (Check all that apply): X Soil/Solid

Water

Other:

Cooler Number/Temperature: 1.6 °C

(Describe)

Thermometer ID: T002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		X		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	SOIL
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) / (pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)		X		SOIL
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

03-19-14 1616
Date/Time Reviewed

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB 36-36'

3/19/2014 10:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X403178-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4C19009	03/19/2014	03/19/2014
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Surrogate: o-Terphenyl	91.2 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	10.4	0.200	mg/kg	1	4C19008	03/19/2014	03/19/2014
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Benzene	0.0041	0.0020	"	"	"	"	"
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Toluene	ND	0.0020	"	"	"	"	"
---------	----	--------	---	---	---	---	---

Ethylbenzene	0.0219	0.0020	"	"	"	"	"
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Xylenes, total	0.565	0.0020	"	"	"	"	"
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Napthalene	0.0570	0.0080	"	"	"	"	"
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Surrogate: 1,2-Dichloroethane-d4	113 %	70-130			"	"	"
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Surrogate: Toluene-d8	115 %	70-130			"	"	"
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Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"
---------------------------------	-------	--------	--	--	---	---	---

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C19008 - EPA 5030 (soil)										
Blank (4C19008-BLK1)					Prepared: 03/19/2014 Analyzed: 03/19/2014					
Gasoline Range Hydrocarbons	ND	0.100	mg/kg							
Benzene	ND	0.0010	"							
Toluene	ND	0.0010	"							
Ethylbenzene	ND	0.0010	"							
Xylenes, total	ND	0.0010	"							
Naphthalene	ND	0.0040	"							
Surrogate: 1,2-Dichloroethane-d4	73		ug/kg	62.5		117	70-130			
Surrogate: Toluene-d8	62		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.2	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C19008 - EPA 5030 (soil)										
LCS (4C19008-BS1)					Prepared: 03/19/2014 Analyzed: 03/19/2014					
Benzene	0.106	0.0010	mg/kg	0.100		106	70-130			
Toluene	0.108	0.0010	"	0.100		108	70-130			
Ethylbenzene	0.108	0.0010	"	0.100		108	70-130			
m,p-Xylene	0.227	0.0020	"	0.200		114	70-130			
o-Xylene	0.107	0.0010	"	0.100		107	70-130			
Naphthalene	0.0978	0.0040	"	0.100		97.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	67		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.8	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C19008 - EPA 5030 (soil)										
Matrix Spike (4C19008-MS1)		Source: X403178-01			Prepared: 03/19/2014 Analyzed: 03/19/2014					
Benzene	0.108	0.0010	mg/kg	0.100	0.0041	104	70-130			
Toluene	0.118	0.0010	"	0.100	ND	118	70-130			
Ethylbenzene	0.133	0.0010	"	0.100	0.0219	111	70-130			
m,p-Xylene	0.492	0.0020	"	0.200	0.565	NR	70-130			QM-07
o-Xylene	0.0983	0.0010	"	0.100	ND	98.3	70-130			
Naphthalene	0.173	0.0040	"	0.100	0.0570	116	70-130			
Surrogate: 1,2-Dichloroethane-d4	71		ug/kg	62.5		114	70-130			
Surrogate: Toluene-d8	89		"	62.5		142	70-130			S-06
Surrogate: 4-Bromofluorobenzene	68		"	62.5		108	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C19008 - EPA 5030 (soil)										
Matrix Spike Dup (4C19008-MSD1)			Source: X403178-01		Prepared: 03/19/2014 Analyzed: 03/19/2014					
Benzene	0.107	0.0010	mg/kg	0.100	0.0041	103	70-130	0.934	20	
Toluene	0.116	0.0010	"	0.100	ND	116	70-130	1.44	20	
Ethylbenzene	0.114	0.0010	"	0.100	0.0219	91.6	70-130	15.7	20	
m,p-Xylene	0.424	0.0020	"	0.200	0.565	NR	70-130	14.9	20	QM-07
o-Xylene	0.0960	0.0010	"	0.100	ND	96.0	70-130	2.39	20	
Naphthalene	0.163	0.0040	"	0.100	0.0570	106	70-130	6.16	20	
Surrogate: 1,2-Dichloroethane-d4	67		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	82		"	62.5		132	70-130			S-06
Surrogate: 4-Bromofluorobenzene	67		"	62.5		107	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4C19009 - EPA 3580

Blank (4C19009-BLK1)

Prepared: 03/19/2014 Analyzed: 03/19/2014

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 43 g 50.0 86.0 59-131

LCS (4C19009-BS1)

Prepared: 03/19/2014 Analyzed: 03/19/2014

Diesel (C10-C28) 760 50.0 mg/kg 1000 76.0 64-121

Surrogate: o-Terphenyl 37 g 50.0 74.7 59-131

Matrix Spike (4C19009-MS1)

Source: X403165-01

Prepared: 03/19/2014 Analyzed: 03/19/2014

Diesel (C10-C28) 887 50.0 mg/kg 1000 ND 88.7 53-125

Surrogate: o-Terphenyl 46 g 50.0 92.1 59-131

Matrix Spike Dup (4C19009-MSD1)

Source: X403165-01

Prepared: 03/19/2014 Analyzed: 03/19/2014

Diesel (C10-C28) 970 50.0 mg/kg 1000 ND 97.0 53-125 8.98 20

Surrogate: o-Terphenyl 50 g 50.0 100 59-131

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



March 20, 2014

Tasman Geosciences

Dan Wade

6899 Pecos Street, Unit C

Denver

CO 80211

Project Name - Fri 2-18

Project Number - [none]

Attached are your analytical results for Fri 2-18 received by Origins Laboratory, Inc. March 20, 2014. This project is associated with Origins project number X403197-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB37-40'	X403197-01	Soil	March 20, 2014 10:15	03/20/2014 15:00

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

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page 1 of 1

X403197

Client: Tasman (Noble Energy)
Address: 6899 Pecos St, Denver, CO
Telephone Number:
Email Address: dwade@tasman-geo.com

Project Manager: Dan Wade
Project Name: Fri 2-18
Project Number:
Samples Collected By: Eric Siegel

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #			
S637-40'	3/20/14	1015	1	X					X			8015 DRO 8260 GEO 8260 BTEX Naphthalene	1
													2
													3
													4
													5
													6
													7
													8
													9
													10

Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:
Eric A. Siegel	3/20/14	15:00	[Signature]	3/20/14	15:00	Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>

Date Results Needed

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X403197

Client: Tasman

Client Project ID: Fri 2-18

Checklist Completed by: Jeff Smith

Shipped Via: Pick Up

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 3/20/14 15:55

Airbill #: NA

Matrix(s) Received: (Check all that apply) ☒ Soil/Solid ☐ Water ☐ Other: _____

Cooler Number/Temperature: 139 °C / _____ °C / _____ °C / _____ °C (Describe)

Thermometer ID: 1099

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HT's due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Soil
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) / (pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Soil
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

03-20-14 1829
Date/Time Reviewed

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB37-40'

3/20/2014 10:15:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X403197-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	203	50.0	mg/kg	1	4C20011	03/20/2014	03/20/2014
Surrogate: o-Terphenyl	75.2 %	59-131			"	"	"

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	524	10.0	mg/kg	50	4C20010	03/20/2014	03/20/2014
Benzene	ND	0.100	"	"	"	"	"
Toluene	2.00	0.100	"	"	"	"	"
Ethylbenzene	0.496	0.100	"	"	"	"	"
Xylenes, total	10.1	0.100	"	"	"	"	"
Napthalene	ND	0.400	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	87.7 %	70-130			"	"	"
Surrogate: Toluene-d8	103 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	105 %	70-130			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C20010 - EPA 5030 (soil)										
Blank (4C20010-BLK1)					Prepared: 03/20/2014 Analyzed: 03/20/2014					
Gasoline Range Hydrocarbons	ND	0.100	mg/kg							
Benzene	ND	0.0010	"							
Toluene	ND	0.0010	"							
Ethylbenzene	ND	0.0010	"							
Xylenes, total	ND	0.0010	"							
Naphthalene	ND	0.0040	"							
Surrogate: 1,2-Dichloroethane-d4	57		ug/kg	62.5		90.9	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.4	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.8	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C20010 - EPA 5030 (soil)										
LCS (4C20010-BS1)					Prepared: 03/20/2014 Analyzed: 03/20/2014					
Benzene	0.109	0.0010	mg/kg	0.100		109	70-130			
Toluene	0.105	0.0010	"	0.100		105	70-130			
Ethylbenzene	0.106	0.0010	"	0.100		106	70-130			
m,p-Xylene	0.222	0.0020	"	0.200		111	70-130			
o-Xylene	0.108	0.0010	"	0.100		108	70-130			
Naphthalene	0.127	0.0040	"	0.100		127	70-130			
Surrogate: 1,2-Dichloroethane-d4	53		ug/kg	62.5		84.6	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.5	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.9	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4C20010 - EPA 5030 (soil)

Matrix Spike (4C20010-MS1)		Source: X403187-01			Prepared: 03/20/2014 Analyzed: 03/20/2014					
Benzene	0.212	0.0010	mg/kg	0.200	ND	106	70-130			
Toluene	0.201	0.0010	"	0.200	ND	101	70-130			
Ethylbenzene	0.232	0.0010	"	0.200	ND	116	70-130			
m,p-Xylene	0.362	0.0020	"	0.400	ND	90.6	70-130			
o-Xylene	0.251	0.0010	"	0.200	ND	126	70-130			
Naphthalene	0.214	0.0040	"	0.200	0.0125	101	70-130			
Surrogate: 1,2-Dichloroethane-d4	49		ug/kg	62.5		79.1	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.8	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.4	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C20010 - EPA 5030 (soil)										
Matrix Spike Dup (4C20010-MSD1)			Source: X403187-01		Prepared: 03/20/2014 Analyzed: 03/20/2014					
Benzene	0.201	0.0010	mg/kg	0.200	ND	101	70-130	5.16	20	
Toluene	0.196	0.0010	"	0.200	ND	97.9	70-130	2.73	20	
Ethylbenzene	0.212	0.0010	"	0.200	ND	106	70-130	9.10	20	
m,p-Xylene	0.376	0.0020	"	0.400	ND	93.9	70-130	3.60	20	
o-Xylene	0.231	0.0010	"	0.200	ND	115	70-130	8.34	20	
Naphthalene	0.234	0.0040	"	0.200	0.0125	111	70-130	8.84	20	
Surrogate: 1,2-Dichloroethane-d4	53		ug/kg	62.5		85.2	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.3	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4C20011 - EPA 3580

Blank (4C20011-BLK1)

Prepared: 03/20/2014 Analyzed: 03/20/2014

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 49 g 50.0 97.9 59-131

LCS (4C20011-BS1)

Prepared: 03/20/2014 Analyzed: 03/20/2014

Diesel (C10-C28) 857 50.0 mg/kg 1000 85.7 64-121

Surrogate: o-Terphenyl 42 g 50.0 84.8 59-131

Matrix Spike (4C20011-MS1)

Source: X403193-01

Prepared: 03/20/2014 Analyzed: 03/20/2014

Diesel (C10-C28) 418 25.0 mg/kg 500 57.3 72.2 53-125

Surrogate: o-Terphenyl 38 g 50.0 75.1 59-131

Matrix Spike Dup (4C20011-MSD1)

Source: X403193-01

Prepared: 03/20/2014 Analyzed: 03/20/2014

Diesel (C10-C28) 437 25.0 mg/kg 500 57.3 75.9 53-125 4.43 20

Surrogate: o-Terphenyl 38 g 50.0 76.3 59-131

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



March 21, 2014

Tasman Geosciences

Dan Wade

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - Fri 2-18

Project Number - [none]

Attached are your analytical results for Fri 2-18 received by Origins Laboratory, Inc. March 21, 2014. This project is associated with Origins project number X403223-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB38-45'	X403223-01	Soil	March 21, 2014 10:45	03/21/2014 15:30

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

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page 1 of 1

X403223

Project Manager: Dan Wade
Project Name: Fri 2-18
Project Number:
Samples Collected By: Eric Siegel

Client: Tasman (Noble Energy)
Address:
Telephone Number:
Email Address: dwade@tasman-geo.com

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #			
S838-45'	3/21/14	1045	1	X					X			1	
												2	
												3	
												4	
												5	
												6	
												7	
												8	
												9	
												10	

Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:
Eric A. Siegel	3/21/14	1530	Eric Siegel	3/21/14	15:30	Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>

Date Results Needed

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X403223

Client: Tasman

Client Project ID: Fri 2-18

Checklist Completed by: Jeff Smith

Shipped Via: Pick up
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 3/21/14 16:24

Airbill #: NA

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: _____

Cooler Number/Temperature: 14.8 °C 1 °C 1 °C 1 °C (Describe)

Thermometer ID: T002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)?	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	Soil
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) (pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)		<input checked="" type="checkbox"/>		Soil
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date, time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

03-21-14/703
Date/Time Reviewed

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

SB38-45'

3/21/2014 10:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc.
X403223-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4C21011	03/21/2014	03/21/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	92.9 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.100	mg/kg	1	4C21010	03/21/2014	03/21/2014
Benzene	0.0078	0.0010	"	"	"	"	"
Toluene	ND	0.0010	"	"	"	"	"
Ethylbenzene	0.0018	0.0010	"	"	"	"	"
Xylenes, total	ND	0.0010	"	"	"	"	"
Naphthalene	ND	0.0040	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	106 %	70-130			"	"	"
Surrogate: Toluene-d8	99.0 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	70-130			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C21010 - EPA 5030 (soil)										
Blank (4C21010-BLK1)					Prepared: 03/21/2014 Analyzed: 03/21/2014					
Gasoline Range Hydrocarbons	ND	0.100	mg/kg							
Benzene	ND	0.0010	"							
Toluene	ND	0.0010	"							
Ethylbenzene	ND	0.0010	"							
Xylenes, total	ND	0.0010	"							
Naphthalene	ND	0.0040	"							
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C21010 - EPA 5030 (soil)										
LCS (4C21010-BS1)					Prepared: 03/21/2014 Analyzed: 03/21/2014					
Benzene	0.0961	0.0010	mg/kg	0.100		96.1	70-130			
Toluene	0.105	0.0010	"	0.100		105	70-130			
Ethylbenzene	0.103	0.0010	"	0.100		103	70-130			
m,p-Xylene	0.206	0.0020	"	0.200		103	70-130			
o-Xylene	0.104	0.0010	"	0.100		104	70-130			
Naphthalene	0.0999	0.0040	"	0.100		99.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		97.0	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.8	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C21010 - EPA 5030 (soil)										
Matrix Spike (4C21010-MS1)		Source: X403216-01			Prepared: 03/21/2014 Analyzed: 03/21/2014					
Benzene	0.112	0.0010	mg/kg	0.100	ND	112	70-130			
Toluene	0.192	0.0010	"	0.100	ND	192	70-130			QM-07
Ethylbenzene	0.119	0.0010	"	0.100	ND	119	70-130			
m,p-Xylene	0.265	0.0020	"	0.200	ND	132	70-130			QM-07
o-Xylene	0.129	0.0010	"	0.100	ND	129	70-130			
Naphthalene	0.108	0.0040	"	0.100	0.0024	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		100	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.7	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C21010 - EPA 5030 (soil)										
Matrix Spike Dup (4C21010-MSD1)			Source: X403216-01		Prepared: 03/21/2014 Analyzed: 03/21/2014					
Benzene	0.109	0.0010	mg/kg	0.100	ND	109	70-130	2.46	20	
Toluene	0.188	0.0010	"	0.100	ND	188	70-130	2.12	20	QM-07
Ethylbenzene	0.115	0.0010	"	0.100	ND	115	70-130	3.36	20	
m,p-Xylene	0.253	0.0020	"	0.200	ND	127	70-130	4.33	20	
o-Xylene	0.127	0.0010	"	0.100	ND	127	70-130	2.05	20	
Naphthalene	0.103	0.0040	"	0.100	0.0024	101	70-130	4.63	20	
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		98.6	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.2	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.1	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 4C21011 - EPA 3580

Blank (4C21011-BLK1)

Prepared: 03/21/2014 Analyzed: 03/21/2014

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 44 g 50.0 87.0 59-131

LCS (4C21011-BS1)

Prepared: 03/21/2014 Analyzed: 03/21/2014

Diesel (C10-C28) 796 50.0 mg/kg 1000 79.6 64-121

Surrogate: o-Terphenyl 40 g 50.0 80.1 59-131

Matrix Spike (4C21011-MS1)

Source: X403216-01

Prepared: 03/21/2014 Analyzed: 03/21/2014

Diesel (C10-C28) 789 50.0 mg/kg 1000 ND 78.9 53-125

Surrogate: o-Terphenyl 39 g 50.0 78.0 59-131

Matrix Spike Dup (4C21011-MSD1)

Source: X403216-01

Prepared: 03/21/2014 Analyzed: 03/21/2014

Diesel (C10-C28) 842 50.0 mg/kg 1000 ND 84.2 53-125 6.49 20

Surrogate: o-Terphenyl 44 g 50.0 88.4 59-131

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Dan Wade
Project Number: [none]
Project: Fri 2-18

Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

Report Summary

Friday April 04, 2014

Report Number: L691230


Samples Received: 04/02/14

Client Project: FRI 2-18

Description: FRI 2-18

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jared Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

April 04,2014

Date Received : April 02, 2014
Description : FRI 2-18
Sample ID : SB32
Collected By : Dan Wade
Collection Date : 03/31/14 13:00

ESC Sample # : L691230-01

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Suspended Solids	87000	2500	ug/l	2540 D-201	04/03/14	1
Total Solids	1980000	10000	ug/l	2540B	04/03/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 04/03/14 14:11 Revised: 04/04/14 13:19



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REPORT OF ANALYSIS

Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

April 04,2014

Date Received : April 02, 2014
Description : FRI 2-18
Sample ID : SB35
Collected By : Dan Wade
Collection Date : 03/31/14 13:30

ESC Sample # : L691230-02

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Suspended Solids	220000	2500	ug/l	2540 D-201	04/03/14	1
Total Solids	1980000	10000	ug/l	2540B	04/03/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 04/03/14 14:11 Revised: 04/04/14 13:19



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REPORT OF ANALYSIS

Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

April 04,2014

Date Received : April 02, 2014
Description : FRI 2-18
Sample ID : SB36
Collected By : Dan Wade
Collection Date : 03/31/14 14:00

ESC Sample # : L691230-03

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Suspended Solids	890000	2500	ug/l	2540 D-201	04/03/14	1
Total Solids	2900000	10000	ug/l	2540B	04/03/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 04/03/14 14:11 Revised: 04/04/14 13:19



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REPORT OF ANALYSIS

Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

April 04, 2014

Date Received : April 02, 2014
Description : FRI 2-18
Sample ID : SB38
Collected By : Dan Wade
Collection Date : 03/31/14 14:30

ESC Sample # : L691230-04

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Suspended Solids	200000	2500	ug/l	2540 D-201	04/03/14	1
Total Solids	1910000	10000	ug/l	2540B	04/03/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 04/03/14 14:11 Revised: 04/04/14 13:19



YOUR LAB OF CHOICE

Tasman Geosciences- Arvada, CO
 Dan Wade
 6899 Pecos Street, Unit C
 Denver, CO 80221

Quality Assurance Report
 Level II
 L691230

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April 04, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Suspended Solids	< 2.5	mg/l			WG714150	04/03/14 08:33
Total Solids	< 10	mg/l			WG714149	04/03/14 13:03

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Suspended Solids	mg/l	3480	3560	2.27	5	L691257-03	WG714150
Total Solids	mg/l	2880	2900	0.900	5	L691230-03	WG714149

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Suspended Solids	mg/l	773	880.	114.	85-115	WG714150
Total Solids	mg/l	9505	9750	103.	85-115	WG714149

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Suspended Solids	mg/l	880.	880.	114.	85-115	0.00	5	WG714150
Total Solids	mg/l	9740	9750	102.	85-115	0.103	5	WG714149

Batch number /Run number / Sample number cross reference

WG713970: R2900563: L691230-01 02 03 04
 WG714150: R2901024: L691230-01 02 03 04
 WG714149: R2901205: L691230-01 02 03 04

* * Calculations are performed prior to rounding of reported values.
 * Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Tasman Geosciences- Arvada, CO
Dan Wade
6899 Pecos Street, Unit C

Denver, CO 80221

Quality Assurance Report
Level II

L691230

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April 04, 2014

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

Report Summary

Friday April 04, 2014

Report Number: L691746


Samples Received: 04/02/14

Client Project: FRI 2-18

Description: FRI 2-18

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jared Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

April 04,2014

Date Received : April 02, 2014
Description : FRI 2-18
Sample ID : SB32
Collected By : Dan Wade
Collection Date : 03/31/14 13:00

ESC Sample # : L691746-01

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	3.6	1.0	ug/l	8260B	04/04/14	1
Toluene	15.	5.0	ug/l	8260B	04/04/14	1
Ethylbenzene	BDL	1.0	ug/l	8260B	04/04/14	1
Total Xylenes	18.	3.0	ug/l	8260B	04/04/14	1
Surrogate Recovery						
Toluene-d8	97.7		% Rec.	8260B	04/04/14	1
Dibromofluoromethane	78.9		% Rec.	8260B	04/04/14	1
a,a,a-Trifluorotoluene	113.		% Rec.	8260B	04/04/14	1
4-Bromofluorobenzene	92.9		% Rec.	8260B	04/04/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 04/04/14 10:50 Printed: 04/04/14 13:03



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REPORT OF ANALYSIS

Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

April 04,2014

Date Received : April 02, 2014
Description : FRI 2-18
Sample ID : SB35
Collected By : Dan Wade
Collection Date : 03/31/14 13:30

ESC Sample # : L691746-02

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	1.0	ug/l	8260B	04/04/14	1
Toluene	BDL	5.0	ug/l	8260B	04/04/14	1
Ethylbenzene	BDL	1.0	ug/l	8260B	04/04/14	1
Total Xylenes	BDL	3.0	ug/l	8260B	04/04/14	1
Surrogate Recovery						
Toluene-d8	96.5		% Rec.	8260B	04/04/14	1
Dibromofluoromethane	85.4		% Rec.	8260B	04/04/14	1
a,a,a-Trifluorotoluene	110.		% Rec.	8260B	04/04/14	1
4-Bromofluorobenzene	96.3		% Rec.	8260B	04/04/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

April 04,2014

Date Received : April 02, 2014
Description : FRI 2-18
Sample ID : SB36
Collected By : Dan Wade
Collection Date : 03/31/14 14:00

ESC Sample # : L691746-03

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	77.	1.0	ug/l	8260B	04/04/14	1
Toluene	BDL	5.0	ug/l	8260B	04/04/14	1
Ethylbenzene	3.2	1.0	ug/l	8260B	04/04/14	1
Total Xylenes	BDL	3.0	ug/l	8260B	04/04/14	1
Surrogate Recovery						
Toluene-d8	93.6		% Rec.	8260B	04/04/14	1
Dibromofluoromethane	75.0		% Rec.	8260B	04/04/14	1
a,a,a-Trifluorotoluene	112.		% Rec.	8260B	04/04/14	1
4-Bromofluorobenzene	96.3		% Rec.	8260B	04/04/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

April 04,2014

Date Received : April 02, 2014
Description : FRI 2-18
Sample ID : SB38
Collected By : Dan Wade
Collection Date : 03/31/14 14:30

ESC Sample # : L691746-04

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	14.	1.0	ug/l	8260B	04/04/14	1
Toluene	10.	5.0	ug/l	8260B	04/04/14	1
Ethylbenzene	3.1	1.0	ug/l	8260B	04/04/14	1
Total Xylenes	32.	3.0	ug/l	8260B	04/04/14	1
Surrogate Recovery						
Toluene-d8	89.9		% Rec.	8260B	04/04/14	1
Dibromofluoromethane	84.7		% Rec.	8260B	04/04/14	1
a,a,a-Trifluorotoluene	109.		% Rec.	8260B	04/04/14	1
4-Bromofluorobenzene	103.		% Rec.	8260B	04/04/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L691746-03	WG714476	SAMP	Dibromofluoromethane	R2901682	J2

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



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Dan Wade
6899 Pecos Street, Unit C

Denver, CO 80221

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Mt. Juliet, TN 37122
(615) 758-5858
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April 04, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .001	mg/l			WG714476	04/04/14 02:31
Ethylbenzene	< .001	mg/l			WG714476	04/04/14 02:31
Toluene	< .005	mg/l			WG714476	04/04/14 02:31
Total Xylenes	< .003	mg/l			WG714476	04/04/14 02:31
4-Bromofluorobenzene		% Rec.	96.50	71-126	WG714476	04/04/14 02:31
Dibromofluoromethane		% Rec.	87.20	78.3-121	WG714476	04/04/14 02:31
Toluene-d8		% Rec.	90.00	88.5-111	WG714476	04/04/14 02:31
a,a,a-Trifluorotoluene		% Rec.	106.0	85-114	WG714476	04/04/14 02:31

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/l	.025	0.0210	84.2	74.8-121	WG714476
Ethylbenzene	mg/l	.025	0.0286	115.	78.8-122	WG714476
Toluene	mg/l	.025	0.0249	99.7	79.7-116	WG714476
Total Xylenes	mg/l	.075	0.0865	115.	78.7-121	WG714476
4-Bromofluorobenzene				98.00	71-126	WG714476
Dibromofluoromethane				79.70	78.3-121	WG714476
Toluene-d8				96.40	88.5-111	WG714476
a,a,a-Trifluorotoluene				112.0	85-114	WG714476

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	mg/l	0.0207	0.0210	83.0	74.8-121	1.84	20	WG714476
Ethylbenzene	mg/l	0.0276	0.0286	110.	78.8-122	3.64	20	WG714476
Toluene	mg/l	0.0248	0.0249	99.0	79.7-116	0.340	20	WG714476
Total Xylenes	mg/l	0.0830	0.0865	111.	78.7-121	4.08	20	WG714476
4-Bromofluorobenzene				96.70	71-126			WG714476
Dibromofluoromethane				80.10	78.3-121			WG714476
Toluene-d8				96.70	88.5-111			WG714476
a,a,a-Trifluorotoluene				113.0	85-114			WG714476

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Benzene	mg/l	0.0231	0.00362	.025	78.0	54.3-133	L691746-01	WG714476
Ethylbenzene	mg/l	0.0292	0.000723	.025	110.	61.4-133	L691746-01	WG714476
Toluene	mg/l	0.0387	0.0148	.025	96.0	61.4-130	L691746-01	WG714476
Total Xylenes	mg/l	0.106	0.0186	.075	120.	63.3-131	L691746-01	WG714476
4-Bromofluorobenzene					99.20	71-126		WG714476
Dibromofluoromethane					77.50*	78.3-121		WG714476
Toluene-d8					95.70	88.5-111		WG714476
a,a,a-Trifluorotoluene					113.0	85-114		WG714476

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
Benzene	mg/l	0.0225	0.0231	75.6	54.3-133	2.68	20	L691746-01	WG714476
Ethylbenzene	mg/l	0.0282	0.0292	110.	61.4-133	3.58	20	L691746-01	WG714476
Toluene	mg/l	0.0368	0.0387	88.0	61.4-130	4.92	20	L691746-01	WG714476
Total Xylenes	mg/l	0.101	0.106	110.	63.3-131	4.97	20	L691746-01	WG714476
4-Bromofluorobenzene				98.70	71-126				WG714476
Dibromofluoromethane				80.20	78.3-121				WG714476
Toluene-d8				94.60	88.5-111				WG714476
a,a,a-Trifluorotoluene				112.0	85-114				WG714476

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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6899 Pecos Street, Unit C
Denver, CO 80221

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(615) 758-5858
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Est. 1970

April 04, 2014

Batch number /Run number / Sample number cross reference

WG714476: R2901682: L691746-01 02 03 04

* * Calculations are performed prior to rounding of reported values.

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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April 04, 2014

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

Report Summary

Monday April 21, 2014

Report Number: L692356

Samples Received: 04/08/14

Client Project: FRI 2-18

Description: Former FRI 2-18 Tank Battery

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

April 21, 2014

Date Received : April 08, 2014
Description : Former FRI 2-18 Tank Battery
Sample ID : SB39-52 FT
Collected By : Eric Siegel
Collection Date : 04/07/14 11:15

ESC Sample # : L692356-01

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
TPH (GC/MS) Low Fraction	BDL	2.5	mg/kg	8260B	04/19/14	5
Benzene	BDL	0.0050	mg/kg	8260B	04/19/14	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	04/19/14	5
Naphthalene	BDL	0.025	mg/kg	8260B	04/19/14	5
Toluene	BDL	0.025	mg/kg	8260B	04/19/14	5
Xylenes, Total	BDL	0.015	mg/kg	8260B	04/19/14	5
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	04/19/14	5
Dibromofluoromethane	106.		% Rec.	8260B	04/19/14	5
a,a,a-Trifluorotoluene	111.		% Rec.	8260B	04/19/14	5
4-Bromofluorobenzene	108.		% Rec.	8260B	04/19/14	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	04/09/14	1
Surrogate recovery(%)						
o-Terphenyl	88.3		% Rec.	3546/DRO	04/09/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Summary of Remarks For Samples Printed
04/21/14 at 14:03:16

TSR Signing Reports: 358
R2 - Rush: Next Day

BTEX/GRO/Naphthalene (EPA 8260B) = V8260TPKS

Sample: L692356-01 Account: TASGEOACO Received: 04/08/14 09:30 Due Date: 04/21/14 00:00 RPT Date: 04/21/14 10:57
uni 755786 dor 4/18/14.



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Tasman Geosciences- Arvada, CO
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April 21, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) High Fraction	< 4	mg/kg			WG714590	04/09/14 09:15
o-Terphenyl		% Rec.	100.0	50-150	WG714590	04/09/14 09:15
Benzene	< .001	mg/kg			WG716791	04/19/14 06:50
Ethylbenzene	< .001	mg/kg			WG716791	04/19/14 06:50
Naphthalene	< .005	mg/kg			WG716791	04/19/14 06:50
Toluene	< .005	mg/kg			WG716791	04/19/14 06:50
TPH (GC/MS) Low Fraction	< .5	mg/kg			WG716791	04/19/14 06:50
Xylenes, Total	< .003	mg/kg			WG716791	04/19/14 06:50
4-Bromofluorobenzene		% Rec.	107.0	71-126	WG716791	04/19/14 06:50
Dibromofluoromethane		% Rec.	108.0	78.3-121	WG716791	04/19/14 06:50
Toluene-d8		% Rec.	101.0	88.5-111	WG716791	04/19/14 06:50
a,a,a-Trifluorotoluene		% Rec.	108.0	85-114	WG716791	04/19/14 06:50

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) High Fraction	mg/kg	60	50.4	84.1	50-150	WG714590
o-Terphenyl				93.50	50-150	WG714590
TPH (GC/MS) Low Fraction	mg/kg	5	6.40	128.	63.4-135	WG716791
4-Bromofluorobenzene				86.20	71-126	WG716791
Dibromofluoromethane				103.0	78.3-121	WG716791
Toluene-d8				101.0	88.5-111	WG716791
a,a,a-Trifluorotoluene				108.0	85-114	WG716791
Benzene	mg/kg	.025	0.0258	103.	77.1-121	WG716791
Ethylbenzene	mg/kg	.025	0.0233	93.3	79.7-122	WG716791
Naphthalene	mg/kg	.025	0.0229	91.5	69.8-128	WG716791
Toluene	mg/kg	.025	0.0249	99.6	79.7-118	WG716791
Xylenes, Total	mg/kg	.075	0.0694	92.5	78.8-121	WG716791
4-Bromofluorobenzene				102.0	71-126	WG716791
Dibromofluoromethane				106.0	78.3-121	WG716791
Toluene-d8				104.0	88.5-111	WG716791
a,a,a-Trifluorotoluene				112.0	85-114	WG716791

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) High Fraction	mg/kg	54.2	50.4	90.0	50-150	7.16	20	WG714590
o-Terphenyl				98.30	50-150			WG714590
TPH (GC/MS) Low Fraction	mg/kg	6.08	6.40	122.	63.4-135	5.00	20	WG716791
4-Bromofluorobenzene				104.0	71-126			WG716791
Dibromofluoromethane				104.0	78.3-121			WG716791
Toluene-d8				92.20	88.5-111			WG716791
a,a,a-Trifluorotoluene				106.0	85-114			WG716791
Benzene	mg/kg	0.0268	0.0258	107.	77.1-121	3.87	20	WG716791
Ethylbenzene	mg/kg	0.0238	0.0233	95.0	79.7-122	2.15	20	WG716791
Naphthalene	mg/kg	0.0231	0.0229	92.0	69.8-128	1.11	20	WG716791
Toluene	mg/kg	0.0253	0.0249	101.	79.7-118	1.66	20	WG716791
Xylenes, Total	mg/kg	0.0712	0.0694	95.0	78.8-121	2.66	20	WG716791
4-Bromofluorobenzene				102.0	71-126			WG716791
Dibromofluoromethane				107.0	78.3-121			WG716791
Toluene-d8				104.0	88.5-111			WG716791
a,a,a-Trifluorotoluene				111.0	85-114			WG716791

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Dan Wade
6899 Pecos Street, Unit C

Denver, CO 80221

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Mt. Juliet, TN 37122
(615) 758-5858
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April 21, 2014

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
TPH (GC/FID) High Fraction	mg/kg	61.7	13.6	60	80.0	50-150	L691760-09	WG714590
o-Terphenyl					108.0	50-150		WG714590
Benzene	mg/kg	0.0204	0.0	.025	82.0	54.3-133	L693975-01	WG716791
Ethylbenzene	mg/kg	0.0189	0.0	.025	76.0	61.4-133	L693975-01	WG716791
Naphthalene	mg/kg	0.0152	0.0	.025	61.0	58-135	L693975-01	WG716791
Toluene	mg/kg	0.0195	0.0	.025	78.0	61.4-130	L693975-01	WG716791
Xylenes, Total	mg/kg	0.0541	0.0	.075	72.0	63.3-131	L693975-01	WG716791
4-Bromofluorobenzene					102.0	71-126		WG716791
Dibromofluoromethane					113.0	78.3-121		WG716791
Toluene-d8					103.0	88.5-111		WG716791
a,a,a-Trifluorotoluene					107.0	85-114		WG716791
TPH (GC/MS) Low Fraction	mg/kg	4.65	0.0	5	93.0	64-142	L693975-01	WG716791
4-Bromofluorobenzene					93.60	71-126		WG716791
Dibromofluoromethane					111.0	78.3-121		WG716791
Toluene-d8					92.50	88.5-111		WG716791
a,a,a-Trifluorotoluene					93.30	85-114		WG716791

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) High Fraction	mg/kg	59.5	61.7	76.4	50-150	3.62	20	L691760-09	WG714590
o-Terphenyl				103.0	50-150				WG714590
Benzene	mg/kg	0.0202	0.0204	81.0	54.3-133	0.690	20	L693975-01	WG716791
Ethylbenzene	mg/kg	0.0179	0.0189	71.7	61.4-133	5.45	20	L693975-01	WG716791
Naphthalene	mg/kg	0.0162	0.0152	65.0	58-135	6.73	25.5	L693975-01	WG716791
Toluene	mg/kg	0.0194	0.0195	77.7	61.4-130	0.130	20	L693975-01	WG716791
Xylenes, Total	mg/kg	0.0529	0.0541	70.5	63.3-131	2.35	20	L693975-01	WG716791
4-Bromofluorobenzene				101.0	71-126				WG716791
Dibromofluoromethane				111.0	78.3-121				WG716791
Toluene-d8				104.0	88.5-111				WG716791
a,a,a-Trifluorotoluene				107.0	85-114				WG716791
TPH (GC/MS) Low Fraction	mg/kg	4.49	4.65	89.8	64-142	3.50	20	L693975-01	WG716791
4-Bromofluorobenzene				101.0	71-126				WG716791
Dibromofluoromethane				120.0	78.3-121				WG716791
Toluene-d8				102.0	88.5-111				WG716791
a,a,a-Trifluorotoluene				105.0	85-114				WG716791

Batch number /Run number / Sample number cross reference

WG714736: R2902821: L692356-01
WG715199: R2903038: L692356-01
WG714590: R2903040: L692356-01
WG716791: R2906525: L692356-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Quality Assurance Report
Level II

L692356

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Fax (615) 758-5859

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April 21, 2014

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

Report Summary

Monday April 21, 2014

Report Number: L692662

Samples Received: 04/09/14

Client Project: FRI 2-18

Description: Former FRI 2-18 Tank Battery

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

April 21, 2014

Date Received : April 09, 2014
Description : Former FRI 2-18 Tank Battery
Sample ID : SB40-47'
Collected By : Eric Siegel
Collection Date : 04/08/14 12:45

ESC Sample # : L692662-01

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
TPH (GC/MS) Low Fraction	BDL	2.5	mg/kg	8260B	04/19/14	5
Benzene	BDL	0.0050	mg/kg	8260B	04/19/14	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	04/19/14	5
Naphthalene	BDL	0.025	mg/kg	8260B	04/19/14	5
Toluene	BDL	0.025	mg/kg	8260B	04/19/14	5
Xylenes, Total	BDL	0.015	mg/kg	8260B	04/19/14	5
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	04/19/14	5
Dibromofluoromethane	105.		% Rec.	8260B	04/19/14	5
a,a,a-Trifluorotoluene	108.		% Rec.	8260B	04/19/14	5
4-Bromofluorobenzene	106.		% Rec.	8260B	04/19/14	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	04/10/14	1
Surrogate recovery(%)						
o-Terphenyl	87.1		% Rec.	3546/DRO	04/10/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 04/21/14 10:58 Printed: 04/21/14 14:09

Summary of Remarks For Samples Printed
04/21/14 at 14:09:48

TSR Signing Reports: 358
R2 - Rush: Next Day

BTEX/GRO/Naphthalene (EPA 8260B) = V8260TPKS

Sample: L692662-01 Account: TASGEOACO Received: 04/09/14 10:00 Due Date: 04/21/14 00:00 RPT Date: 04/21/14 10:58
uni 756036 dor 4/18/14.



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6899 Pecos Street, Unit C
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April 21, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) High Fraction	< 4	mg/kg			WG715206	04/09/14 22:40
o-Terphenyl		% Rec.	86.70	50-150	WG715206	04/09/14 22:40
Benzene	< .001	mg/kg			WG716791	04/19/14 06:50
Ethylbenzene	< .001	mg/kg			WG716791	04/19/14 06:50
Naphthalene	< .005	mg/kg			WG716791	04/19/14 06:50
Toluene	< .005	mg/kg			WG716791	04/19/14 06:50
TPH (GC/MS) Low Fraction	< .5	mg/kg			WG716791	04/19/14 06:50
Xylenes, Total	< .003	mg/kg			WG716791	04/19/14 06:50
4-Bromofluorobenzene		% Rec.	107.0	71-126	WG716791	04/19/14 06:50
Dibromofluoromethane		% Rec.	108.0	78.3-121	WG716791	04/19/14 06:50
Toluene-d8		% Rec.	101.0	88.5-111	WG716791	04/19/14 06:50
a,a,a-Trifluorotoluene		% Rec.	108.0	85-114	WG716791	04/19/14 06:50

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) High Fraction	mg/kg	60	48.6	81.1	50-150	WG715206
o-Terphenyl				89.80	50-150	WG715206
TPH (GC/MS) Low Fraction	mg/kg	5	6.40	128.	63.4-135	WG716791
4-Bromofluorobenzene				86.20	71-126	WG716791
Dibromofluoromethane				103.0	78.3-121	WG716791
Toluene-d8				101.0	88.5-111	WG716791
a,a,a-Trifluorotoluene				108.0	85-114	WG716791
Benzene	mg/kg	.025	0.0258	103.	77.1-121	WG716791
Ethylbenzene	mg/kg	.025	0.0233	93.3	79.7-122	WG716791
Naphthalene	mg/kg	.025	0.0229	91.5	69.8-128	WG716791
Toluene	mg/kg	.025	0.0249	99.6	79.7-118	WG716791
Xylenes, Total	mg/kg	.075	0.0694	92.5	78.8-121	WG716791
4-Bromofluorobenzene				102.0	71-126	WG716791
Dibromofluoromethane				106.0	78.3-121	WG716791
Toluene-d8				104.0	88.5-111	WG716791
a,a,a-Trifluorotoluene				112.0	85-114	WG716791

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) High Fraction	mg/kg	47.6	48.6	79.0	50-150	2.20	20	WG715206
o-Terphenyl				84.60	50-150			WG715206
TPH (GC/MS) Low Fraction	mg/kg	6.08	6.40	122.	63.4-135	5.00	20	WG716791
4-Bromofluorobenzene				104.0	71-126			WG716791
Dibromofluoromethane				104.0	78.3-121			WG716791
Toluene-d8				92.20	88.5-111			WG716791
a,a,a-Trifluorotoluene				106.0	85-114			WG716791
Benzene	mg/kg	0.0268	0.0258	107.	77.1-121	3.87	20	WG716791
Ethylbenzene	mg/kg	0.0238	0.0233	95.0	79.7-122	2.15	20	WG716791
Naphthalene	mg/kg	0.0231	0.0229	92.0	69.8-128	1.11	20	WG716791
Toluene	mg/kg	0.0253	0.0249	101.	79.7-118	1.66	20	WG716791
Xylenes, Total	mg/kg	0.0712	0.0694	95.0	78.8-121	2.66	20	WG716791
4-Bromofluorobenzene				102.0	71-126			WG716791
Dibromofluoromethane				107.0	78.3-121			WG716791
Toluene-d8				104.0	88.5-111			WG716791
a,a,a-Trifluorotoluene				111.0	85-114			WG716791

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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April 21, 2014

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
TPH (GC/FID) High Fraction	mg/kg	54.8	0.567	60	90.0	50-150	L692070-04	WG715206
o-Terphenyl					104.0	50-150		WG715206
Benzene	mg/kg	0.0204	0.0	.025	82.0	54.3-133	L693975-01	WG716791
Ethylbenzene	mg/kg	0.0189	0.0	.025	76.0	61.4-133	L693975-01	WG716791
Naphthalene	mg/kg	0.0152	0.0	.025	61.0	58-135	L693975-01	WG716791
Toluene	mg/kg	0.0195	0.0	.025	78.0	61.4-130	L693975-01	WG716791
Xylenes, Total	mg/kg	0.0541	0.0	.075	72.0	63.3-131	L693975-01	WG716791
4-Bromofluorobenzene					102.0	71-126		WG716791
Dibromofluoromethane					113.0	78.3-121		WG716791
Toluene-d8					103.0	88.5-111		WG716791
a,a,a-Trifluorotoluene					107.0	85-114		WG716791
TPH (GC/MS) Low Fraction	mg/kg	4.65	0.0	5	93.0	64-142	L693975-01	WG716791
4-Bromofluorobenzene					93.60	71-126		WG716791
Dibromofluoromethane					111.0	78.3-121		WG716791
Toluene-d8					92.50	88.5-111		WG716791
a,a,a-Trifluorotoluene					93.30	85-114		WG716791

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) High Fraction	mg/kg	54.4	54.8	89.6	50-150	0.780	20	L692070-04	WG715206
o-Terphenyl				99.50	50-150				WG715206
Benzene	mg/kg	0.0202	0.0204	81.0	54.3-133	0.690	20	L693975-01	WG716791
Ethylbenzene	mg/kg	0.0179	0.0189	71.7	61.4-133	5.45	20	L693975-01	WG716791
Naphthalene	mg/kg	0.0162	0.0152	65.0	58-135	6.73	25.5	L693975-01	WG716791
Toluene	mg/kg	0.0194	0.0195	77.7	61.4-130	0.130	20	L693975-01	WG716791
Xylenes, Total	mg/kg	0.0529	0.0541	70.5	63.3-131	2.35	20	L693975-01	WG716791
4-Bromofluorobenzene				101.0	71-126				WG716791
Dibromofluoromethane				111.0	78.3-121				WG716791
Toluene-d8				104.0	88.5-111				WG716791
a,a,a-Trifluorotoluene				107.0	85-114				WG716791
TPH (GC/MS) Low Fraction	mg/kg	4.49	4.65	89.8	64-142	3.50	20	L693975-01	WG716791
4-Bromofluorobenzene				101.0	71-126				WG716791
Dibromofluoromethane				120.0	78.3-121				WG716791
Toluene-d8				102.0	88.5-111				WG716791
a,a,a-Trifluorotoluene				105.0	85-114				WG716791

Batch number /Run number / Sample number cross reference

WG715270: R2903264: L692662-01
WG715345: R2903323: L692662-01
WG715206: R2903346 R2903436: L692662-01
WG716791: R2906525: L692662-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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April 21, 2014

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time
SB40-47'	Grab	SS	47'	4/8/2014	12:45

[illegible]

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

Relinquished by: (Signature) G. A. A. /	Date: 4/8/14	Time: 14:30
--	-----------------	----------------

Relinquished by : (Signature)	Date:	Time:
-------------------------------	-------	-------

Relinquished by : (Signature)	Date:	Time:
-------------------------------	-------	-------

Depth	Date	Time
47'	4/8/2014	12:45

[illegible]- Drinking Water OT - Other_____535

8/14	Time: 14:30	Received
------	-------------	----------

	Time:	Received
--	-------	----------

Time:	Received:
-------	-----------

BTEX / GRO (EPA TO-15)

Rem./Contaminant	Sample # (lab only)
------------------	---------------------

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: ☐ UPS

☐ FedEx ☒ Courier ☐ _____

Temp:	°C	Bottles Received:
3.6		1=402

Date: 4/9/14 Time: 1000

Hold #Condition: (lab use only)

COC Seal Intact: Y N NA

pH Checked: NCF:



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Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

Report Summary

Monday April 21, 2014

Report Number: L692903

Samples Received: 04/10/14

Client Project: FRI 2-18

Description: Former FRI 2-18 Tank Battery

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

April 21, 2014

Date Received : April 10, 2014
Description : Former FRI 2-18 Tank Battery
Sample ID : SB41-41FT
Collected By : Eric Siegel
Collection Date : 04/09/14 10:50

ESC Sample # : L692903-01

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
TPH (GC/MS) Low Fraction	BDL	2.5	mg/kg	8260B	04/19/14	5
Benzene	BDL	0.0050	mg/kg	8260B	04/19/14	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	04/19/14	5
Naphthalene	BDL	0.025	mg/kg	8260B	04/19/14	5
Toluene	BDL	0.025	mg/kg	8260B	04/19/14	5
Xylenes, Total	BDL	0.015	mg/kg	8260B	04/19/14	5
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	04/19/14	5
Dibromofluoromethane	109.		% Rec.	8260B	04/19/14	5
a,a,a-Trifluorotoluene	109.		% Rec.	8260B	04/19/14	5
4-Bromofluorobenzene	114.		% Rec.	8260B	04/19/14	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	04/13/14	1
Surrogate recovery(%)						
o-Terphenyl	95.2		% Rec.	3546/DRO	04/13/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 04/21/14 14:21 Printed: 04/21/14 14:22



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REPORT OF ANALYSIS

Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

April 21, 2014

Date Received : April 10, 2014
Description : Former FRI 2-18 Tank Battery
Sample ID : SB42-48FT
Collected By : Eric Siegel
Collection Date : 04/09/14 15:15

ESC Sample # : L692903-02

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
TPH (GC/MS) Low Fraction	BDL	2.5	mg/kg	8260B	04/19/14	5
Benzene	BDL	0.0050	mg/kg	8260B	04/19/14	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	04/19/14	5
Naphthalene	BDL	0.025	mg/kg	8260B	04/19/14	5
Toluene	BDL	0.025	mg/kg	8260B	04/19/14	5
Xylenes, Total	BDL	0.015	mg/kg	8260B	04/19/14	5
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	04/19/14	5
Dibromofluoromethane	102.		% Rec.	8260B	04/19/14	5
a,a,a-Trifluorotoluene	106.		% Rec.	8260B	04/19/14	5
4-Bromofluorobenzene	103.		% Rec.	8260B	04/19/14	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	04/11/14	1
Surrogate recovery(%)						
o-Terphenyl	84.9		% Rec.	3546/DRO	04/11/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 04/21/14 14:21 Printed: 04/21/14 14:22

Summary of Remarks For Samples Printed
04/21/14 at 14:22:20

TSR Signing Reports: 358
R3 - Rush: Two Day

BTEX/GRO/Naphthalene (EPA 8260B) = V8260TPKS

Sample: L692903-01 Account: TASGEOACO Received: 04/10/14 09:45 Due Date: 04/21/14 00:00 RPT Date: 04/21/14 14:21
uni 756558 dor 4/18/14.

Sample: L692903-02 Account: TASGEOACO Received: 04/10/14 09:45 Due Date: 04/21/14 00:00 RPT Date: 04/21/14 14:21



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Tasman Geosciences- Arvada, CO
Dan Wade
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L692903

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Mt. Juliet, TN 37122
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April 21, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) High Fraction	< 4	mg/kg			WG715490	04/11/14 20:49
o-Terphenyl		% Rec.	102.0	50-150	WG715490	04/11/14 20:49
TPH (GC/FID) High Fraction	< 4	mg/kg			WG715730	04/13/14 11:12
o-Terphenyl		% Rec.	96.20	50-150	WG715730	04/13/14 11:12
Benzene	< .001	mg/kg			WG716791	04/19/14 06:50
Ethylbenzene	< .001	mg/kg			WG716791	04/19/14 06:50
Naphthalene	< .005	mg/kg			WG716791	04/19/14 06:50
Toluene	< .005	mg/kg			WG716791	04/19/14 06:50
TPH (GC/MS) Low Fraction	< .5	mg/kg			WG716791	04/19/14 06:50
Xylenes, Total	< .003	mg/kg			WG716791	04/19/14 06:50
4-Bromofluorobenzene		% Rec.	107.0	71-126	WG716791	04/19/14 06:50
Dibromofluoromethane		% Rec.	108.0	78.3-121	WG716791	04/19/14 06:50
Toluene-d8		% Rec.	101.0	88.5-111	WG716791	04/19/14 06:50
a,a,a-Trifluorotoluene		% Rec.	108.0	85-114	WG716791	04/19/14 06:50

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) High Fraction	mg/kg	60	54.5	90.8	50-150	WG715490
o-Terphenyl				97.00	50-150	WG715490
TPH (GC/FID) High Fraction	mg/kg	60	54.1	90.2	50-150	WG715730
o-Terphenyl				95.60	50-150	WG715730
TPH (GC/MS) Low Fraction	mg/kg	5	6.40	128.	63.4-135	WG716791
4-Bromofluorobenzene				86.20	71-126	WG716791
Dibromofluoromethane				103.0	78.3-121	WG716791
Toluene-d8				101.0	88.5-111	WG716791
a,a,a-Trifluorotoluene				108.0	85-114	WG716791
Benzene	mg/kg	.025	0.0258	103.	77.1-121	WG716791
Ethylbenzene	mg/kg	.025	0.0233	93.3	79.7-122	WG716791
Naphthalene	mg/kg	.025	0.0229	91.5	69.8-128	WG716791
Toluene	mg/kg	.025	0.0249	99.6	79.7-118	WG716791
Xylenes, Total	mg/kg	.075	0.0694	92.5	78.8-121	WG716791
4-Bromofluorobenzene				102.0	71-126	WG716791
Dibromofluoromethane				106.0	78.3-121	WG716791
Toluene-d8				104.0	88.5-111	WG716791
a,a,a-Trifluorotoluene				112.0	85-114	WG716791

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) High Fraction	mg/kg	57.5	54.5	96.0	50-150	5.39	20	WG715490
o-Terphenyl				105.0	50-150			WG715490
TPH (GC/FID) High Fraction	mg/kg	52.7	54.1	88.0	50-150	2.75	20	WG715730
o-Terphenyl				99.20	50-150			WG715730
TPH (GC/MS) Low Fraction	mg/kg	6.08	6.40	122.	63.4-135	5.00	20	WG716791
4-Bromofluorobenzene				104.0	71-126			WG716791
Dibromofluoromethane				104.0	78.3-121			WG716791

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Dan Wade
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April 21, 2014

Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Toluene-d8				92.20	88.5-111			
a,a,a-Trifluorotoluene				106.0	85-114			
Benzene	mg/kg	0.0268	0.0258	107.	77.1-121	3.87	20	WG716791
Ethylbenzene	mg/kg	0.0238	0.0233	95.0	79.7-122	2.15	20	WG716791
Naphthalene	mg/kg	0.0231	0.0229	92.0	69.8-128	1.11	20	WG716791
Toluene	mg/kg	0.0253	0.0249	101.	79.7-118	1.66	20	WG716791
Xylenes, Total	mg/kg	0.0712	0.0694	95.0	78.8-121	2.66	20	WG716791
4-Bromofluorobenzene				102.0	71-126			WG716791
Dibromofluoromethane				107.0	78.3-121			WG716791
Toluene-d8				104.0	88.5-111			WG716791
a,a,a-Trifluorotoluene				111.0	85-114			WG716791

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) High Fraction	mg/kg	46.3	20.3	60	43.0*	50-150	L692930-04	WG715490
o-Terphenyl					75.20	50-150		WG715490
TPH (GC/FID) High Fraction	mg/kg	48.4	3.31	60	75.0	50-150	L693256-01	WG715730
o-Terphenyl					96.70	50-150		WG715730
Benzene	mg/kg	0.0204	0.0	.025	82.0	54.3-133	L693975-01	WG716791
Ethylbenzene	mg/kg	0.0189	0.0	.025	76.0	61.4-133	L693975-01	WG716791
Naphthalene	mg/kg	0.0152	0.0	.025	61.0	58-135	L693975-01	WG716791
Toluene	mg/kg	0.0195	0.0	.025	78.0	61.4-130	L693975-01	WG716791
Xylenes, Total	mg/kg	0.0541	0.0	.075	72.0	63.3-131	L693975-01	WG716791
4-Bromofluorobenzene					102.0	71-126		WG716791
Dibromofluoromethane					113.0	78.3-121		WG716791
Toluene-d8					103.0	88.5-111		WG716791
a,a,a-Trifluorotoluene					107.0	85-114		WG716791
TPH (GC/MS) Low Fraction	mg/kg	4.65	0.0	5	93.0	64-142	L693975-01	WG716791
4-Bromofluorobenzene					93.60	71-126		WG716791
Dibromofluoromethane					111.0	78.3-121		WG716791
Toluene-d8					92.50	88.5-111		WG716791
a,a,a-Trifluorotoluene					93.30	85-114		WG716791

Analyte	Units	Matrix Spike Duplicate				Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec						
TPH (GC/FID) High Fraction	mg/kg	45.9	46.3	42.7*		50-150	0.920	20	L692930-04	WG715490
o-Terphenyl				88.10		50-150				WG715490
TPH (GC/FID) High Fraction	mg/kg	47.6	48.4	73.8		50-150	1.67	20	L693256-01	WG715730
o-Terphenyl				104.0		50-150				WG715730
Benzene	mg/kg	0.0202	0.0204	81.0		54.3-133	0.690	20	L693975-01	WG716791
Ethylbenzene	mg/kg	0.0179	0.0189	71.7		61.4-133	5.45	20	L693975-01	WG716791
Naphthalene	mg/kg	0.0162	0.0152	65.0		58-135	6.73	25.5	L693975-01	WG716791
Toluene	mg/kg	0.0194	0.0195	77.7		61.4-130	0.130	20	L693975-01	WG716791
Xylenes, Total	mg/kg	0.0529	0.0541	70.5		63.3-131	2.35	20	L693975-01	WG716791
4-Bromofluorobenzene				101.0		71-126				WG716791
Dibromofluoromethane				111.0		78.3-121				WG716791
Toluene-d8				104.0		88.5-111				WG716791
a,a,a-Trifluorotoluene				107.0		85-114				WG716791
TPH (GC/MS) Low Fraction	mg/kg	4.49	4.65	89.8		64-142	3.50	20	L693975-01	WG716791

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Dan Wade
6899 Pecos Street, Unit C
Denver, CO 80221

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L692903

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Mt. Juliet, TN 37122
(615) 758-5858
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April 21, 2014

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
4-Bromofluorobenzene				101.0	71-126					
Dibromofluoromethane				120.0	78.3-121					
Toluene-d8				102.0	88.5-111					
a,a,a-Trifluorotoluene				105.0	85-114					

Batch number /Run number / Sample number cross reference

WG715774: R2904025: L692903-01 02
WG715490: R2904029: L692903-02
WG715649: R2904041: L692903-01 02
WG715730: R2904251 R2904574: L692903-01
WG716791: R2906525: L692903-01 02

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Denver, CO 80221

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Level II

L692903

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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Company Name/Address:

Billing Information:

Tasman Geosciences**Tasman Geosciences****Attn: Daniel Wade****8699 Pecos Street, Unit C****Denver, CO 80221****6899 Pecos Street, Unit C**
Denver, CO 80221

Report to:

Email To:

Daniel Wade**dwade@tasman-geo.com**

Project

Description: **Former FRI 2-18 Tank Battery**

City/State

Collected: **Thornton, CO**Phone: **303-912-2625**

Client Project #

FRI 2-18

Lab Project #

Fax: **NA**

Collected by (print):

Eric Siegel

Site/Facility ID #

FRI 2-18

P.O. #

Collected by (signature):

*Eric A. Siegel***Rush? (Lab MUST Be Notified)**☒ Same Day 200%☒ Next Day 100%☒ Two Day 50%☐ Three Day 25%

Date Results Needed

Email? ☐ No ☒ YesFAX? ☒ No ☐ YesNo.
of
Cntrs

Sample ID

Comp/Grab

Matrix *

Depth

Date

Time

No.
of
Cntrs

BTEX / GRO / Naphthalene (EPA 8260B)

DRO (EPA 8015)

BTEX (EPA 8260B)

BTEX / GRO (EPA TO-15)

Chain of Custody

Page 1 of 1



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Phone: 800-767-5859
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Acctnum:

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Rem./Contaminant

Sample # (lab only)

-01

-02

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other _____

Remarks:

Relinquished by: (Signature)

Date:

4/9/14

Time:

15:30

Received by: (Signature)

pH _____ Temp _____

Flow _____ Other _____

Hold #

Samples returned via: ☐ UPS☒ FedEx ☒ Courier ☐ _____Condition: (lab use only) **m3**

Temp: _____ °C Bottles Received:

3.3**4**COC Seal Intact: ☐ Y ☐ N ☐ NA

pH Checked:

NCF:

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date:

Time:

4/10/14 0945



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Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

Report Summary

Monday April 21, 2014

Report Number: L694627

Samples Received: 04/19/14

Client Project: FRI 2-18

Description: Former FRI 2-18 Tank Battery

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

April 21, 2014

Date Received : April 19, 2014
Description : Former FRI 2-18 Tank Battery
Sample ID : SB39
Collected By : Eric Siegel
Collection Date : 04/18/14 15:00

ESC Sample # : L694627-01

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	1870000	10000	ug/l	2540B	04/20/14	1
Benzene	BDL	1.0	ug/l	8260B	04/21/14	1
Toluene	BDL	5.0	ug/l	8260B	04/21/14	1
Ethylbenzene	BDL	1.0	ug/l	8260B	04/21/14	1
Total Xylenes	BDL	3.0	ug/l	8260B	04/21/14	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	04/21/14	1
Dibromofluoromethane	95.3		% Rec.	8260B	04/21/14	1
a,a,a-Trifluorotoluene	101.		% Rec.	8260B	04/21/14	1
4-Bromofluorobenzene	92.0		% Rec.	8260B	04/21/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
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April 21, 2014

Date Received : April 19, 2014
Description : Former FRI 2-18 Tank Battery
Sample ID : SB40
Collected By : Eric Siegel
Collection Date : 04/18/14 15:25

ESC Sample # : L694627-02

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Suspended Solids	970000	2500	ug/l	2540 D-201	04/20/14	1
Total Solids	3790000	10000	ug/l	2540B	04/20/14	1
Benzene	BDL	1.0	ug/l	8260B	04/21/14	1
Toluene	BDL	5.0	ug/l	8260B	04/21/14	1
Ethylbenzene	BDL	1.0	ug/l	8260B	04/21/14	1
Total Xylenes	BDL	3.0	ug/l	8260B	04/21/14	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	04/21/14	1
Dibromofluoromethane	91.7		% Rec.	8260B	04/21/14	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	04/21/14	1
4-Bromofluorobenzene	94.2		% Rec.	8260B	04/21/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

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6899 Pecos Street, Unit C
Denver, CO 80221

April 21, 2014

Date Received : April 19, 2014
Description : Former FRI 2-18 Tank Battery
Sample ID : SB41
Collected By : Eric Siegel
Collection Date : 04/18/14 15:35

ESC Sample # : L694627-03

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Suspended Solids	100000	2500	ug/l	2540 D-201	04/20/14	1
Total Solids	1310000	10000	ug/l	2540B	04/20/14	1
Benzene	BDL	1.0	ug/l	8260B	04/21/14	1
Toluene	BDL	5.0	ug/l	8260B	04/21/14	1
Ethylbenzene	BDL	1.0	ug/l	8260B	04/21/14	1
Total Xylenes	BDL	3.0	ug/l	8260B	04/21/14	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	04/21/14	1
Dibromofluoromethane	90.9		% Rec.	8260B	04/21/14	1
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	04/21/14	1
4-Bromofluorobenzene	93.9		% Rec.	8260B	04/21/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

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April 21, 2014

Date Received : April 19, 2014
Description : Former FRI 2-18 Tank Battery
Sample ID : SB42
Collected By : Eric Siegel
Collection Date : 04/18/14 15:50

ESC Sample # : L694627-04

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Suspended Solids	36000	2500	ug/l	2540 D-201	04/20/14	1
Total Solids	1770000	10000	ug/l	2540B	04/20/14	1
Benzene	BDL	1.0	ug/l	8260B	04/21/14	1
Toluene	BDL	5.0	ug/l	8260B	04/21/14	1
Ethylbenzene	BDL	1.0	ug/l	8260B	04/21/14	1
Total Xylenes	BDL	3.0	ug/l	8260B	04/21/14	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	04/21/14	1
Dibromofluoromethane	91.5		% Rec.	8260B	04/21/14	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	04/21/14	1
4-Bromofluorobenzene	90.7		% Rec.	8260B	04/21/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 04/21/14 16:45 Printed: 04/21/14 16:45



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

Dan Wade
Tasman Geosciences- Arvada, CO
6899 Pecos Street, Unit C
Denver, CO 80221

April 21, 2014

Date Received : April 19, 2014
Description : Former FRI 2-18 Tank Battery
Sample ID : TB-01
Collected By : Eric Siegel
Collection Date : 04/18/14 12:00

ESC Sample # : L694627-05

Site ID : FRI 2-18

Project # : FRI 2-18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	1.0	ug/l	8260B	04/20/14	1
Toluene	BDL	5.0	ug/l	8260B	04/20/14	1
Ethylbenzene	BDL	1.0	ug/l	8260B	04/20/14	1
Total Xylenes	BDL	3.0	ug/l	8260B	04/20/14	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	04/20/14	1
Dibromofluoromethane	93.8		% Rec.	8260B	04/20/14	1
a,a,a-Trifluorotoluene	105.		% Rec.	8260B	04/20/14	1
4-Bromofluorobenzene	91.4		% Rec.	8260B	04/20/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 04/21/14 16:45 Printed: 04/21/14 16:45

Summary of Remarks For Samples Printed
04/21/14 at 16:45:53

TSR Signing Reports: 358
R1 - Rush: Sameday

BTEX/GRO/Naphthalene (EPA 8260B) = V8260TPKS

Sample: L694627-01 Account: TASGEOACO Received: 04/19/14 09:45 Due Date: 04/21/14 00:00 RPT Date: 04/21/14 16:45

Sample: L694627-02 Account: TASGEOACO Received: 04/19/14 09:45 Due Date: 04/21/14 00:00 RPT Date: 04/21/14 16:45
limited sample volume for TSS

Sample: L694627-03 Account: TASGEOACO Received: 04/19/14 09:45 Due Date: 04/21/14 00:00 RPT Date: 04/21/14 16:45
limited sample volume for TSS

Sample: L694627-04 Account: TASGEOACO Received: 04/19/14 09:45 Due Date: 04/21/14 00:00 RPT Date: 04/21/14 16:45
limited sample volume for TSS

Sample: L694627-05 Account: TASGEOACO Received: 04/19/14 09:45 Due Date: 04/21/14 00:00 RPT Date: 04/21/14 16:45



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Dan Wade
6899 Pecos Street, Unit C

Denver, CO 80221

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Level II

L694627

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Mt. Juliet, TN 37122
(615) 758-5858
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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Suspended Solids	< 2.5	mg/l			WG716914	04/20/14 11:57
Total Solids	< 10	mg/l			WG716923	04/20/14 13:07
Benzene	< .001	mg/l			WG716933	04/20/14 12:09
Ethylbenzene	< .001	mg/l			WG716933	04/20/14 12:09
Toluene	< .005	mg/l			WG716933	04/20/14 12:09
Total Xylenes	< .003	mg/l			WG716933	04/20/14 12:09
4-Bromofluorobenzene		% Rec.	90.10	71-126	WG716933	04/20/14 12:09
Dibromofluoromethane		% Rec.	92.90	78.3-121	WG716933	04/20/14 12:09
Toluene-d8		% Rec.	102.0	88.5-111	WG716933	04/20/14 12:09
a,a,a-Trifluorotoluene		% Rec.	102.0	85-114	WG716933	04/20/14 12:09
Benzene	< .001	mg/l			WG717006	04/21/14 11:49
Ethylbenzene	< .001	mg/l			WG717006	04/21/14 11:49
Toluene	< .005	mg/l			WG717006	04/21/14 11:49
Total Xylenes	< .003	mg/l			WG717006	04/21/14 11:49
4-Bromofluorobenzene		% Rec.	93.50	71-126	WG717006	04/21/14 11:49
Dibromofluoromethane		% Rec.	91.30	78.3-121	WG717006	04/21/14 11:49
Toluene-d8		% Rec.	104.0	88.5-111	WG717006	04/21/14 11:49
a,a,a-Trifluorotoluene		% Rec.	102.0	85-114	WG717006	04/21/14 11:49

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Suspended Solids	mg/l	63.2	63.6	0.631	5	L694326-01	WG716914
Suspended Solids	mg/l	34.0	34.4	1.17	5	L694369-01	WG716914
Total Solids	mg/l	1290	1230	4.28	5	L694074-01	WG716923
Total Solids	mg/l	1340	1310	2.42	5	L694627-03	WG716923

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Suspended Solids	mg/l	773	876.	113.	85-115	WG716914
Total Solids	mg/l	9505	9380	98.7	85-115	WG716923
Benzene	mg/l	.025	0.0238	95.1	74.8-121	WG716933
Ethylbenzene	mg/l	.025	0.0252	101.	78.8-122	WG716933
Toluene	mg/l	.025	0.0241	96.2	79.7-116	WG716933
Total Xylenes	mg/l	.075	0.0741	98.8	78.7-121	WG716933
4-Bromofluorobenzene				93.50	71-126	WG716933
Dibromofluoromethane				92.50	78.3-121	WG716933
Toluene-d8				101.0	88.5-111	WG716933
a,a,a-Trifluorotoluene				99.40	85-114	WG716933
Benzene	mg/l	.025	0.0236	94.3	74.8-121	WG717006
Ethylbenzene	mg/l	.025	0.0257	103.	78.8-122	WG717006
Toluene	mg/l	.025	0.0244	97.7	79.7-116	WG717006
Total Xylenes	mg/l	.075	0.0770	103.	78.7-121	WG717006
4-Bromofluorobenzene				92.30	71-126	WG717006

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Dan Wade
6899 Pecos Street, Unit C

Denver, CO 80221

Quality Assurance Report
Level II

L694627

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
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Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Dibromofluoromethane					90.00		78.3-121	
Toluene-d8					101.0		88.5-111	
a,a,a-Trifluorotoluene					100.0		85-114	

Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Suspended Solids	mg/l	856.	876.	111.	85-115	2.31	5	WG716914
Total Solids	mg/l	9490	9380	100.	85-115	1.18	5	WG716923
Benzene	mg/l	0.0243	0.0238	97.0	74.8-121	1.95	20	WG716933
Ethylbenzene	mg/l	0.0254	0.0252	102.	78.8-122	0.920	20	WG716933
Toluene	mg/l	0.0247	0.0241	99.0	79.7-116	2.84	20	WG716933
Total Xylenes	mg/l	0.0751	0.0741	100.	78.7-121	1.39	20	WG716933
4-Bromofluorobenzene				90.30	71-126			WG716933
Dibromofluoromethane				93.20	78.3-121			WG716933
Toluene-d8				102.0	88.5-111			WG716933
a,a,a-Trifluorotoluene				101.0	85-114			WG716933
Benzene	mg/l	0.0235	0.0236	94.0	74.8-121	0.290	20	WG717006
Ethylbenzene	mg/l	0.0259	0.0257	104.	78.8-122	0.870	20	WG717006
Toluene	mg/l	0.0244	0.0244	97.0	79.7-116	0.240	20	WG717006
Total Xylenes	mg/l	0.0765	0.0770	102.	78.7-121	0.710	20	WG717006
4-Bromofluorobenzene				93.30	71-126			WG717006
Dibromofluoromethane				91.50	78.3-121			WG717006
Toluene-d8				102.0	88.5-111			WG717006
a,a,a-Trifluorotoluene				102.0	85-114			WG717006

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Benzene	mg/l	0.0226	0.0	.025	91.0	54.3-133	L693987-01	WG716933
Ethylbenzene	mg/l	0.0310	0.000417	.025	120.	61.4-133	L693987-01	WG716933
Toluene	mg/l	0.0236	0.0	.025	94.0	61.4-130	L693987-01	WG716933
Total Xylenes	mg/l	0.123	0.00326	.075	160.*	63.3-131	L693987-01	WG716933
4-Bromofluorobenzene					97.30	71-126		WG716933
Dibromofluoromethane					94.20	78.3-121		WG716933
Toluene-d8					101.0	88.5-111		WG716933
a,a,a-Trifluorotoluene					101.0	85-114		WG716933
Benzene	mg/l	0.0216	0.0	.025	86.0	54.3-133	L694627-01	WG717006
Ethylbenzene	mg/l	0.0221	0.0	.025	89.0	61.4-133	L694627-01	WG717006
Toluene	mg/l	0.0221	0.0	.025	88.0	61.4-130	L694627-01	WG717006
Total Xylenes	mg/l	0.0656	0.0	.075	87.0	63.3-131	L694627-01	WG717006
4-Bromofluorobenzene					91.40	71-126		WG717006
Dibromofluoromethane					93.60	78.3-121		WG717006
Toluene-d8					101.0	88.5-111		WG717006
a,a,a-Trifluorotoluene					101.0	85-114		WG717006

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
Benzene	mg/l	0.0208	0.0226	83.2	54.3-133	8.52	20	L693987-01	WG716933
Ethylbenzene	mg/l	0.0317	0.0310	125.	61.4-133	2.24	20	L693987-01	WG716933

* Performance of this Analyte is outside of established criteria.

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Toluene	mg/l	0.0227	0.0236	90.7	61.4-130	4.06	20	L693987-01	WG716933
Total Xylenes	mg/l	0.135	0.123	176.*	63.3-131	9.52	20	L693987-01	WG716933
4-Bromofluorobenzene				94.60	71-126				WG716933
Dibromofluoromethane				94.60	78.3-121				WG716933
Toluene-d8				102.0	88.5-111				WG716933
a,a,a-Trifluorotoluene				101.0	85-114				WG716933
Benzene	mg/l	0.0191	0.0216	76.4	54.3-133	12.3	20	L694627-01	WG717006
Ethylbenzene	mg/l	0.0196	0.0221	78.4	61.4-133	12.2	20	L694627-01	WG717006
Toluene	mg/l	0.0195	0.0221	78.1	61.4-130	12.2	20	L694627-01	WG717006
Total Xylenes	mg/l	0.0573	0.0656	76.4	63.3-131	13.4	20	L694627-01	WG717006
4-Bromofluorobenzene				92.40	71-126				WG717006
Dibromofluoromethane				93.50	78.3-121				WG717006
Toluene-d8				102.0	88.5-111				WG717006
a,a,a-Trifluorotoluene				101.0	85-114				WG717006

Batch number /Run number / Sample number cross reference

WG716914: R2906405: L694627-02 03 04
WG716923: R2906421: L694627-01 02 03 04
WG716933: R2906481: L694627-05
WG717006: R2906857: L694627-01 02 03 04

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

