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## **Groundwater Assessment Report Nelson C-1**

August 11, 2016

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### **Prepared For:**

Whiting Petroleum Corporation

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## 1 Introduction

Talon/LPE (Talon) was contracted by Whiting Petroleum Corporation (Whiting) to conduct site investigation assessment activities associated with a flowline release identified at the Nelson C1 site (Site) in Weld County, Colorado. The site is located at the northwest quarter of the southeast quarter of Section 18, Township 10 North, Range 58 West, 6th Principal Meridian at 40°50'10.72"N and 103°54'17.73"W (Attachment 1). The site is identified by the State of Colorado Oil and Gas Conservation Commission (COGCC) as Spill/Release Point Facility ID 441208. The Site Plan is shown on Figure 1, and the general site location is shown on Figure 7.

## 2 Objective

The primary objective of this document is to provide an assessment of site investigation activities including the installation of monitoring wells, and groundwater monitoring. The site investigation activities were performed to determine the nature and extent of soil and/or groundwater impacts resulting from a flowline release. The release was discovered and reported on COGCC Form 19 on March 30, 2015. Assessment and remediation activities are being conducted as part of COGCC Form 27 Number 9146.

## 3 Regulatory Framework

The COGCC has regulatory jurisdiction over oil and natural gas industry operations in the State of Colorado. Section 900 of the COGCC Rules is for Exploration and Production Waste Management. More specifically, Section 910 details the Concentrations and Sampling for Soil and Groundwater rules. The regulatory limits for specific analytes in soil and groundwater are detailed in Table 910-1 and are summarized below.

Compound	COGCC Table 910-1 Soil Concentrations	COGCC Table 910-1 Groundwater Concentrations
Benzene	0.17 mg/kg	0.005 mg/L
Toluene	85 mg/kg	1.0 mg/L
Ethylbenzene	100 mg/kg	0.7 mg/L
Xylenes (total)	175 mg/kg	10 mg/L
Naphthalene	23 mg/kg	Not Applicable
TPH (total volatile and extractable petroleum hydrocarbons)	500 mg/kg	Not Applicable

## 4 Site Characteristics

### 4.1 Geography

The site is located in the Pawnee Grasslands in Weld County, which is the northeastern part of Colorado. The Grasslands are part of the Colorado Eastern Plains and are relatively flat with the exception of the Pawnee Creek which drains into the South Platte River.

### 4.2 Geologic Summary

Surficial geology surrounding the area consists of Tertiary age fluvial deposits of the lower

Ogallala Formation. More specifically, these deposits are Miocene in age and are composed of gray to brown and semi-consolidated, ashy sands and silt beds with volcanic ash beds. Deposited material hardened into sandstone and siltstone which are grouped into three formations: White River, Arikaree, and Ogallala.

### **4.3 Groundwater**

According to the Colorado Division of Water Resources Website, there are no water wells within 1,000-foot radius of the Site.

Depth to groundwater levels, as measured on June 20, 2016, in the 20 groundwater monitoring wells range from 26.40 to 43.14 feet below top of casing (Table 4), which are above-ground by approximately three (3) feet (ft). Several wells had measurable amounts of phase-separated hydrocarbons (PSH) during this monitoring event.

## **5 Site Investigation Activities**

### **5.1 Previous Field Activities**

On March 20, 2015, COGCC Form 19 was submitted which describes a condensate leak which was found on a flowline leading to a treater due to a loose union. The union was replaced to mitigate the leak. The Form 19 outlines a remedial action plan of excavating impacted soils and placing them on a liner for on-site remediation via soil shredding.

On March 30, 2015, a Supplemental Form 19 was submitted which reports that excavation activities indicated that soil was impacted and the extent of impacts needed to be delineated.

In September through October 2015, Talon performed a subsurface site assessment to define the extent of soil impacts associated with this release, which included the installation of four groundwater monitoring wells. The results of this assessment indicated soil impacts in monitoring wells MW-1 and MW-2 (Figure 2a) and groundwater impacts to the east and northeast of the tank battery area. Following this assessment, Talon recommended installing four additional monitoring wells to further delineate the horizontal and vertical extent of soil and groundwater impacts.

### **5.2 Monitoring Well Installation - February 2016**

On February 11 and 12, 2016, Talon personnel oversaw Drilling Engineers advance four monitoring wells (MW-5 through MW-8). Monitoring well MW-6 was drilled to approximately 45 feet below ground surface (bgs) and the remaining wells were drilled to approximately 40 feet bgs. The depths of the monitoring wells were determined in the field based on observed lithology, hydrocarbon odors, and PID values; the goal was to drill until no further odors or elevated PIDs were observed and a confining lithologic layer was observed. Boring logs detailing observed lithology, and PID values are included in Attachment 3.

Four to seven soil samples were collected from each of the borings during drilling efforts from depths ranging from 10-15 ft bgs to 43-45 ft bgs. Sample locations were determined based on elevated PID values. Additionally, soil samples were collected from the bottom of each boring and above the assumed groundwater interface to provide additional vertical delineation of any



impacts. The collected soil samples were submitted to Summit Scientific (Summit) in Golden, Colorado for analysis of benzene, toluene, ethylbenzene, and xylene (BTEX), gasoline range organics (GRO), and naphthalene via method SW8260B and diesel range organics (DRO) via method SW8015. The remaining soils were stockpiled on-site on a plastic liner pending laboratory analytical results.

All four monitoring wells were constructed using 4-inch diameter Schedule 40 PVC casing and 10-slot screen. Each well was completed with 10/20 silica sand pack to two (2) ft above the top of the screen interval, sealed with bentonite chips to near-surface, and included an above-ground well mount in a concrete pad. Well completion details are included in Attachment 3.

All four monitoring wells were developed on February 16, 2016, by purging all water in wells MW-5 through MW-8 until the monitoring wells became dry. Three casing volumes were purged from monitoring wells MW-1 through MW-4 as part of routine groundwater monitoring. On February 17, 2016, Talon personnel collected groundwater samples from MW-1, MW-2, MW-4, and MW-8. The collected groundwater samples were submitted to Summit Scientific (Summit) laboratory in Golden, Colorado for analysis of BTEX via method SW8260. The remaining wells were not sampled due to the presence of PSH greater than 0.1 inches thick. Depth to water and depth to PSH values are summarized in Table 4. Purge water generated during development and sampling was placed in 55-gallon drums within the tank battery berm for secondary containment pending off-site disposal.

### **5.2.1 Discussion of Results**

Table 2 in Attachment 2 summarizes the soil sample laboratory analytical results, and Table 3 summarizes the groundwater laboratory analytical results. Table 1 summarizes the well completion and survey information, and Table 4 includes well gauging data. A copy of the laboratory reports and chain of custody documentation is included in Attachment 4.

The soil analytical result for TPH as GRO and DRO in monitoring well MW-6 at 30-35 ft bgs (1,200 mg/kg) is above the COGCC Table 910-1 concentration level. All remaining soil analytical results were below COGCC Table 910-1 concentration levels or laboratory detection limits (Figure 2b).

The analytical results of the groundwater samples were above COGCC Table 910-1 concentration levels for benzene, toluene, and ethylbenzene in all four sampled monitoring wells (Table 3). Groundwater analytical results for benzene ranged from 12 mg/L in MW-8 to 16 mg/L in MW-2. Analytical results for toluene ranged from 13 mg/L in MW-1 and MW-8 to 15 mg/L in MW-4. Analytical results for ethylbenzene ranged from 0.91 mg/L in MW-4 to 1.4 mg/L in MW-2. Analytical results for total xylenes were below COGCC Table 910-1 concentration levels in MW-1, MW-2, MW-4, and MW-8.

### **5.3 Monitoring Well Installation - March 2016**

Monitoring well installation activities performed in February 2016 determined that the horizontal extent of impacts had not yet been fully delineated. Therefore, additional monitoring wells were installed.

On March 7 through March 16, 2016, Talon personnel oversaw Drilling Engineers as they advanced 12 monitoring wells (MW-9 through MW-20). Well locations were determined by drilling five wells approximately 200 feet away from the existing wells; then, based on observations of these borings, determining locations for the remaining seven wells.

The monitoring wells were drilled to 35-45 feet bgs. The depths of the monitoring wells were determined in the field based on observed lithology and PID values. Boring logs detailing observed lithology, and PID values are included in Attachment 3.

Soil samples were collected from each of the borings during drilling efforts based on elevated PID values. Additionally, soil samples were collected from the bottom of each boring and above the assumed groundwater interface to provide additional vertical delineation of any impacts. The collected soil samples were submitted to Summit in Golden, Colorado for analysis of BTEX, GRO, and naphthalene via method SW8260B and DRO via method SW8015. A copy of the laboratory reports and chain of custody documentation is included in Attachment 4.

All twelve monitoring wells were constructed using 4-inch diameter Schedule 40 PVC casing and 10-slot screen. Each well was completed with 10/20 silica sand pack to 2 feet above the top of the screen interval, sealed with bentonite chips to near-surface, and included an above-ground well mount in a concrete pad. Well completion details are included in Attachment 3. The drill cuttings were stockpiled on-site on a plastic liner pending laboratory analytical results.

The 12 monitoring wells were gauged for depth to water and depth to PSH on March 21, 2016 (Table 4). The wells were then developed on March 21, 2016, by purging all water until the monitoring wells became dry. Monitoring wells MW-10, MW-12, and MW-19 were not purged because they were dry. On March 22, 2016, Talon personnel gauged all 20 on-site wells (Table 4). Groundwater samples were collected from MW-9, MW-11, MW-13 through MW-16 and MW-18. Monitoring wells MW-10, MW-12, and MW-19 remained dry and were not sampled. Monitoring wells MW-17 and MW-20 were not sampled due to the presence of PSH greater than 0.1 inches thick. The collected groundwater samples were submitted to Summit for analysis of BTEX via method SW8260. Purge water generated during development and sampling was placed in 55-gallon drums within the tank battery berm for secondary containment pending off-site disposal.

### **5.3.1 Discussion of Results**

All laboratory analytical results for soil samples collected from monitoring wells MW-9 through MW-20 were below COGCC Table 910-1 concentration levels or laboratory detection limits (Table 2, Figure 2b).

Groundwater laboratory analytical results (Table 3) for benzene were above COGCC Table 910-1 concentrations in monitoring wells MW-14 (2.5 mg/L), MW-15 (4.3 mg/L), MW-16 (14 mg/L), and MW-18 (0.084 mg/L). Analytical results for toluene were above COGCC Table 910-1 concentrations in monitoring wells MW-14 (2.3 mg/L), MW-15 (6.4 mg/L), and MW-16 (16 mg/L). All remaining analytical results from the sampled wells were below COGCC Table 910-1 concentration levels or laboratory detection limits. A copy of the laboratory reports and chain of custody documentation is included in Attachment 4.

Talon gauging data from March 22, 2016, reveals the presence PSH in monitoring wells MW-3, MW-5, MW-6, MW-7, MW-16, MW-17, and MW-20 ranging from 0.02 ft to 5.98 ft.

### 5.3.2 Site Lithology

General lithology observed at the site during well installation activities consists of a top layer of very fine silty clay which is typically underlain by a gravelly sand layer. Beneath the gravelly sand is a sandy silt layer which varies in thickness across the site from a few feet thick to more than 30 feet thick. This layer ranges from slightly compact to very hard and cemented (siltstone) throughout the site and tends to change color from a yellowish brown to an olive gray with depth in the stratigraphic column. Generally, the photoionization detector (PID) readings are the highest in this olive gray sandy silt to siltstone layer. The sandy silt to siltstone layer is underlain by a very dense siltstone or clay layer which acts as a confining layer prohibiting downward migration of any fluids at the site. Figures 8 through 11 show cross sections detailing observed PID values and inferred lithologic layers across the Site.

## 6 Groundwater Monitoring

### 6.1 Groundwater Sampling

The 20 monitoring wells were gauged for depth to water and depth to PSH on June 20, 2016 (Table 4). Wells with less than 0.1 inches of PSH were purged until the wells became dry. On June 21, 2016, Talon personnel collected groundwater samples from these wells. Monitoring wells MW3, MW-5, MW-6, MW-7, MW-17, and MW-20 were not sampled due to the presence of PSH. Figure 6a shows groundwater elevation contours and the hydraulic gradient based on wells with no measurable PSH. This hydraulic gradient has been calculated to be approximately 0.016 ft/foot to the northeast between monitoring wells MW-8 and MW-11. Figure 6b shows groundwater elevation contours and the hydraulic gradient based on potentiometric surface elevations, which have been corrected to account for the presence of PSH. This hydraulic gradient has been calculated to be approximately 0.021 ft/foot to the northeast between monitoring wells MW-8 and MW-18.

The collected groundwater samples were submitted to Summit for analysis of BTEX via method SW8260. Purge water generated during development and sampling was placed in 55-gallon drums within the tank battery berm for secondary containment pending off-site disposal.

Table 1 in Attachment 2 summarizes the well completion and survey information. Groundwater analytical results are summarized in Table 3 and shown on Figure 3.

Groundwater laboratory analytical results for benzene were above COGCC Table 910- concentrations in monitoring wells MW-1 (17 mg/L), MW-2 (18 mg/L), MW-4 (12 mg/L), MW-8 (17 mg/L), MW-14 (2.4 mg/L), MW-15 (6.5 mg/L), MW-16 (16 mg/L), and MW-18 (0.23 mg/L). Analytical results for toluene were above COGCC Table 910-1 concentrations in monitoring wells MW-1 (16 mg/L), MW-2 (16 mg/L), MW-4 (16 mg/L), MW-8 (17 mg/L), MW-14 (2.2 mg/L), MW-15 (5.2 mg/L), and MW-16 (16 mg/L). Analytical results for ethylbenzene were above COGCC Table 910-1 concentrations in monitoring wells MW-1 (1.1 mg/L), MW-2 (1 mg/L), MW-4 (0.99 mg/L), MW-8 (1.1 mg/), and MW-16 (1.1 mg/L). All

remaining analytical results from the sampled wells were below COGCC Table 910-1 concentration levels or laboratory detection limits. A copy of the laboratory reports and chain of custody documentation is included in Attachment 3. Figure 4 shows the isoconcentration contours of dissolved-phase benzene analytical results.

## **7 Product Removal and Gauging**

Talon gauging data from June 20, 2016, reveals the presence PSH in monitoring wells MW-1, MW-2, MW3, MW-5, MW-6, MW-7, MW-17, and MW-20 ranging from 0.02 ft to 7.01 ft (Table 4). Figure 5 shows contours of PSH thickness.

Product recovery is performed twice per week via hand-bailing on all monitoring wells exhibiting PSH. All waste produced by hand-bailing is stored on site in poly containers within secondary containment pending offsite disposal. Table 5 summarizes PSH removal and recovery.

Product recovery efforts were suspended for two weeks prior to groundwater sampling activities to allow the fluid levels in each well to reach static equilibrium. Following the groundwater sampling event, product recovery efforts resumed.

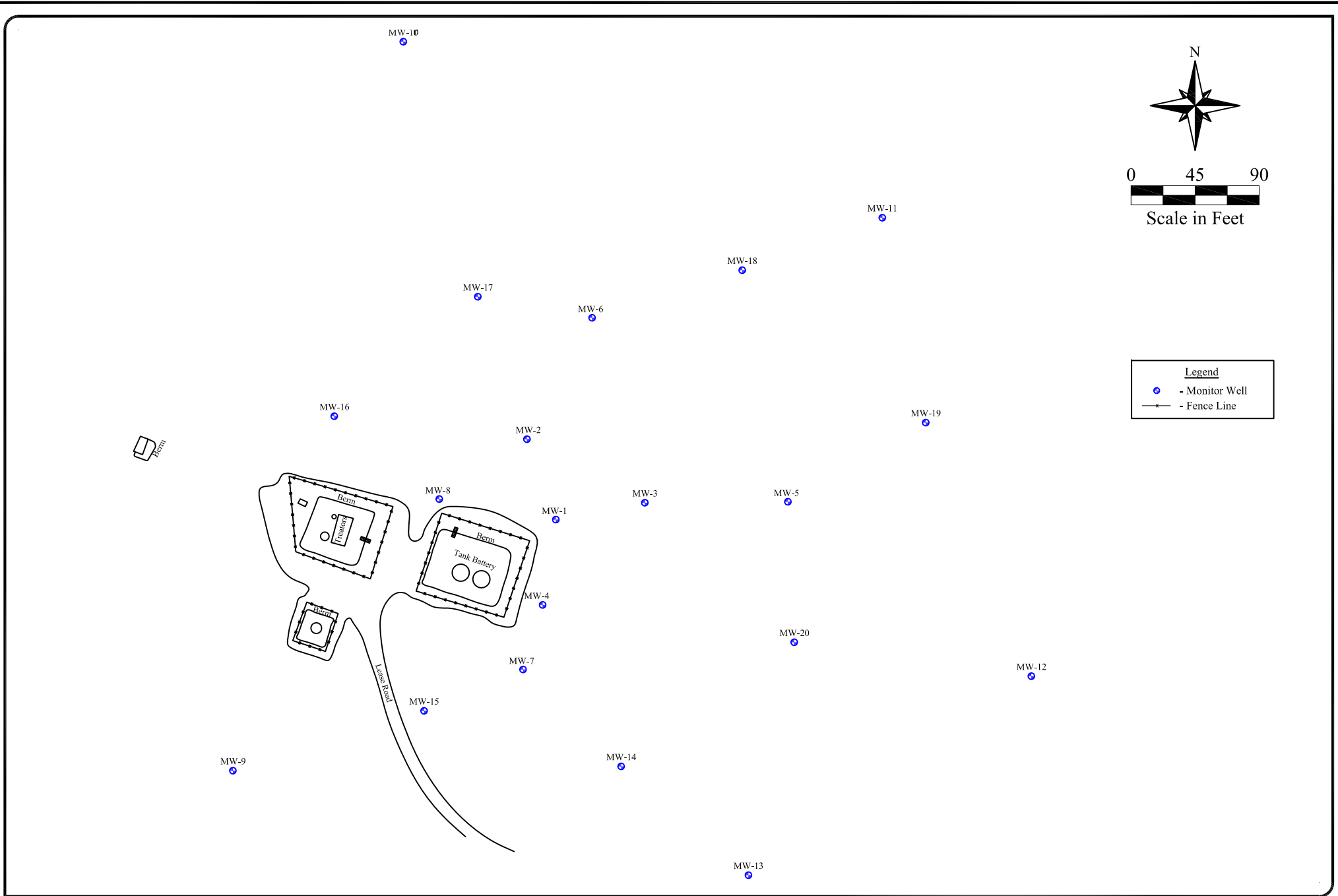
## **8 Conclusions & Recommendations**

The objective of this report was to document the nature and extent of the impacts at the Nelson C1 location. Talon has installed 20 total monitoring wells to assess soil or groundwater impacts from this release. The assessment activities reported herein have defined soil impacted areas. The benzene analytical results in MW-1 at 20-25 ft bgs (1.2 mg/kg), 25-30 ft bgs (1.2 mg/kg), 30-35 ft bgs (1.5 mg/kg), MW-2 at 25 ft bgs (0.24 mg/kg) and the TPH analytical result in MW-6 at 30-35 ft bgs (1,200 mg/kg) are above COGCC Table 910-1 concentration levels.

The known areas of groundwater impacts surround the tank battery area. The groundwater impacted area is delineated to the south, north, and east. The elevated analytical results of benzene and toluene in MW-16 demonstrate that further delineation is needed to the west.

Talon recommends installing additional monitoring wells to the west of MW-16 to provide further delineation to this area, and to install an active product removal system such as well skimmers in the wells exhibiting PSH.

**Attachment 1**  
**Figures**

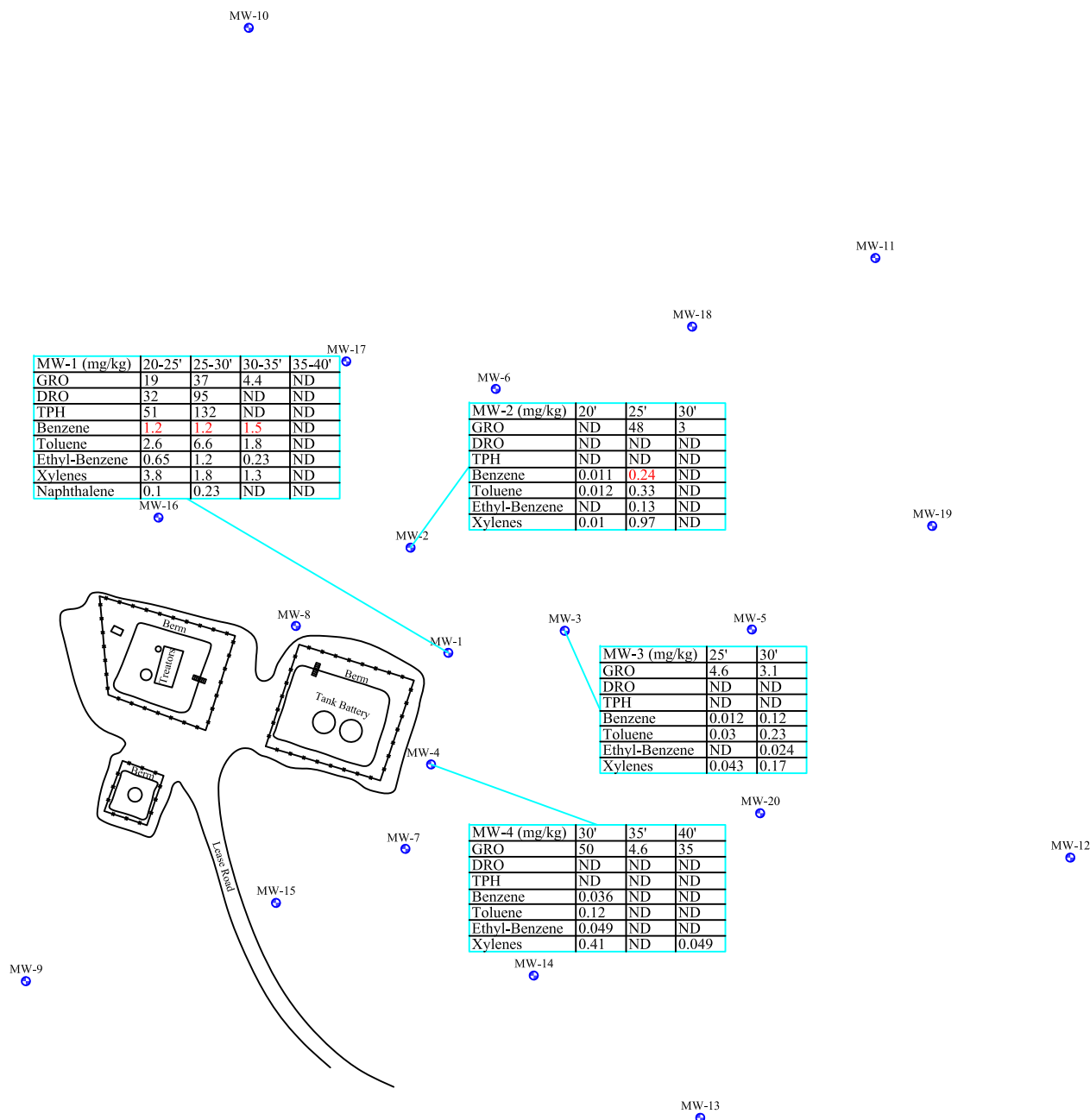


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Scale: 1" = 90'  
Drawn By: TJS

Nelson C-1  
Whiting Oil & Gas  
Weld County, Colorado  
Figure 1 - Site Plan



0 45 90  
Scale in Feet



Legend	
	• Monitor Well
	— Fence Line
COGCC Levels (mg/kg)	
TPH = 500	
B = 0.17	
T = 85	
E = 100	
X = 175	
Naphthalene = 23	
ND = Non-Detect	



Date: 07/12/2016  
Scale: 1" = 90'  
Drawn By: TJS

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Weld County, Colorado  
Figure 2a - Soil Concentration Map (08/25/2015 & 10/27/2015)

MW-10 (mg/kg)	15-20'	30-35'	35-40'
GRO	ND	ND	ND
DRO	ND	ND	ND
TPH	ND	ND	ND
Benzene	ND	ND	ND
Toluene	ND	ND	ND
Ethyl-Benzene	ND	ND	ND
Xylenes	ND	ND	ND

MW-17 (mg/kg)	20-25'	25-30'	30-35'	35-40'	40-42'	42-45'
GRO	ND	1	28	3.4	12	0.75
DRO	ND	ND	55	ND	ND	ND
TPH	ND	ND	83	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND
Ethyl-Benzene	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND	ND	ND

MW-11 (mg/kg)	15-20'	20-25'	25-30'	40-45'
GRO	ND	ND	ND	ND
DRO	ND	ND	ND	ND
TPH	ND	ND	ND	ND
Benzene	ND	ND	ND	ND
Toluene	ND	ND	ND	ND
Ethyl-Benzene	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND

MW-16 (mg/kg)	10-15'	15-20'	20-25'	25-30'	30-35'	35-37.5'	37.5-40'
GRO	ND	ND	8.7	11	1.1	6.6	ND
DRO	ND	ND	ND	ND	ND	ND	ND
TPH	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	0.021	0.039	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND
Ethyl-Benzene	ND	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	0.014	ND	ND	ND

MW-18 (mg/kg)	15-20'	20-25'	25-30'	40-45'
GRO	ND	ND	ND	ND
DRO	ND	ND	ND	ND
TPH	ND	ND	ND	ND
Benzene	ND	ND	ND	ND
Toluene	ND	ND	ND	ND
Ethyl-Benzene	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND

MW-8 (mg/kg)	10-15'	15-20'	20-25'	25-30'	30-35'	35-37.5'	37.5-40'
GRO	ND	86	76	90	5.2	15	ND
DRO	ND	86	100	110	ND	ND	ND
TPH	ND	172	176	200	ND	ND	ND
Benzene	ND	ND	ND	0.0033	ND	0.0032	ND
Toluene	ND	ND	0.031	0.011	ND	ND	ND
Ethyl-Benzene	ND	0.073	0.019	0.013	ND	ND	ND
Xylenes	ND	0.81	0.18	0.17	ND	ND	ND

MW-6 (mg/kg)	15-20'	20-25'	25-30'	30-35'	35-40'	40-43'	43-45'
GRO	ND	ND	0.82	870	ND	ND	ND
DRO	ND	ND	ND	330	ND	ND	ND
TPH	ND	ND	ND	1,200	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	0.11	ND	ND	ND
Ethyl-Benzene	ND	ND	ND	0.68	ND	ND	ND
Xylenes	ND	ND	ND	4.3	ND	ND	ND

MW-5 (mg/kg)	20-25'	25-30'	30-35'	38-40'
GRO	0.98	250	ND	ND
DRO	ND	150	ND	ND
TPH	ND	400	ND	ND
Benzene	ND	0.004	ND	ND
Toluene	ND	0.054	ND	ND
Ethyl-Benzene	ND	0.12	ND	ND
Xylenes	ND	1.2	ND	ND

MW-19 (mg/kg)	15-20'	20-25'	35-40'
GRO	ND	ND	ND
DRO	ND	ND	ND
TPH	ND	ND	ND
Benzene	ND	ND	ND
Toluene	ND	ND	ND
Ethyl-Benzene	ND	ND	ND
Xylenes	ND	ND	ND

MW-15 (mg/kg)	15-20'	20-25'	25-30'	30-34.5'	34.5-35'
GRO	ND	ND	ND	0.84	ND
DRO	ND	ND	ND	ND	ND
TPH	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	0.0029	ND
Toluene	ND	ND	ND	ND	ND
Ethyl-Benzene	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND	ND

MW-9 (mg/kg)	10-15'	15-20'	30-35'
GRO	ND	ND	ND
DRO	ND	ND	ND
TPH	ND	ND	ND
Benzene	ND	ND	ND
Toluene	ND	ND	ND
Ethyl-Benzene	ND	ND	ND
Xylenes	ND	ND	ND

MW-7 (mg/kg)	10-15'	20-25'	25-30'	30-35'	38-40'
GRO	ND	0.98	250	ND	ND
DRO	ND	ND	150	ND	ND
TPH	ND	ND	400	ND	ND
Benzene	ND	ND	0.004	ND	ND
Toluene	ND	ND	0.054	ND	ND
Ethyl-Benzene	ND	ND	0.12	ND	ND
Xylenes	ND	ND	1.2	ND	ND

MW-20 (mg/kg)	15-20'	30-35'	35-37.5'	37.5-40'
GRO	ND	3.9	17	ND
DRO	ND	ND	ND	ND
TPH	ND	ND	ND	ND
Benzene	ND	ND	0.0049	ND
Toluene	ND	ND	ND	ND
Ethyl-Benzene	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND

MW-14 (mg/kg)	10-15'	20-25'	30-35'	35-40'
GRO	ND	ND	ND	ND
DRO	ND	ND	ND	ND
TPH	ND	ND	ND	ND
Benzene	ND	ND	ND	ND
Toluene	ND	ND	ND	ND
Ethyl-Benzene	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND

MW-12 (mg/kg)	15-20'	20-25'	35-40'
GRO	ND	ND	ND
DRO	ND	ND	ND
TPH	ND	ND	ND
Benzene	ND	ND	ND
Toluene	ND	ND	ND
Ethyl-Benzene	ND	ND	ND
Xylenes	ND	ND	ND

MW-13 (mg/kg)	10-15'	15-20'	35-40'
GRO	ND	ND	ND
DRO	ND	ND	ND
TPH	ND	ND	ND
Benzene	ND	ND	ND
Toluene	ND	ND	ND
Ethyl-Benzene	ND	ND	ND
Xylenes	ND	ND	ND



0 45 90  
Scale in Feet

Legend	
	• Monitor Well
	— Fence Line
COGCC Levels (mg/kg)	
TPH = 500	
B = 0.17	
T = 85	
E = 100	
X = 175	
Naphthalene = 23	
ND = Non-Detect	

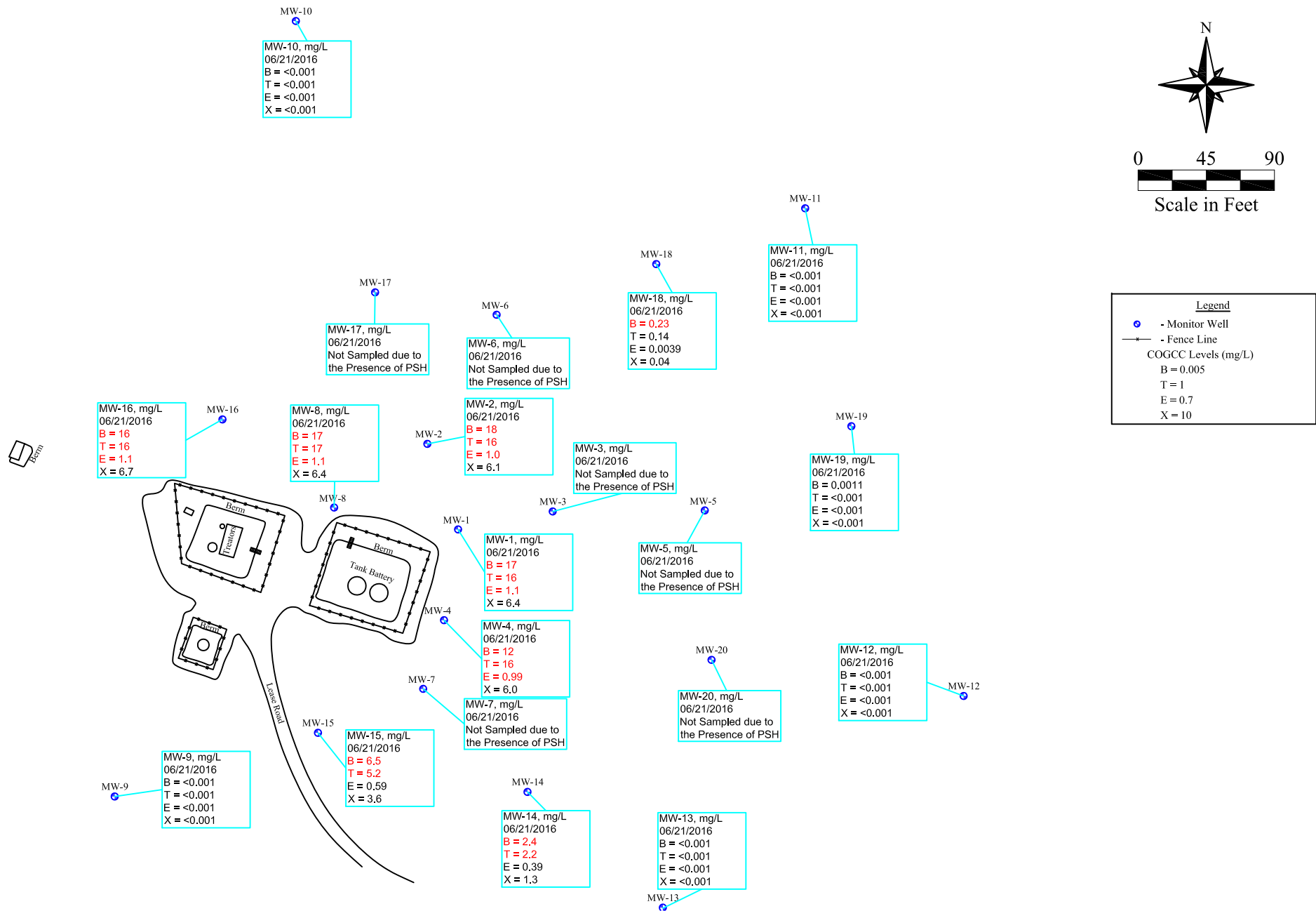


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Nelson C-1  
Whiting Oil & Gas  
Weld County, Colorado

Figure 2b - Soil Concentration Map (02/11-12/2016 & 03/07-16/2016)





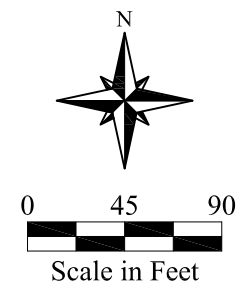
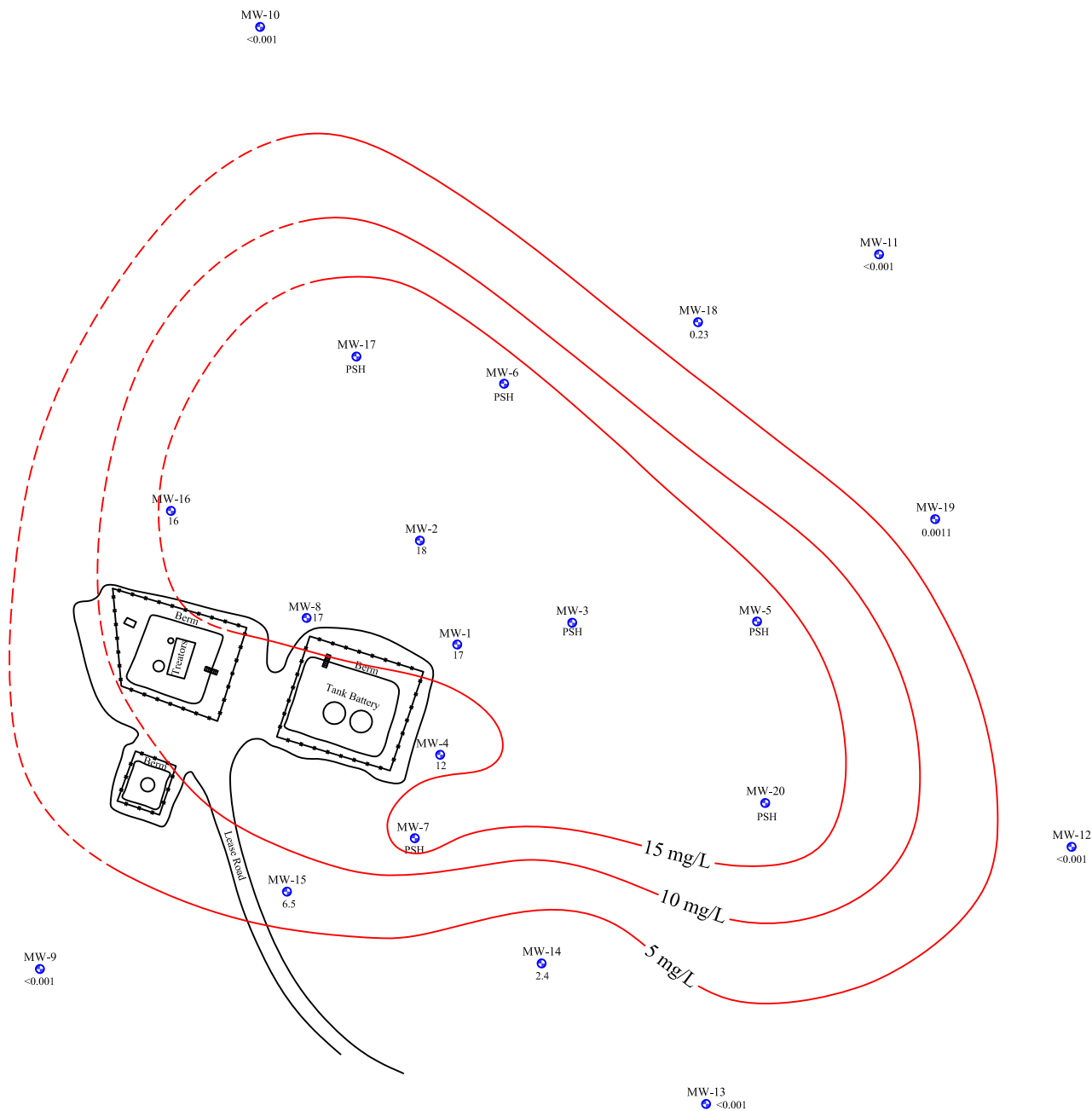
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Nelson C-1  
Whiting Oil & Gas  
Weld County, Colorado

Figure 3 - Groundwater Concentration Map (06/21/2016)

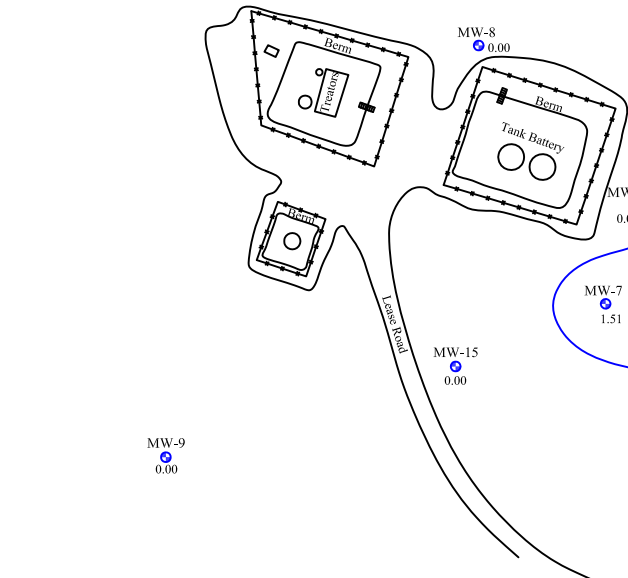


Legend	
	Monitor Well
	Fence Line
	Benzene Contour Line
	PSH
COGCC Levels (mg/L)	
B	0.005
T	1
E	0.7
X	10



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Scale: 1" = 90'  
Drawn By: TJS

Nelson C-1  
Whiting Oil & Gas  
Weld County, Colorado  
Figure 4 - Benzene Isoconcentration Map (06/21/2016)



MW-9  
0.00

MW-16  
0.00

MW-10  
0.00

MW-8  
0.00

MW-17  
7.01

5.0'

3.0'

1.0'

MW-2  
0.02

MW-1  
0.04

MW-4  
0.00

MW-7  
1.51

MW-15  
0.00

MW-6  
4.78

MW-14  
0.00

MW-3  
1.57

MW-13  
0.00

MW-18  
0.00

MW-5  
1.24

MW-20  
4.50

MW-11  
0.00

MW-19  
0.00

MW-12  
0.00



0 45 90  
Scale in Feet

#### Legend

- Monitor Well
- Fence Line
- Extent of PSH Contour Line
- 0.05 PSH Thickness in Feet
- PSH - Phase Separated Hydrocarbons

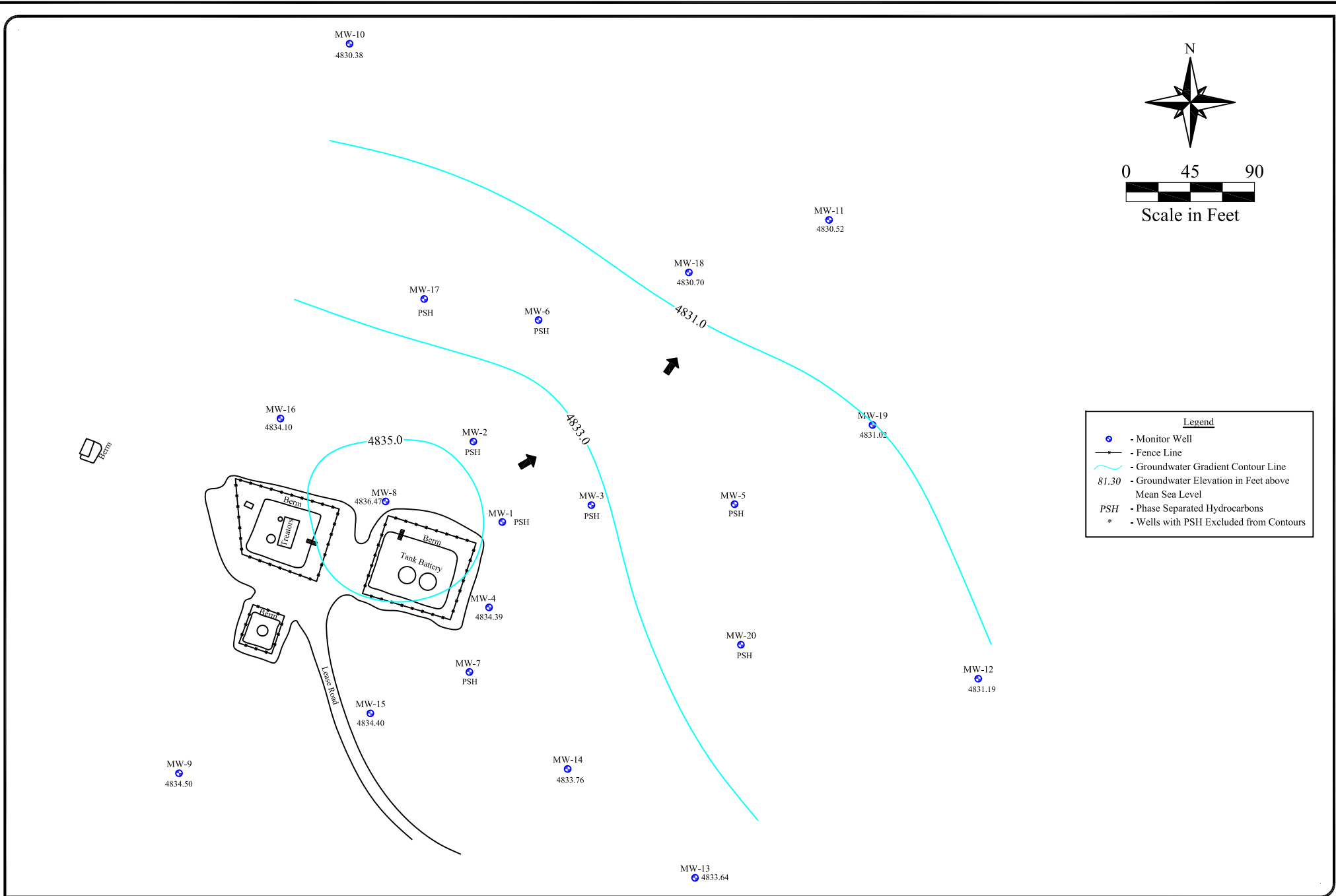


Date: 07/12/2016

Scale: 1" = 90'

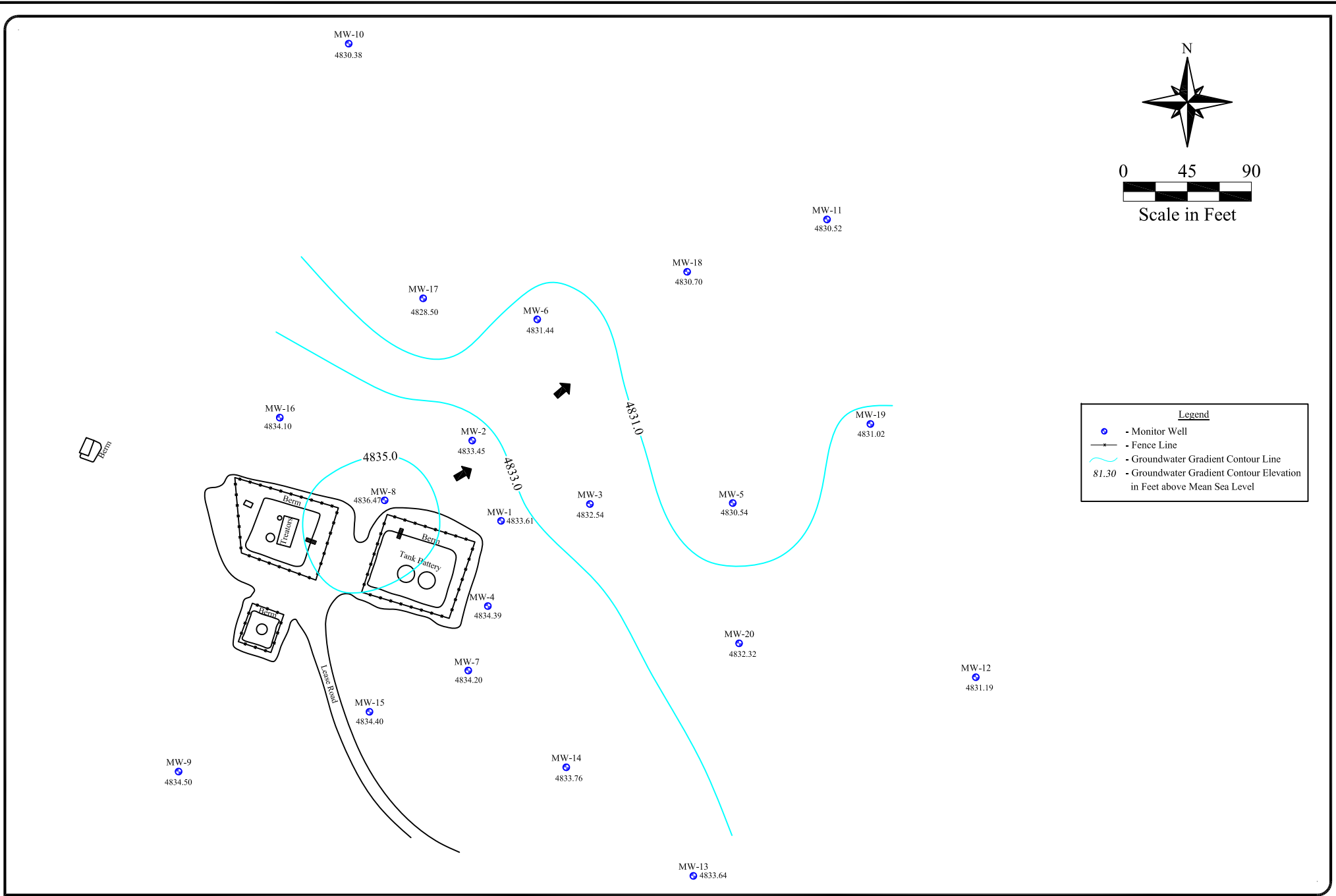
Drawn By: TJS

Nelson C-1  
Whiting Oil & Gas  
Weld County, Colorado  
Figure 5 - PSH Isoconcentration Map (06/20/2016)



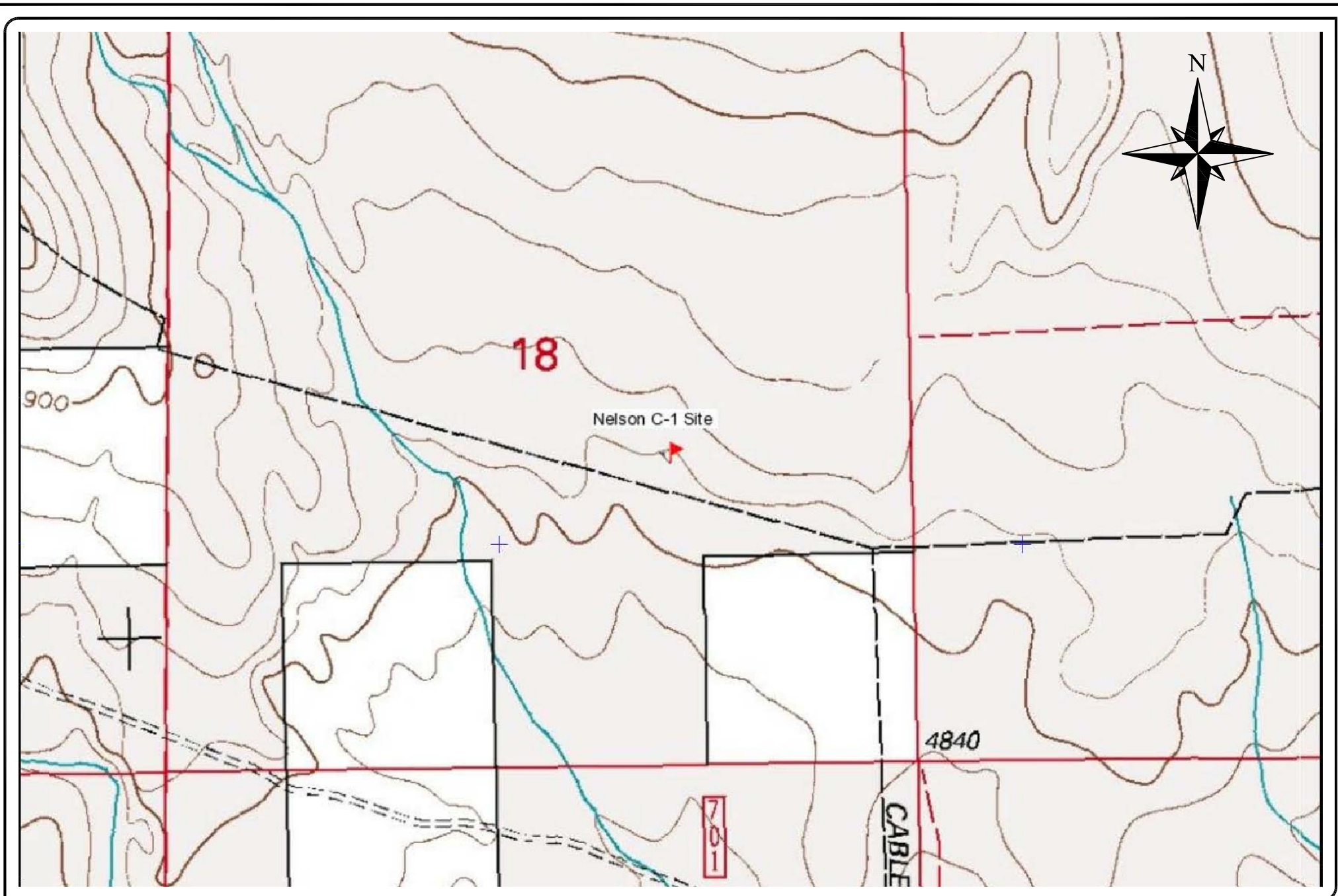
Date: 07/12/2016  
 Scale: 1" = 90'  
 Drawn By: TJS

Nelson C-1  
 Whiting Oil & Gas  
 Weld County, Colorado  
 Figure 6a - Groundwater Gradient Map - Excluding Wells with PSH (06/20/2016)



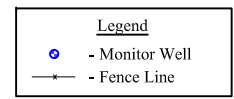
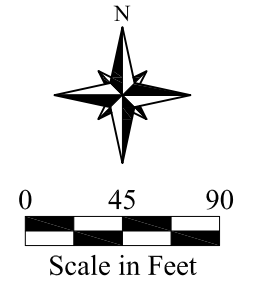
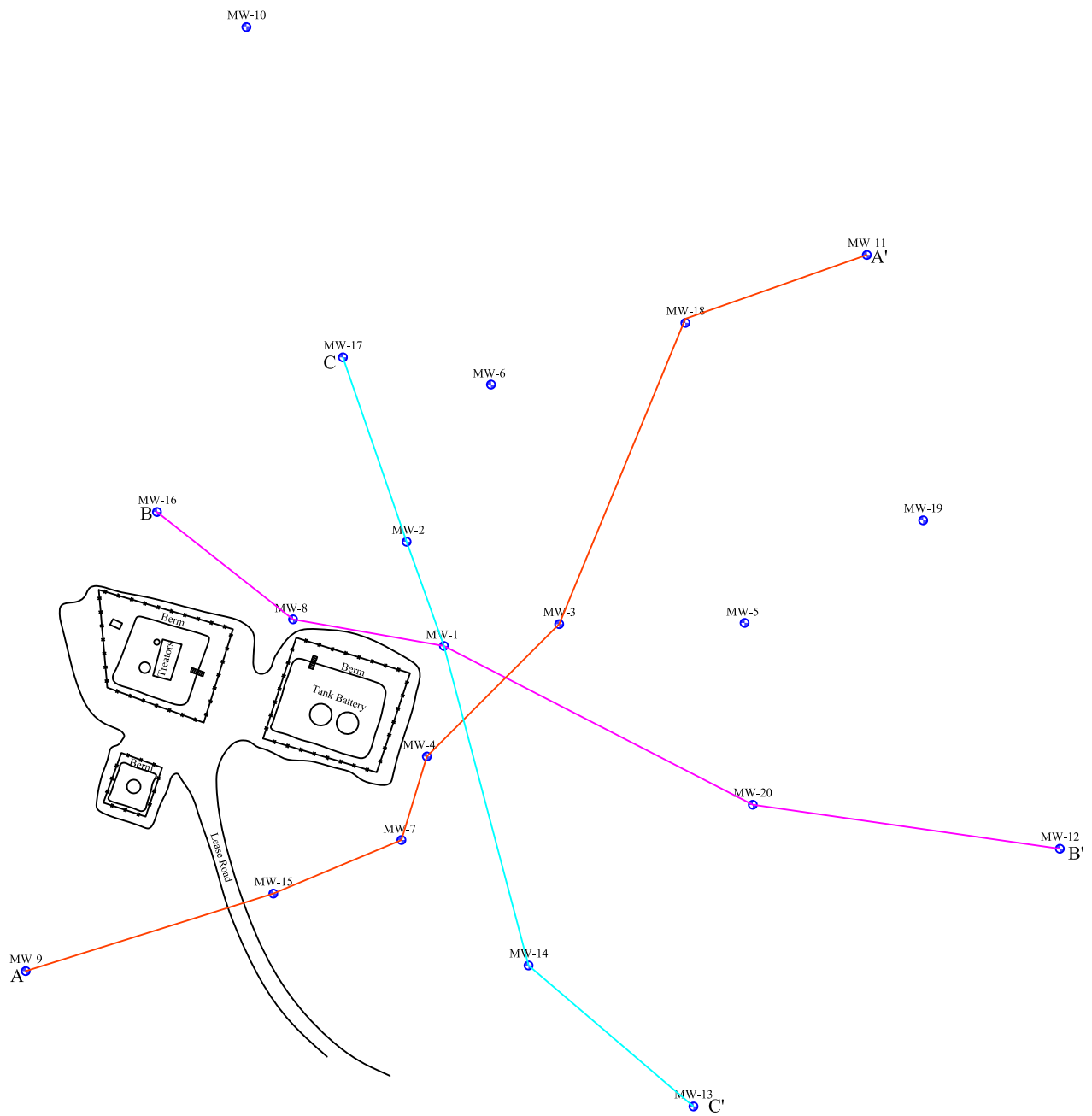
Date: 07/12/2016  
Scale: 1" = 90'  
Drawn By: TJS

Nelson C-1  
Whiting Oil & Gas  
Weld County, Colorado  
Figure 6b - Groundwater Gradient Map - All Wells (06/20/2016)



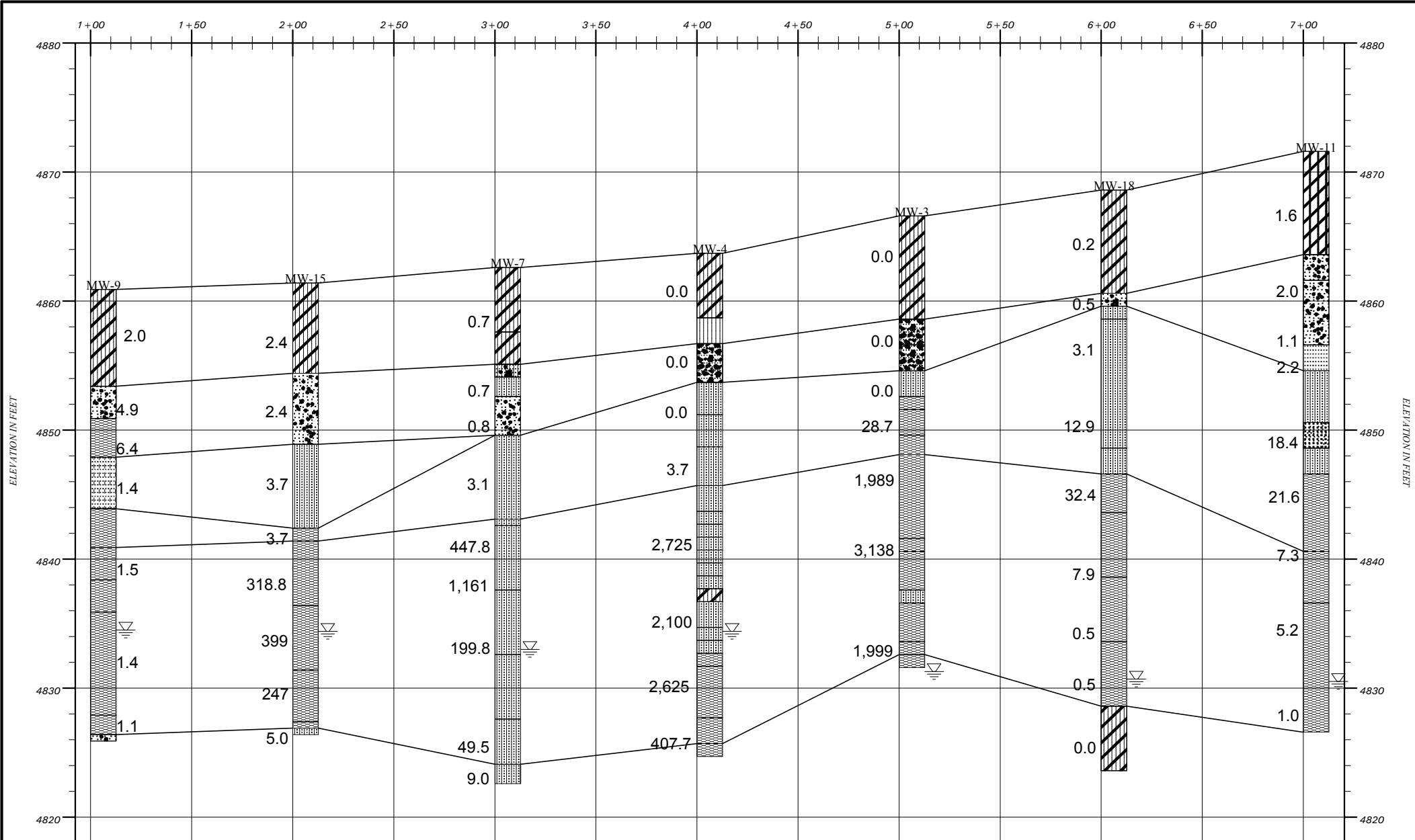
Date: 07/12/2016  
Scale: 1" = 10,000'  
Drawn By: TJS

Nelson C-1  
Whiting Oil & Gas  
Weld County, Colorado  
Figure 7 - Topographic Map

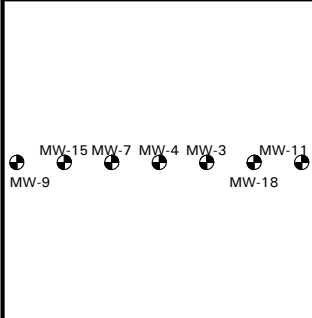


Date: 07/12/2016  
Scale: 1" = 90'  
Drawn By: TJS

Nelson C-1  
Whiting Oil & Gas  
Weld County, Colorado  
Figure 8 - Cross Section Locations



Plan View



Strata symbols

- Silty low plasticity clay
- Poorly graded gravel and sand
- Siltstone
- Well graded sand with silt

- Silty sand
- Poorly graded gravel with silt
- Silt
- Well graded gravel and sand
- Inorganic silts and clays
- Well graded sand
- Poorly graded sand

## TALON/LPE GENERALIZED SOIL PROFILE A-A'

HORIZONTAL  
SCALE: 1"=(proportional)'

DRAWN BY/APPROVED BY  
TIM SELLMYER

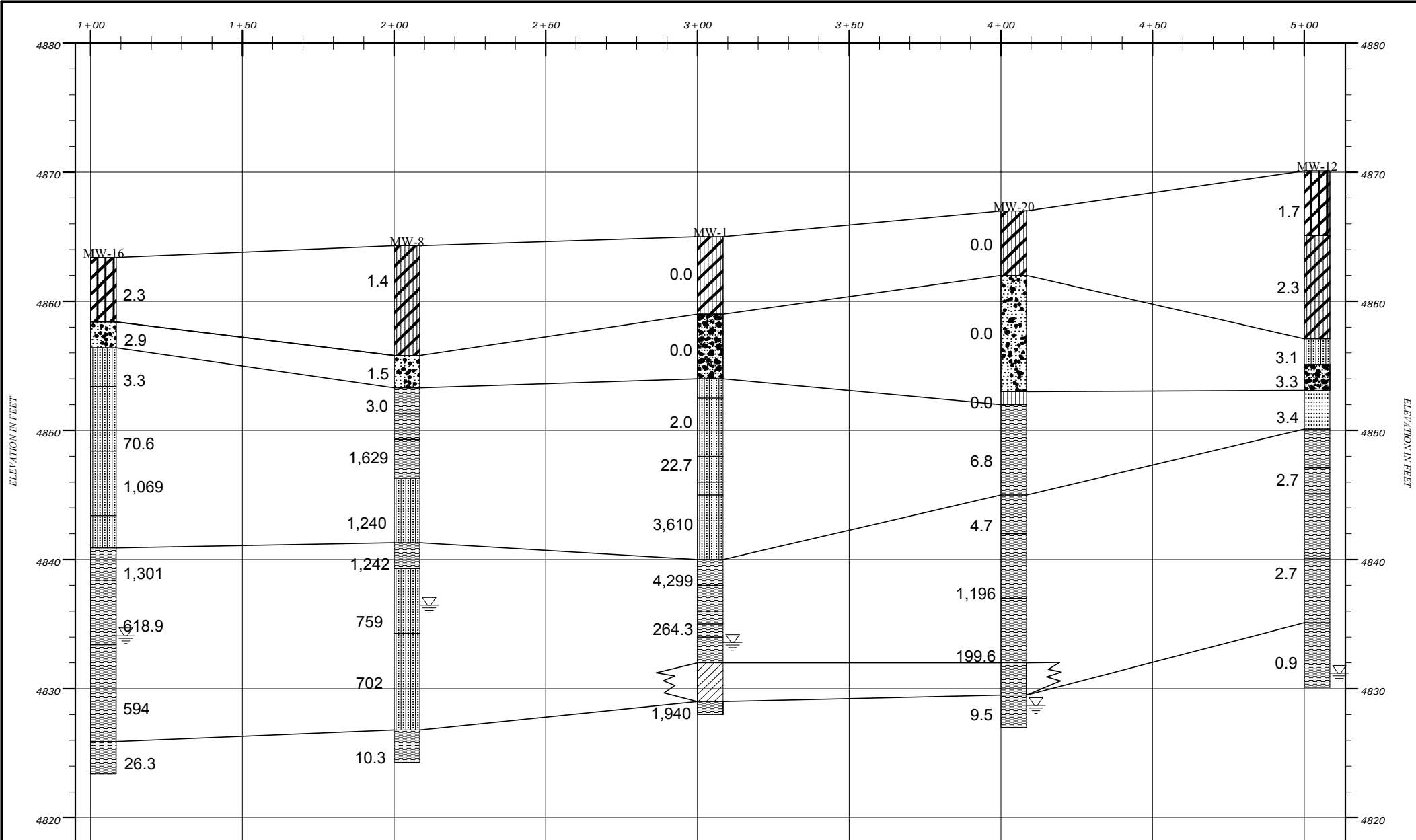
DATE DRAWN  
8/10/2016

Whiting Oil

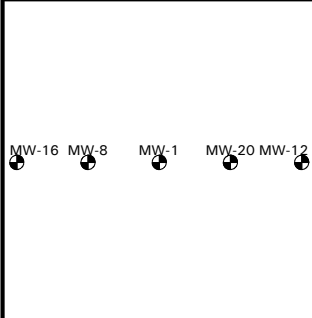
PROJECT NO. 701530.020.04

FIGURE 9





Plan View

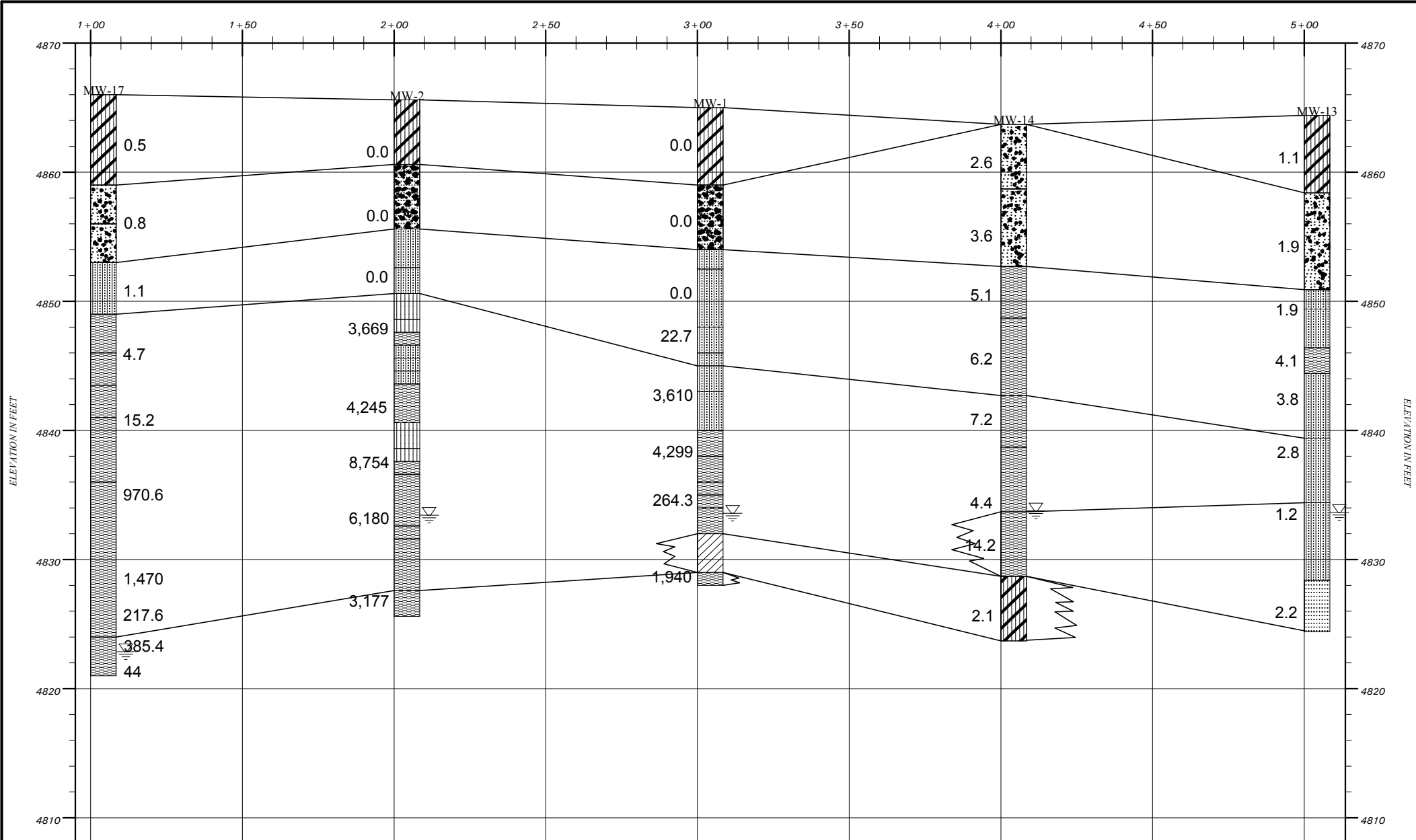


Strata symbols

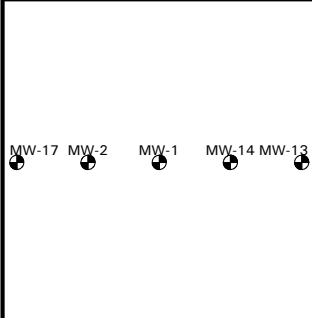
- Inorganic silts and clays
- Poorly graded gravel and sand
- Silty sand
- Siltstone

- Silty low plasticity clay
- Well graded gravel and sand
- Low plasticity clay
- Silt
- Well graded sand

TALON/LPE GENERALIZED SOIL PROFILE B-B'		
HORIZONTAL SCALE: 1"=(proportional)'	DRAWN BY/APPROVED BY TIM SELLMYER	DATE DRAWN 8/10/2016
Whiting Oil		
PROJECT NO. 701530.020.04		FIGURE 10



Plan View



Strata symbols

- Silty low plasticity clay
- Poorly graded gravel and sand
- Silty sand
- Siltstone

- Well graded gravel and sand
- Silt
- Low plasticity clay
- Well graded sand

## TALON/LPE GENERALIZED SOIL PROFILE C-C'

HORIZONTAL  
SCALE: 1"=(proportional)  
VERTICAL  
SCALE: 1"=10'

DRAWN BY/APPROVED BY  
TIM SELLMYER

DATE DRAWN  
8/10/2016

Whiting Oil

PROJECT NO. 701530.020.04

FIGURE 11

## **Attachment 2 Tables**



**Table 1 - Well Information**

**Whiting Oil and Gas Corporation  
Nelson C-1  
Weld County, Colorado**

Well ID	Latitude	Longitude	Ground Surface Elevation (ft amsl)	TOC Elevation (ft amsl)	Screen Interval (ft bgs)	Total Depth (ft)
MW-1	40.836400	-103.904672	4861.9	4865.0	19.8-39.8	40.38
MW-2	40.836550	-103.904761	4862.2	4865.6	19-39	39.50
MW-3	40.836453	-103.904461	4863.2	4866.6	19.5-39.5	40.00
MW-4	40.836239	-103.904742	4860.6	4863.7	19.5-39.5	40.00
MW-5	40.836419	-103.904069	4865.0	4868.0	20-40	40.00
MW-6	40.836722	-103.904467	4863.8	4867.1	20-45	45.00
MW-7	40.836089	-103.904822	4859.3	4862.6	20-40	40.00
MW-8	40.836469	-103.904956	4860.9	4864.3	20-40	40.00
MW-9	40.835925	-103.905525	4857.9	4860.9	17-32	35.00
MW-10	40.837317	-103.905089	4864.5	4867.7	19-39	39.00
MW-11	40.836978	-103.903889	4868.6	4871.6	19-44	44.00
MW-12	40.836108	-103.903511	4867.0	4870.1	18-38	38.00
MW-13	40.835728	-103.904222	4861.5	4864.4	20-40	40.00
MW-14	40.835936	-103.904542	4860.4	4863.7	20-40	40.00
MW-15	40.836042	-103.905064	4858.6	4861.4	19-34	34.00
MW-16	40.836608	-103.905264	4860.1	4863.4	19-39	39.00
MW-17	40.836836	-103.904900	4862.8	4866.0	19-44	44.00
MW-18	40.836881	-103.904236	4865.8	4868.6	19-44	44.00
MW-19	40.836589	-103.903778	4867.3	4870.2	19-39	39.00
MW-20	40.836172	-103.904103	4864.1	4867.0	19-39	39.00

TOC - Top of Casing  
ft bgs - Feet Below Ground Surface  
ft amsl - Feet Above Mean Sea Level



Table 2 - Soil Analytical Data

Whiting Oil and Gas Corporation  
Nelson C-1  
Weld County, Colorado

Sample ID	Lab ID	Date Sampled	Concentration (mg/kg)							
			Benzene	Toluene	Ethyl-Benzene	Xylenes	Naphthalene	GRO	DRO	TPH
COGCC Table 910-1 Concentration Levels			0.17	85	100	175	23	NA	NA	500
MW-1 @ 20-25'	1508471-4	08/25/15	1.2	2.6	0.65	3.8	0.1	19	32	51
MW-1 @ 25-30'	1508471-5	08/25/15	1.2	6.6	1.2	1.8	0.23	37	95	132
MW-1 @ 30-35'	1508471-6	08/25/15	1.5	1.8	0.23	1.3	<0.076	4.4	<7.6	<7.6
MW-1@ - 35-40'	1508471-7	08/25/15	<0.0059	<0.0059	<0.0059	<0.005	<0.0059	<0.35	<6	<6
MW-2 @ 20'	1510247-01	10/27/15	0.011	0.012	<0.005	0.01	NA	<0.50	<50	<50
MW-2 @ 25'	1510247-02	10/27/15	0.24	0.33	0.13	0.97	NA	48	<50	<50
MW-2 @ 30'	1510247-03	10/27/15	<0.0020	<0.0050	<0.0050	<0.0050	NA	3	<50	<50
MW-3 @ 25'	1510247-04	10/27/15	0.012	0.03	<0.0050	0.043	NA	4.6	<50	<50
MW-3 @ 30'	1510247-05	10/27/15	0.12	0.23	0.024	0.17	NA	3.1	<50	<50
MW-4 @ 30'	1510247-06	10/28/15	0.036	0.12	0.049	0.41	NA	50	<50	50
MW-4 @ 35'	1510247-07	10/28/15	<0.0020	<0.0050	<0.0050	<0.0050	NA	4.6	<50	<50
MW-4 @ 40'	1510247-08	10/28/15	<0.0020	<0.0050	<0.0050	0.049	NA	35	<50	<50
MW-5 @ 15-20'	1602102-01	02/11/16	<0.0020	<0.0050	<0.0050	<0.0050	NA	<0.50	<50	<50
MW-5 @ 30-35'	1602102-02	02/11/16	0.0033	0.013	<0.0050	0.028	NA	0.77	<50	<50
MW-5 @ 35-39.5'	1602102-03	02/11/16	0.014	0.022	0.0073	0.081	NA	13	<50	<50
MW-5 @ 39.5-40'	1602102-04	02/11/16	<0.0020	<0.0050	<0.0050	<0.0050	NA	<0.50	<50	<50
MW-6 @ 15-20'	1602102-05	02/11/16	<0.0020	<0.0050	<0.0050	<0.0050	NA	<0.50	<50	<50
MW-6 @ 20-25'	1602102-06	02/11/16	<0.0020	<0.0050	<0.0050	<0.0050	NA	<0.50	<50	<50
MW-6 @ 25-30'	1602102-07	02/11/16	<0.0020	<0.0050	<0.0050	<0.0050	NA	0.82	<50	<50
MW-6 @ 30-35'	1602102-08	02/11/16	<0.0020	0.11	0.68	4.3	NA	870	330	1200
MW-6 @ 35-40'	1602102-09	02/11/16	<0.0020	<0.0050	<0.0050	<0.0050	NA	<0.50	<50	<50
MW-6 @ 40-43'	1602102-10	02/11/16	<0.0020	<0.0050	<0.0050	<0.0050	NA	<0.50	<50	<50
MW-6 @ 43-45'	1602102-11	02/11/16	<0.0020	<0.0050	<0.0050	<0.0050	NA	<0.50	<50	<50
MW-7 @ 15-20'	1602102-12	02/12/16	<0.0020	<0.0050	<0.0050	<0.0050	NA	<0.50	<50	<50
MW-7 @ 20-25'	1602102-13	02/12/16	<0.0020	<0.0050	<0.0050	<0.0050	NA	0.98	<50	<50
MW-7 @ 25-30'	1602102-14	02/12/16	0.004	0.054	0.12	1.2	NA	250	150	400
MW-7 @ 30-35'	1602102-15	02/12/16	<0.0020	<0.0050	<0.0050	<0.0050	NA	<0.50	<50	<50
MW-7 @ 38-40'	1602102-16	02/12/16	<0.0020	<0.0050	<0.0050	<0.0050	NA	<0.50	<50	<50
MW-8 @ 10-15'	1602102-17	02/12/16	<0.0020	<0.0050	<0.0050	<0.0050	NA	<0.50	<50	<50
MW-8 @ 15-20'	1602102-18	02/12/16	<0.0020	<0.0050	0.073	0.81	NA	86	86	172
MW-8 @ 20-25'	1602102-19	02/12/16	<0.0020	0.031	0.019	0.18	NA	76	100	176
MW-8 @ 25-30'	1602102-20	02/12/16	0.0033	0.011	0.013	0.17	NA	90	110	200
MW-8 @ 30-35'	1602102-21	02/12/16	<0.0020	<0.0050	<0.0050	<0.0050	NA	5.2	<50	<50
MW-8 @ 35-37.5'	1602102-22	02/12/16	0.0032	<0.0050	<0.0050	<0.0050	NA	15	<50	<50
MW-8 @ 37.5-40'	1602102-23	02/12/16	<0.0020	<0.0050	<0.0050	<0.0050	NA	<0.50	<50	<50



Table 2 - Soil Analytical Data

Whiting Oil and Gas Corporation  
Nelson C-1  
Weld County, Colorado

Sample ID	Lab ID	Date Sampled	Concentration (mg/kg)							
			Benzene	Toluene	Ethyl-Benzene	Xylenes	Naphthalene	GRO	DRO	TPH
COGCC Table 910-1 Concentration Levels			0.17	85	100	175	23	NA	NA	500
MW-9 @ 10-15'	1603086-01	03/07/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-9 @ 15-20'	1603086-02	03/08/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-9 @ 30-35'	1603086-03	03/08/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-10 @ 15-20'	1603086-04	03/08/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-10 @ 30-35'	1603086-05	03/08/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-10 @ 35-40'	1603086-06	03/08/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-11 @ 15-20'	1603086-07	03/08/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-11 @ 20-25'	1603086-08	03/08/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-11 @ 25-30'	1603086-09	03/08/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-11 @ 40-45'	1603086-10	03/08/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-12 @ 15-20'	1603086-11	03/09/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-12 @ 20-25'	1603086-12	03/09/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-12 @ 35-40'	1603086-13	03/09/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-13 @ 10-15'	1603086-14	03/10/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-13 @ 15-20'	1603086-15	03/10/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-13 @ 35-40'	1603086-16	03/10/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-14 @ 10-15'	1603086-17	03/10/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-14 @ 20-25'	1603086-18	03/10/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-14 @ 30-35'	1603086-19	03/10/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-14 @ 35-40'	1603086-20	03/10/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-15 @ 15-20'	1603093-01	03/11/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-15 @ 20-25'	1603093-02	03/11/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-15 @ 25-30'	1603093-03	03/11/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-15 @ 30-34.5'	1603093-04	03/11/16	0.0029	<0.0050	<0.0050	<0.010	<0.010	0.84	<50	<50
MW-15 @ 34.5-35'	1603093-05	03/11/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-16 @ 10-15'	1603093-06	03/11/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-16 @ 15-20'	1603093-07	03/11/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-16 @ 20-25'	1603093-08	03/11/16	0.021	<0.0050	<0.0050	<0.010	<0.010	8.7	<50	<50
MW-16 @ 25-30'	1603093-09	03/11/16	0.039	<0.0050	<0.0050	0.014	<0.010	11	<50	<50
MW-16 @ 30-35'	1603093-10	03/11/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	1.1	<50	<50
MW-16 @ 35-37.5'	1603093-11	03/11/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	6.6	<50	<50
MW-16 @ 37.5-40'	1603093-12	03/11/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-17 @ 20-25'	1603125-01	03/15/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-17 @ 25-30'	1603125-02	03/15/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	1	<50	<50
MW-17 @ 30-35'	1603125-03	03/15/16	<0.0020	<0.0050	<0.0050	<0.010	0.095	28	55	83



**Table 2 - Soil Analytical Data**

**Whiting Oil and Gas Corporation  
Nelson C-1  
Weld County, Colorado**

Sample ID	Lab ID	Date Sampled	Concentration (mg/kg)							
			Benzene	Toluene	Ethyl-Benzene	Xylenes	Naphthalene	GRO	DRO	TPH
COGCC Table 910-1 Concentration Levels			0.17	85	100	175	23	NA	NA	500
MW-17 @ 35-40'	1603125-04	03/15/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	3.4	<50	<50
MW-17 @ 40-42'	1603125-05	03/15/16	<0.0020	<0.0050	<0.0050	<0.010	0.028	12	<50	<50
MW-17 @ 42-45'	1603125-06	03/15/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	0.75	<50	<50
MW-18 @ 15-20'	1603125-07	03/15/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-18 @ 20-25'	1603125-08	03/15/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-18 @ 25-30'	1603125-09	03/15/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-18 @ 40-45'	1603125-10	03/15/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-19 @ 15-20'	1603125-11	03/16/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-19 @ 20-25'	1603125-12	03/16/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-19 @ 35-40'	1603125-13	03/16/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-20 @ 15-20'	1603125-14	03/16/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50
MW-20 @ 30-35'	1603125-15	03/16/16	<0.0020	<0.0050	<0.0050	<0.010	0.019	3.9	<50	<50
MW-20 @ 35-37.5'	1603125-16	03/16/16	0.0049	<0.0050	<0.0050	<0.010	0.046	17	<50	<50
MW-20 @ 37.5-40'	1603125-17	03/16/16	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<0.50	<50	<50

mg/kg - milligrams per kilogram

< - Analytical result is less than the reporting limit

COGCC - Colorado Oil and Gas Conservation Commission

GRO - Gasoline Range Organics

DRO - Diesel Range Organics

TPH - Total Petroleum Hydrocarbons (Combined GRO/DRO)



Table 3 - Groundwater Analytical Data

Whiting Oil and Gas Corporation  
Nelson C-1  
Weld County, Colorado

Sample ID	Lab ID	Date	Concentration (mg/L)			
			Benzene	Toluene	Ethyl-Benzene	Xylenes
COGCC Table 910-1 Concentration Levels			0.005	1	0.7	10
MW-1	1511065-2	11/04/15	17	18	1	5.4
	1602138-01	02/17/16	15	13	0.99	5.5
	1606205-01	06/21/16	17	16	1.1	6.4
MW-2	1511065-3	11/04/15	18	20	0.96	5
	1602138-02	02/17/16	16	14	1.4	8.2
	1606205-02	06/21/16	18	16	1	6.1
MW-3	NS	11/04/15	Not Sampled Due to Presence of PSH			
	NS	02/17/16	Not Sampled Due to Presence of PSH			
	NS	06/21/16	Not Sampled Due to Presence of PSH			
MW-4	1511065-1	11/04/15	16	20	0.94	4.8
	1602138-03	02/17/16	13	15	0.91	5.5
	1606205-03	06/21/16	12	16	0.99	6
MW-5	NS	02/17/16	Not Sampled Due to Presence of PSH			
	NS	06/21/16	Not Sampled Due to Presence of PSH			
MW-6	NS	02/17/16	Not Sampled Due to Presence of PSH			
	NS	06/21/16	Not Sampled Due to Presence of PSH			
MW-7	NS	02/17/16	Not Sampled Due to Presence of PSH			
	NS	06/21/16	Not Sampled Due to Presence of PSH			
MW-8	1602138-04	02/17/16	12	13	1	5.3
	1606205-04	06/21/16	17	17	1.1	6.4
MW-9	1603161-01	03/22/16	<0.001	0.0016	<0.001	0.0039
	1606205-05	06/21/16	<0.001	<0.001	<0.001	<0.001
MW-10	NS	03/22/16	Dry - No Sample Collected			
	1606205-06	06/21/16	<0.001	<0.001	<0.001	<0.001
MW-11	1603161-02	03/22/16	0.0016	0.0011	<0.001	<0.001
	1606205-07	06/21/16	<0.001	<0.001	<0.001	<0.001
MW-12	NS	03/22/16	Dry - No Sample Collected			
	1606205-08	06/21/16	<0.001	<0.001	<0.001	<0.001
MW-13	1603161-03	03/22/16	<0.001	0.0013	<0.001	<0.001
	1606205-09	06/21/16	<0.001	<0.001	<0.001	<0.001
MW-14	1603161-04	03/22/16	2.5	2.3	0.48	1.3
	1606205-10	06/21/16	2.4	2.2	0.39	1.3
MW-15	1603161-05	03/22/16	4.3	6.4	0.42	3.5
	1606205-11	06/21/16	6.5	5.2	0.59	3.6
MW-16	1603161-06	03/22/16	14	16	0.68	6.1
	1606205-12	06/21/16	16	16	1.1	6.7
MW-17	NS	03/22/16	Not Sampled Due to Presence of PSH			
	NS	06/21/16	Not Sampled Due to Presence of PSH			
MW-18	1603161-07	03/22/16	0.084	0.047	0.0026	0.0074
	1606205-13	06/21/16	0.23	0.14	0.0039	0.04
MW-19	NS	03/22/16	Dry - No Sample Collected			
	1606205-14	06/21/16	0.0011	<0.001	<0.001	<0.001
MW-20	NS	03/22/16	Not Sampled Due to Presence of PSH			
	NS	06/21/16	Not Sampled Due to Presence of PSH			

mg/L -milligrams per liter

< - Analytical result is less than the reporting limit

COGCC - Colorado Oil and Gas Conservation Commission

NS - Not Sampled

PSH - Phase-Separated Hydrocarbons





**Table 4 - Gauging Data**

**Whiting Oil and Gas Corporation  
Nelson C-1  
Weld County, Colorado**

Well ID	Top of Casing Elevation (ft amsl)	Total Depth of Well (ft)	Date Gauged	Depth to Product (ft btoc)	DTW (ft btoc)	Product Thickness (ft)	Potentiometric Surface Elevation (ft)
MW-1	4865.00	40.38	11/4/2015	NA	36.49	0.00	4828.51
			12/3/2015	NA	30.88	0.00	4834.12
			12/8/2015	30.62	30.63	0.01	4834.38
			12/22/2015	NA	31.46	0.00	4833.54
			12/30/2015	NA	32.03	0.00	4832.97
			1/13/2016	NA	38.05	0.00	4826.95
			1/21/2016	NA	31.08	0.00	4833.92
			1/27/2016	31.10	31.13	0.03	4833.89
			2/8/2016	31.24	31.29	0.05	4833.75
			2/15/2016	30.90	30.92	0.02	4834.10
			2/16/2016	30.96	30.99	0.03	4834.03
			2/17/2016	NA	32.27	0.00	4832.73
			2/19/2016	NA	31.04	0.00	4833.96
			2/24/2016	NA	31.19	0.00	4833.81
			2/29/2016	NA	30.95	0.00	4834.05
			3/8/2016	NA	32.67	0.00	4832.33
			3/15/2016	NA	32.95	0.00	4832.05
			3/22/2016	NA	33.02	0.00	4831.98
			3/29/2016	NA	33.04	0.00	4831.96
			4/5/2016	NA	33.22	0.00	4831.78
			4/19/2016	NA	31.70	0.00	4833.30
			4/26/2016	NA	32.78	0.00	4832.22
MW-2	4865.6	39.50	5/5/2016	NA	31.41	0.00	4833.59
			6/6/2016	31.35	31.36	0.01	4833.65
			6/20/2016	31.38	31.42	0.04	4833.61
			11/4/2015	31.15	31.20	0.05	4834.44
			12/3/2015	31.60	31.62	0.02	4834.00
			12/8/2015	31.50	31.52	0.02	4834.10
			12/22/2015	NA	31.29	0.00	4834.31
			12/30/2015	31.93	31.94	0.01	4833.67
			1/13/2016	NA	31.55	0.00	4834.05
			1/21/2016	NA	31.71	0.00	4833.89
			1/27/2016	NA	31.72	0.00	4833.88
			2/8/2016	31.90	31.92	0.02	4833.70
			2/15/2016	31.53	31.58	0.05	4834.06
			2/16/2016	31.63	31.66	0.03	4833.96
			2/17/2016	32.31	32.35	0.04	4833.28
			2/19/2016	31.68	31.73	0.05	4833.91
			2/24/2016	NA	31.80	0.00	4833.80
			2/29/2016	31.56	31.63	0.07	4834.03
			3/8/2016	NA	32.25	0.00	4833.35
			3/15/2016	NA	32.37	0.00	4833.23
			3/22/2016	NA	32.21	0.00	4833.39
MW-3	4866.6	40.00	3/29/2016	NA	32.21	0.00	4833.39
			4/5/2016	NA	32.42	0.00	4833.18
			4/19/2016	32.25	32.27	0.02	4833.35
			4/26/2016	NA	32.36	0.00	4833.24
			5/5/2016	NA	32.12	0.00	4833.48
			6/6/2016	32.10	32.14	0.04	4833.49
			6/20/2016	32.15	32.17	0.02	4833.45
			11/4/2015	35.61	36.52	0.91	4830.81
			12/3/2015	34.74	35.89	1.15	4831.63
			12/8/2015	34.77	35.62	0.85	4831.66
			12/22/2015	34.44	35.36	0.92	4831.98
			12/30/2015	35.07	35.93	0.86	4831.36
			1/13/2016	37.32	37.82	0.50	4829.18
			1/21/2016	33.70	34.78	1.08	4832.69
			1/27/2016	33.62	35.13	1.51	4832.68
			2/8/2016	33.47	35.88	2.41	4832.66
			2/15/2016	32.95	36.07	3.12	4833.04
			2/16/2016	32.98	36.16	3.18	4833.00
			2/17/2016	35.38	36.50	1.12	4831.00



**Table 4 - Gauging Data**

**Whiting Oil and Gas Corporation  
Nelson C-1  
Weld County, Colorado**

Well ID	Top of Casing Elevation (ft amsl)	Total Depth of Well (ft)	Date Gauged	Depth to Product (ft btoc)	DTW (ft btoc)	Product Thickness (ft)	Potentiometric Surface Elevation (ft)
			2/19/2016	33.80	35.09	1.29	4832.55
			2/24/2016	33.58	35.29	1.71	4832.68
			2/29/2016	33.46	35.37	1.91	4832.77
			3/8/2016	33.68	34.69	1.01	4832.72
			3/15/2016	33.65	33.70	0.05	4832.94
			3/22/2016	34.55	35.55	1.00	4831.85
			3/29/2016	34.48	35.38	0.90	4831.94
			4/5/2016	34.95	35.05	0.10	4831.63
			4/19/2016	34.01	34.71	0.70	4832.45
			4/26/2016	34.45	35.04	0.59	4832.03
			5/5/2016	35.37	36.11	0.74	4831.08
			6/6/2016	33.91	34.82	0.91	4832.51
			6/20/2016	33.75	35.32	1.57	4832.54
MW-4	4863.7	40.00	11/4/2015	NA	35.69	0.00	4828.01
			12/3/2015	NA	37.50	0.00	4826.20
			12/8/2015	NA	35.78	0.00	4827.92
			12/22/2015	NA	34.55	0.00	4829.15
			12/30/2015	NA	35.60	0.00	4828.10
			1/13/2016	NA	38.05	0.00	4825.65
			1/21/2016	NA	34.28	0.00	4829.42
			1/27/2016	NA	30.36	0.00	4833.34
			2/8/2016	NA	29.24	0.00	4834.46
			2/15/2016	NA	29.03	0.00	4834.67
			2/16/2016	NA	29.02	0.00	4834.68
			2/17/2016	NA	36.60	0.00	4827.10
			2/19/2016	NA	33.94	0.00	4829.76
			2/24/2016	NA	29.81	0.00	4833.89
			2/29/2016	NA	29.51	0.00	4834.19
			3/8/2016	NA	33.15	0.00	4830.55
			3/15/2016	NA	35.27	0.00	4828.43
			3/22/2016	NA	35.13	0.00	4828.57
			3/29/2016	NA	35.02	0.00	4828.68
			4/5/2016	NA	35.94	0.00	4827.76
			4/19/2016	NA	33.14	0.00	4830.56
			4/26/2016	NA	29.88	0.00	4833.82
			5/5/2016	NA	29.36	0.00	4834.34
			6/6/2016	NA	29.35	0.00	4834.35
			6/20/2016	NA	29.31	0.00	4834.39
MW-5	4868.0	40.00	2/15/2016	40.31	40.41	0.10	4827.67
			2/16/2016	39.95	40.09	0.14	4828.02
			2/17/2016	Dry	Dry	0.00	Dry
			2/19/2016	39.78	40.07	0.29	4828.16
			2/24/2016	38.60	39.19	0.59	4829.28
			2/29/2016	37.66	38.56	0.90	4830.16
			3/8/2016	36.66	37.95	1.29	4831.09
			3/15/2016	36.20	36.35	0.15	4831.77
			3/22/2016	35.95	37.80	1.85	4831.69
			3/29/2016	35.78	36.51	0.73	4832.08
			4/5/2016	NA	35.74	0.00	4832.26
			4/19/2016	35.65	38.30	2.65	4831.83
			4/26/2016	35.48	38.30	2.82	4831.97
			5/5/2016	35.52	35.53	0.01	4832.48
			6/6/2016	39.08	39.85	0.77	4828.77
			6/20/2016	37.22	38.46	1.24	4830.54
MW-6	4867.1	45.00	2/15/2016	35.32	36.60	1.28	4831.53
			2/16/2016	35.33	36.91	1.58	4831.46
			2/17/2016	35.95	36.14	0.19	4831.11
			2/19/2016	35.55	36.50	0.95	4831.36
			2/24/2016	35.30	37.55	2.25	4831.36
			2/29/2016	34.76	38.19	3.43	4831.67



**Table 4 - Gauging Data**

**Whiting Oil and Gas Corporation  
Nelson C-1  
Weld County, Colorado**

Well ID	Top of Casing Elevation (ft amsl)	Total Depth of Well (ft)	Date Gauged	Depth to Product (ft btoc)	DTW (ft btoc)	Product Thickness (ft)	Potentiometric Surface Elevation (ft)
			3/8/2016	34.44	39.14	4.70	4831.74
			3/15/2016	34.28	38.44	4.16	4832.00
			3/22/2016	33.92	39.90	5.98	4832.01
			3/29/2016	33.88	40.03	6.15	4832.01
			4/5/2016	34.02	39.58	5.56	4831.99
			4/19/2016	34.11	40.91	6.80	4831.66
			4/26/2016	33.80	38.87	5.07	4832.31
			5/5/2016	34.01	40.78	6.77	4831.76
			6/6/2016	33.94	40.80	6.86	4831.82
			6/20/2016	34.72	39.50	4.78	4831.44
MW-7	4862.6	40.00	2/15/2016	31.86	34.29	2.43	4830.26
			2/16/2016	30.00	33.03	3.03	4832.01
			2/17/2016	35.38	36.50	1.12	4827.00
			2/19/2016	30.26	32.22	1.96	4831.96
			2/24/2016	28.01	30.35	2.34	4834.13
			2/29/2016	27.75	29.91	2.16	4834.43
			3/8/2016	27.55	29.73	2.18	4834.62
			3/15/2016	27.61	29.90	2.29	4834.54
			3/22/2016	27.58	29.93	2.35	4834.56
			3/29/2016	27.55	29.95	2.40	4834.58
			4/5/2016	27.75	30.28	2.53	4834.35
			4/19/2016	27.89	27.91	0.02	4834.71
			4/26/2016	27.44	30.06	2.62	4834.65
			5/5/2016	27.81	29.09	1.28	4834.54
			6/6/2016	28.62	30.50	1.88	4833.61
			6/20/2016	28.10	29.61	1.51	4834.20
MW-8	4864.3	40.00	2/15/2016	NA	35.85	0.00	4828.45
			2/16/2016	NA	34.10	0.00	4830.20
			2/17/2016	NA	35.09	0.00	4829.21
			2/19/2016	NA	32.57	0.00	4831.73
			2/24/2016	NA	28.81	0.00	4835.49
			2/29/2016	NA	27.45	0.00	4836.85
			3/8/2016	NA	27.14	0.00	4837.16
			3/15/2016	NA	27.25	0.00	4837.05
			3/22/2016	NA	33.80	0.00	4830.50
			3/29/2016	NA	27.38	0.00	4836.92
			4/5/2016	27.70	27.73	0.03	4836.59
			4/19/2016	28.04	28.06	0.02	4836.26
			4/26/2016	27.72	27.75	0.03	4836.57
			5/5/2016	28.28	28.30	0.02	4836.02
			6/6/2016	28.46	28.52	0.06	4835.83
			6/20/2016	NA	27.83	0.00	4836.47
MW-9	4860.9	35.00	3/15/2016	NA	33.45	0.00	4827.45
			3/21/2016	NA	31.84	0.00	4829.06
			3/22/2016	NA	33.80	0.00	4827.10
			3/29/2016	NA	31.85	0.00	4829.05
			4/5/2016	NA	29.98	0.00	4830.92
			4/19/2016	NA	27.48	0.00	4833.42
			4/26/2016	NA	26.80	0.00	4834.10
			5/5/2016	NA	26.61	0.00	4834.29
			6/6/2016	NA	26.50	0.00	4834.40
			6/20/2016	NA	26.40	0.00	4834.50
MW-10	4867.7	39.00	3/15/2016	NA	Dry	0.00	Dry
			3/21/2016	NA	Dry	0.00	Dry
			3/22/2016	NA	Dry	0.00	Dry
			3/29/2016	NA	Dry	0.00	Dry
			4/5/2016	NA	39.12	0.00	4828.58
			4/19/2016	NA	38.19	0.00	4829.51
			4/26/2016	NA	37.78	0.00	4829.92
			5/5/2016	NA	37.58	0.00	4830.12
			6/6/2016	NA	37.35	0.00	4830.35
			6/20/2016	NA	37.32	0.00	4830.38



**Table 4 - Gauging Data**

**Whiting Oil and Gas Corporation  
Nelson C-1  
Weld County, Colorado**

Well ID	Top of Casing Elevation (ft amsl)	Total Depth of Well (ft)	Date Gauged	Depth to Product (ft btoc)	DTW (ft btoc)	Product Thickness (ft)	Potentiometric Surface Elevation (ft)
MW-11	4871.6	44.00	3/15/2016	NA	41.07	0.00	4830.53
			3/21/2016	NA	41.10	0.00	4830.50
			3/22/2016	NA	42.22	0.00	4829.38
			3/29/2016	NA	40.98	0.00	4830.62
			4/5/2016	NA	41.06	0.00	4830.54
			4/19/2016	NA	47.15	0.00	4824.45
			4/26/2016	NA	40.83	0.00	4830.77
			5/5/2016	NA	41.06	0.00	4830.54
			6/6/2016	NA	41.00	0.00	4830.60
MW-12	4870.1	38.00	6/20/2016	NA	41.08	0.00	4830.52
			3/15/2016	NA	Dry	0.00	Dry
			3/21/2016	NA	Dry	0.00	Dry
			3/22/2016	NA	Dry	0.00	Dry
			3/29/2016	NA	Dry	0.00	Dry
			4/5/2016	NA	40.09	0.00	4830.01
			4/19/2016	NA	39.46	0.00	4830.64
			4/26/2016	NA	39.28	0.00	4830.82
			5/5/2016	NA	39.16	0.00	4830.94
MW-13	4864.4	40.00	6/6/2016	NA	38.94	0.00	4831.16
			6/20/2016	NA	38.91	0.00	4831.19
			3/15/2016	NA	Dry	0.00	Dry
			3/21/2016	NA	38.86	0.00	4825.54
			3/22/2016	NA	39.35	0.00	4825.05
			3/29/2016	NA	37.37	0.00	4827.03
			4/5/2016	NA	35.84	0.00	4828.56
			4/19/2016	NA	33.26	0.00	4831.14
			4/26/2016	NA	32.39	0.00	4832.01
MW-14	4863.7	40.00	5/5/2016	NA	31.71	0.00	4832.69
			6/6/2016	NA	30.83	0.00	4833.57
			6/20/2016	NA	30.76	0.00	4833.64
			3/15/2016	NA	29.62	0.00	4834.08
			3/21/2016	NA	29.55	0.00	4834.15
			3/22/2016	NA	29.35	0.00	4834.35
			3/29/2016	NA	29.37	0.00	4834.33
			4/5/2016	NA	29.64	0.00	4834.06
			4/19/2016	NA	29.85	0.00	4833.85
MW-15	4861.4	34.00	4/26/2016	NA	29.51	0.00	4834.19
			5/5/2016	NA	29.79	0.00	4833.91
			6/6/2016	NA	29.73	0.00	4833.97
			6/20/2016	NA	29.94	0.00	4833.76
			3/15/2016	NA	35.15	0.00	4826.25
			3/21/2016	NA	33.75	0.00	4827.65
			3/22/2016	NA	34.15	0.00	4827.25
			3/29/2016	NA	31.69	0.00	4829.71
			4/5/2016	NA	30.14	0.00	4831.26
MW-16	4863.4	39.00	4/19/2016	NA	28.50	0.00	4832.90
			4/26/2016	NA	27.96	0.00	4833.44
			5/5/2016	NA	27.64	0.00	4833.76
			6/6/2016	NA	27.12	0.00	4834.28
			6/20/2016	NA	27.00	0.00	4834.40
			3/15/2016	NA	35.52	0.00	4827.88
			3/21/2016	NA	32.67	0.00	4830.73
			3/22/2016	36.31	36.34	0.03	4827.08
			3/29/2016	NA	30.70	0.00	4832.70
			4/5/2016	NA	29.65	0.00	4833.75
			4/19/2016	NA	29.19	0.00	4834.21
			4/26/2016	NA	28.98	0.00	4834.42
			5/5/2016	NA	29.18	0.00	4834.22
			6/6/2016	NA	29.27	0.00	4834.13
			6/20/2016	NA	29.30	0.00	4834.10



**Table 4 - Gauging Data**

**Whiting Oil and Gas Corporation  
Nelson C-1  
Weld County, Colorado**

Well ID	Top of Casing Elevation (ft amsl)	Total Depth of Well (ft)	Date Gauged	Depth to Product (ft btoc)	DTW (ft btoc)	Product Thickness (ft)	Potentiometric Surface Elevation (ft)
MW-17	4866.0	44.00	3/16/2016	NA	Dry	0.00	Dry
			3/21/2016	43.16	NA	0.84	Dry
			3/22/2016	44.45	45.53	1.08	4821.34
			3/29/2016	39.16	43.55	4.39	4825.98
			4/5/2016	36.62	42.32	5.70	4828.26
			4/19/2016	34.22	42.25	8.03	4830.21
			4/26/2016	33.39	42.16	8.77	4830.89
			5/5/2016	33.04	42.05	9.01	4831.19
			6/6/2016	32.71	41.94	9.23	4831.48
MW-18	4868.6	44.00	6/20/2016	36.13	43.14	7.01	4828.50
			3/16/2016	NA	38.87	0.00	4829.73
			3/21/2016	NA	37.72	0.00	4830.88
			3/22/2016	NA	38.10	0.00	4830.50
			3/29/2016	NA	37.55	0.00	4831.05
			4/5/2016	NA	37.74	0.00	4830.86
			4/19/2016	NA	37.87	0.00	4830.73
			4/26/2016	NA	37.55	0.00	4831.05
			5/5/2016	NA	37.79	0.00	4830.81
MW-19	4870.2	39.00	6/6/2016	NA	37.75	0.00	4830.85
			6/20/2016	NA	37.90	0.00	4830.70
			3/21/2016	NA	Dry	0.00	Dry
			3/22/2016	NA	Dry	0.00	Dry
			3/29/2016	NA	Dry	0.00	Dry
			4/5/2016	NA	Dry	0.00	Dry
			4/19/2016	NA	39.87	0.00	4830.33
			4/26/2016	NA	39.56	0.00	4830.64
			5/5/2016	NA	39.44	0.00	4830.76
MW-20	4867.0	39.00	6/6/2016	NA	39.20	0.00	4831.00
			6/20/2016	NA	39.18	0.00	4831.02
			3/21/2016	33.95	38.85	4.90	4832.09
			3/22/2016	38.35	40.21	1.86	4828.29
			3/29/2016	38.34	39.15	0.81	4828.50
			4/5/2016	33.52	38.88	5.36	4832.43
			4/19/2016	33.67	38.29	4.62	4832.42
			4/26/2016	33.26	38.05	4.79	4832.80
			5/5/2016	33.60	36.30	2.70	4832.87
			6/6/2016	33.85	38.85	5.00	4832.17
			6/20/2016	33.80	38.30	4.50	4832.32

NA - Not Applicable

DTW - Depth to Water

ft btoc - Feet Below Top of Casing

ft amsl - Feet Above Mean Sea Level



**Table 5 - PSH Removal**

**Whiting Oil and Gas Corporation  
Nelson C-1  
Weld County, Colorado**

Well ID	Date Gauged	Estimated PSH Recovered (gallons)	Cumulative PSH Recovered (gallons)
MW-1	Nov-15	0.00	0.00
	Dec-15	0.03	0.03
	Jan-16	0.00	0.03
	Feb-16	0.03	0.06
	Mar-16	0.00	0.06
	Apr-16	0.00	0.06
	May-16	0.00	0.06
	Jun-16	0.04	0.10
MW-2	Dec-16	0.03	0.03
	Jan-16	0.00	0.03
	Feb-16	0.17	0.20
	Mar-16	0.00	0.20
	Apr-16	0.01	0.21
	May-16	0.00	0.21
	Jun-16	0.04	0.25
MW-3	Dec-16	2.47	2.47
	Jan-16	2.02	4.49
	Feb-16	9.63	14.12
	Mar-16	1.93	16.05
	Apr-16	0.91	16.96
	May-16	0.48	17.44
	Jun-16	2.12	19.56
	Jul-16	4.50	24.06
	Aug-16	0.50	24.56
MW-4	Dec-16	0	0.00
	Jan-16	0.00	0.00
	Feb-16	0.00	0.00
	Mar-16	0.00	0.00
	Apr-16	0.00	0.00
	May-16	0.00	0.00
	Jun-16	0.00	0.00
	Jul-16	0.00	0.00
	Aug-16	0.00	0.00
MW-5	Jun-16	1.50	1.50
	Jul-16	7.00	8.50
	Aug-16	0.25	8.75
MW-6	Jun-16	6.98	6.98
	Jul-16	10.50	17.48
	Aug-16	0.25	17.73
MW-7	Jun-16	3.73	3.73
	Jul-16	10.50	14.23
	Aug-16	0.25	14.48
MW-17	Jun-16	9.03	9.03
	Jul-16	22.00	31.03
	Aug-16	1.00	32.03
MW-20	Jun-16	7.27	7.27
	Jul-16	36.00	43.27
	Aug-16	4.00	47.27
<b>Total</b>			<b>145.18</b>

PSH - Phase Separated Hydrocarbons

**Attachment 3**  
**Boring Logs**

# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Remington</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Joe Fletcher</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Direct Push</u>
BORING / WELL NUMBER: <u>MW-1</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>37'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4865.0'</u>	CASING: Diam. <u>4"</u> Length <u>20'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Gales</u>	DATE DRILLED: <u>June 30, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Very Fine Silty Clay, Dry, Loose, Trace Organic Matter Top 3", 10YR 6/3 Pale Brown, No Odor	0
4			0.0			6'	Sand, Fine to Medium Grained with Some Gravels < 5mm, Dry, Loose, 10YR 6/3 Pale Brown, No Odor	4
8			0.0			11'	Sandy Silt, Sand is Fine to Very Fine Grained, Slight Compaction, 10YR 5/6 Yellowish Brown, No Odor	8
12			0.0			12'6"	Same as Above with Trace Black Streaks	12
16			0.0			17'	Very Fine Sandy Silt, Compact but Crumbles with Fingers, Odor Present, 2.5Y 6/2 Light Brownish Gray, Moderate Odor	16
20			2.0			19'	Same as Above, Except Slightly Moist, Strong Odor	
			14.0			20'	Same as Above, Except 2.5Y 6/1 Gray	20
			22.7		20'-25'	22'	Same as Above, Except Hard, Trace Fragments of Siltstone	
			305					
			2,660					

## REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT





# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Remington</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Joe Fletcher</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Direct Push</u>
BORING / WELL NUMBER: <u>MW-1</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>37'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4865.0'</u>	CASING: Diam. <u>4"</u> Length <u>20'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>June 30, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			3,610					24
			3,548		25'-30'	25'	Silt to Siltstone, Water in Fractures, Trace Yellow Stains, Hard, Compact, Breaks with Fingers, 5Y 6/2 Light Olive Gray, Moist, Strong Odor	
			4,299			27'	Same as Above, Trace Black Minerals and Yellow Staining	
28			2,496					28
			2,838			29'	Same as Above, No More Black or Yellow	
			1,539		30'-35'	30'	Same as Above, Very Moist	
			960			31'	Same as Above, Except Less Odor, Moderate Odor	
			128.2					32
32			2.3			33'	Clay, Moist, Trace Orange Stains, Dense, Slight Plasticity, Stiff, 5Y 6/2 Light Olive Gray, Moderate Odor	
			264.3					
			160.1		35'-37'	36'	Siltstone, Very Hard, Very Compact, Dry, 5Y 6/2 Light Olive Gray< No Odor	36
36			1,940			37'		
			18.2				Bottom of Hole	
40								40
44								44

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Remington</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Joe Fletcher</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Direct Push</u>
BORING / WELL NUMBER: <u>MW-2</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4865.6'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>June 30, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Very Fine Silty Clay, Trace Organic Matter Top 3", Dry, Loose, 10YR 7/3 Very Pale Brown, No Odor	0
4						5'	Sandy Gravel, Sand Fine to Medium Grained, Gravel < 7mm, Dry, Loose, 10YR 6/4 Light Yellowish Brown, No Odor	4
8			0.0			10'	Fine Sand with Some Silt, Trace Biotite, Dry, Semi-Compact, 10YR 6/4 Light Yellowish Brown, No Odor	8
12			0.0			13'	Silt with Some Very Fine Sand, Trace Biotite, Semi-Compact, Slightly Moist, 10YR 5/4 Yellowish Brown, No Odor	12
16			0.0		15'-20'	15'	Silt, Trace Clay and Siltstone Fragments, Slightly Moist, Hard Compact Crumbles with Fingers, 10YR 5/4 Yellowish Brown, No Odor	16
			3.9			17'	Same as Above, Except Slight Odor	
			7.3			18'	Silt to Siltstone, Hard, Crumbly, Slightly Moist to Moist, Odor, 2.5Y 5/3 Light Olive Brown	
20			14.3		20'-25'	19'	Very Fine Sandy Silt with Trace Clay, Slight Plasticity, Loose, Odor, Slightly Moist, 5Y 5/3 Olive	20
			3,669			20'	Same as Above, Except Moist, Water in Fractures	
			3,252			21'	Same as Above, Except Harder with Trace Yellow Staining	
			4,245			22'	Silt to Siltstone, Hard, Crumbly, Very Moist, Water in Fractures, Trace	

## REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Remington</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Joe Fletcher</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Direct Push</u>
BORING / WELL NUMBER: <u>MW-2</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4865.6'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>June 30, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			365				Yellow Stains, 5Y 5/3 Olive, Strong Odor	24
			353.8			25'		
			3,009		25'-30'		Silt, Dense, Very Slight Plasticity, Very Moist to Wet, Red Staining Throughout, Fragments of Siltstone, 5Y 5/3 Olive, Strong Odor	
			3,791			27'		
			4,987			28'	Same as Above, Except Moist and Less Red Staining	28
28			5,965			29'	Silt to Siltstone, Hard, Dense, But Crumbly, Moist, Trace Yellow Stains, 5Y 5/2 Olive Gray, Strong Odor	
			8,754				Same as Above, Slightly Moist, Very Hard	
			3,836					
			1,354			33'		32
			17.8			34'	Same as Above, Except More Red Stains	
			1,297				Same as Above, Except No Red Stains	
			6,180					36
36						38'		
			3,177				Siltstone, Hard, Cemented/Compact, Dry, Gley1 5/10Y Greenish Gray, No Odor	
40			39.4			40'	Bottom of Hole	40
44								44

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Remington</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Joe Fletcher</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Direct Push</u>
BORING / WELL NUMBER: <u>MW-3</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>35'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4866.6'</u>	CASING: Diam. <u>4"</u> Length <u>18'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Gales</u>	DATE DRILLED: <u>July 1, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Very Fine Silty Clay, Trace Organic Matter Top 1', Dry, Loose, 10YR 6/3 Pale Brown, No Odor	0
4			0.0			8'	Sand(Fine to Medium) with Gravels < 5mm, Dry, Loose, 10YR 7/3 Very Pale Brown, No Odor	4
8			0.0			10'	Fine to Medium Sand with Trace Gravel < 3mm and Siltstone Fragments, Dry, Loose, Color Grades to 2.5Y 7/2 Light Gray, No Odor	8
12			0.0			12'	Fine Sand with Silt and Fragments of Siltstone, Dry, Semi-Compact, 5Y 6/3 Pale Olive, No Odor	12
16			0.0			14'	Silt to Siltstone, Slightly Moist, Trace Black Minerals, Dense, Crumbles with Fingers, 5Y 6/3 Pale Olive, No Odor	16
20			0.0			15'	Silt to Siltstone, Slightly Moist, Trace Black Minerals and Yellow Staining, Very Slight Odor, 5Y 6/3 Pale Olive	16
			0.0			17'	Same as Above, Except Trace Calcite Deposits and Yellow & Orange Staining	17
			20.4			18'6"	Silt to Siltstone, Hard, Dense but Crumbles, Trace Clay, Moist, Trace Yellow and Orange Staining, Very Slight Plasticity, 5Y 5/2 Olive Gray, Slight Odor	18
			28.7		20'-25'			20
			40.7					
			972					

## REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Remington</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Joe Fletcher</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Direct Push</u>
BORING / WELL NUMBER: <u>MW-3</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>35'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4866.6'</u>	CASING: Diam. <u>4"</u> Length <u>18'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Gales</u>	DATE DRILLED: <u>July 1, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			288.8		25'-30'			24
			1,989			25'		
			1,174			26'	Same as Above but Harder, More Compact	
			835				Same as Above but Back to Less Hard	
			786					28
28			1,409			29'		
			2,250			30'	Fine Sand with Silt and Fragments of Siltstone, Loose, Moist, Red and Yellow Stains, 5Y 5/2 Olive Gray, Strong Odor	
			3,138				Silt to Siltstone with Some Fine Sand, Hard, Compact, Moist, Red and Yellow Stains, 5Y 5/2 Olive Gray, Strong Odor	
			1,999					32
32			736.4			33'		
			69.4			34'	Silt/Siltstone, Hard, Compact, Moist, Water in Fractures, Trace Yellow Stains, 5Y 5/2 Olive Gray, Moderate Odor	
			119.3			35'	Same as Above, No Odor, Very Hard, Very Compact	
			37.2				Bottom of Hole	36
36								
								40
40								
								44
44								

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Reminton</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Joe Fletcher</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Direct Push</u>
BORING / WELL NUMBER: <u>MW-4</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>39'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4863.7'</u>	CASING: Diam. <u>4"</u> Length <u>22'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>June 23, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Silty Clay, Very Fine, Trace Organic Matter, Dry, Loose, 10YR 6/3 Pale Brown, No Odor	0
4			0.0			5'	Silt, Moist, Fine Grained, No Plasticity, No Odor, 10YR 5/4 Yellowish Brown	4
8						7'	Very Fine to Fine Sand with Some Gravel, Gravels < 3mm, Moist, Loose, No Odor, 10YR 5/4 Yellowish Brown	8
12			0.0			10'	Very Fine Sandy Silt, Moist, Slight Plasticity, Biotite(Trace), No Odor, 10YR 5/4 Yellowish Brown	12
12'6"							Same as Above, Except More Biotite, More Sand, No Plasticity	
16			0.0			15'	Fine Sandy Silt, Slightly Moist, Dense, Hard but Crumbles with Fingers, No Odor, 10YR 5/4 Yellowish Brown	16
18'			0.4				Same as Above, Slight Odor, 19.5' Changes Color to 5Y 5/3 Olive	
20			3.7			20'	Very Fine Sandy Silt, Slightly Moist, Hard but Crumbles with Fingers, Odor, 5Y 5/3 Olive	20
			20.6			21'	Same as Above, Except No Sand	
			377			22'	Same as Above, Evidence of Water in Fractures, 5Y 5/2 Olive Gray	

## REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

DRILLING COMPANY: Reminton

DRILLER: Joe Fletcher

DRILLING METHOD: Direct Push

BORE HOLE DIAMETER: 7 7/8"

SCREEN: Diam. 4" Length 20' Slot Size 0.010

CASING: Diam. 4" Length 22' Type Sch. 40 PVC

DATE DRILLED: June 23, 2016

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			2,725			23'		
			1,422			24'	Same as Above, Very Moist	24
			2,042			25'	Fine Sandy Silt, Loose, Moist, Trace Siltstone Fragments, 5Y 5/2 Olive Gray, Moderate Odor	
			2,100		25'-30'	26'	Same as Above, Hardens toward Bottom and More Compact, 5Y 5/2 Olive Gray	
			354			27'	Clayey Silt, Moderate Plasticity, Moist, Hard, Dense, Odor, 5Y 5/2 Olive Gray, Moderate Odor	
28			165				Very Fine Sandy Silt, Loose, Odor, 5Y 5/2 Olive Gray	28
			20.2			29'		
			321		30'-35'	30'	Same as Above, Plus Trace Yellow Staining	
			2,625			31'	Same as Above, Plus Trace Orange and Yellow Staining, Stronger Odor	
32			235			32'	Silt to Siltstone, Hard, Compact, Moisture in Fractures, Yellow and Orange Staining, 5Y 5/2 Olive Gray, Moderate Odor	32
			29.3				Same as Above, Except Looser, Slight Odor	
			2.7					
			3.1		35'-39'			
36			135.4			36'		36
			116.6				Same as Above, Except Harder	
			407.7			38'		
			5.5			39'	Same as Above, Very Hard, Very Compact, 5Y 6/2 Light Olive Gray, Dry, No Odor	
40							Bottom of Hole	40
44								44

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Ben</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-5</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4868.0'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>February 11, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Moist Organic Matter Top 1 Foot, Then Very Fine Clayey Silt, Loose Dry, No Odor, 10YR 7/3 Very Pale Brown	0
4			0.3			5'	Very Fine Sandy Silt with Trace Clay and Some Gravel, Gravel Ranges from 3mm -Cobble Size, Slightly Moist, Very Loose, 10YR 7/4 Very Pale Brown, Grades to more Gravels at 7'6", No Odor	4
8			0.2			10'	Gravelly Sand, Sand Medium to Coarse, Gravels up to Cobble Size, Loose, Slightly Moist, 10YR 7/4 Very Pale Brown	8
12			0.0			13'6"	Fine Sand with Some Gravels and Silt, More Compact, Color Changes to Lenses of Greenish Hue, No Odor, 10YR 5/4 Yellowish Brown	12
16					15'-20'	15'	Sandy Silt to Sand, Very Fine to Medium Grained, Silt is Compact to Medium Compact, Dry, No Odor, 5Y 7/2 Light Gray, Mottling and Staining, Likely Petroleum Product	16
20			0.4			20'	Same as Above, Some Odor and Petroleum Staining, Slightly Moist, More Compact, 5Y 6/3 Pale Olive	20

## REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT

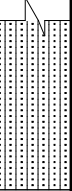
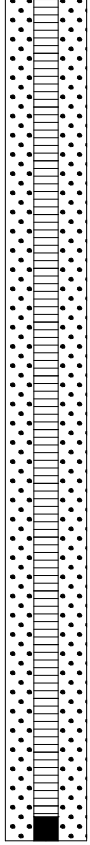




# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Ben</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-5</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4868.0'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>February 11, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			18.2					24
26						26'	Changes to Very Hard/Compact Siltstone, Still Staining & Odor, 5Y 6/3 Pale Olive, More Moist	28
28			8.1					28
30					30'-35'	30'	Same as Above, More Moist to Wet, Water Droplets Observed in Fractures, More Dark Petroleum Staining and Strong Odor 5Y 6/3 Pale Olive	32
32			475					32
34					35'-38'6"	35'	Same as Above, Strong Odor 5Y 5/3 Olive	36
36								36
38						39'6"		38
40			740 25.9		39'6"-40'	40'	Dark Green Siltstone, Moist, No Odor, Gley 1.5/5G Greenish Gray Bottom of Hole	40
42								42
44								44

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Ben</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-6</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>45'</u>	SCREEN: Diam. <u>4"</u> Length <u>25'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4867.1'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>February 12, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Top Foot is Organic Matter, Moist, Then Very Fine Clayey Silt, Dry, Loose, No Odor, 10YR 5/4 Yellowish Brown	0
4			1.8			5'	Same as Above, Grades to More Fine Sand, Slightly Moist, No Odor, 10YR 7/3 Very Pale Brown	4
8			1.9			10'	Fine to Medium Sand w/Some Silt and Gravel, Gravel Fine to Cobbles, 10YR 6/4 Light Yellowish Brown, Slightly Moist to Dry, Loose to Slightly Compact, No Odor	8
12			1.1			15'	Fine Sand w/Some Gravel(Small), 10YR 6/5 Brownish Yellow, Trace Mineralization of Biotite, Partially Compact to Loose, Dry, Hard, No Odor, More Compact Toward Bottom with Slight Moisture	12
16			21.1		15'-20'	20'	Same as Above, 10YR 6/4 Light Yellowish Brown	16
20					20'-25'	22'	Fine Sandy Silt to Siltstone, Hard, Compact, Moist, No Odor, 10YR 6/	20

## REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Ben</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-6</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>45'</u>	SCREEN: Diam. <u>4"</u> Length <u>25'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4867.1'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Gales</u>	DATE DRILLED: <u>February 12, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			75.8			25'	2 Light Brownish Gray	24
28			1,024		25'-30'		Siltstone Top 1.5' Then Grades to More Medium Grained Sand Mixed w/Siltstone, Strong Odor 5Y 6/2, Light Olive Gray, Moist, Lots of Staining, Hard to Very Compact	28
32			1,022		30'-35'			32
36			102		35'-40'	35'	Same as Above, Except Evidence of Water Droplets Between Fractures	36
40			50.3		40'-43'	40'	Same as Above, Except Slight Odor	40
44			5.6		43'-45'	43'	Dark Green Hard, Compact Siltstone, Gley 1 5/10GY Greenish Gray	44
						45'	Bottom of Hole	

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Ben</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-7</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4862.6'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>February 12, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Top Foot is Organic Material, Moist, Then to Very Fine Silty Clay, Dry, Loose, No Odor, 10YR 6/3 Pale Brown	0
4			0.7			5'	Same as Above, Except 10YR 7/4 Very Pale Brown	4
8			0.7			7'6"	Gravelly Sand with Silt, Gravels 3mm-Cobbles, Dry, Loose, No Odor, 10YR 6/4 Light Yellowish Brown Grades to Fine Sandy Silt, Hard, Trace Gravels, Dry, No Odor	8
						8'6"		
12			0.8			10'	Gravelly Sand, Dry, Loose, Gravels 3mm to Cobbles, Grades to Hard, Iron Stains, No Odor	12
16			3.1			13'	Changes to Compact, Very Fine Sandy Silt, Trace Purple Flakes, No, Odor, 10YR 6/4 Light Yellowish Brown	16
20					20'-25'	19'6"	Same as Above, Except Changes Color to 5Y 5/2 Olive Gray Same as Above with Odor and Product Staining, 5Y 6/2 Light Olive Gray, Changes Color at 24' to 5Y 5/3 Olive	20
						20'		

## REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Ben</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-7</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4862.6'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>February 12, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			447.8		25'-30'	25'		24
28			1,161		30'-35'	30'	Same as Above, Strong Odor, Product Staining, Wet Starting at 28', 5Y 6/3 Pale Olive	28
32			199.8			35'	Same as Above, 5Y 5/3 Olive, Wet	32
36					38'-40'	38'6"	Silty Sand, Sand Medium to Coarse, Wet, Loose, Less Odor but Still Some	36
40			49.5 9.0			40'	Changes Color to Dark Green, Harder, No Odor	40
44							Bottom of Hole	44

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Ben</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-8</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4864.3'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>February 12, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Moist, Organic Matter Top Foot and a Half, Then Silty Clay, Dry, Loose, No Odor, 10YR 7/3 Very Pale Brown	0
4			1.4					4
8			1.5			8'6"	Gravelly Sand, Sand Medium to Coarse, Gravel up to Cobble Size, Hard, Slightly Compact, No Odor, 10YR 6/4 Light Yellowish Brown, Dry	8
12			3.0		10'-15'	11'	Changes to 5Y 6/3 Pale Olive, Hard, Compact, No Gravel, Dry, No Odor	12
16						13'	Changes to 2.5Y 6/4 Light Yellowish Brown, Very Hard, Very Compact, Fine Grained, Sandy Siltstone	
					15'-20'	15'	Same as Above, 10YR 6/2 Light Brownish Gray	16
			1,629			18'	Medium to Coarse Sand with Some Silt, Looser, Odor Present, Moist, 2.5Y 6/2 Light Brownish Gray	
20					20'-25'	20'	Same as Above, Slightly Compact, 5Y 6/2 Olive Gray, Strong Odor, Staining	20

## REMARKS:
















THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Ben</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-8</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4864.3'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Gales</u>	DATE DRILLED: <u>February 12, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			1,240		25'-30'	23'	Very Hard, Very Compact Siltstone, Wet, 5Y 5/3 Olive, Odor is Strong, Petroleum Stains	24
28			1,242		30'	25'	Medium to Coarse Sand with Some Silt/Siltstone, Slightly Compact, Strong Odor, Lots of Staining, Wet, 5Y 6/2 Light Olive Gray	28
32			759		35'-37'6"	30'	Same as Above, Slight Odor, Wet	32
36			702		37'6"-40'	37'6"	Changes to Dark Green, Hard, Siltstone, No Odor	36
40			10.3		40'	40'	Bottom of Hole	40
44								44

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-9</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>35'</u>	SCREEN: Diam. <u>4"</u> Length <u>15'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4860.9'</u>	CASING: Diam. <u>4"</u> Length <u>20'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Gales</u>	DATE DRILLED: <u>March 8, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	10YR 5/3 Brown, Very Fine Silty Clay, Dry, Loose, Trace Organic Matter Top 6", No Odor	0
4			2.0					4
8			4.9			7'6"	10YR 7/3 Very Pale Brown, Fine Sand with Trace Gravels and Silt, Dry, Loose, No Odor, Gravels up to 4mm in Size	8
12			6.4		10'-15'	10'	Silt to Siltstone, Medium Compaction, Trace Minerals of Biotite	12
16					15'-20'	13'	Fine Sand Mixed with Silt/Siltstone, Hard, More Compact, No Odor, Changes Color to 10YR 5/4 Yellowish Brown	16
20			1.4			17'	Very Compact, Hard, Dense, Siltstone, Trace Minerals of Biotite, Slightly Moist, No Odor, 10YR 6/4 Light Yellowish Brown	
						20'	Same as Above, Trace Brown Stains	20

## REMARKS:

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











# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-9</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>35'</u>	SCREEN: Diam. <u>4"</u> Length <u>15'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4860.9'</u>	CASING: Diam. <u>4"</u> Length <u>20'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 8, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			1.5			22'6"	Siltstone, 2.5Y 6/1 Gray, Hard, Compact, But Crumbles in Fingers, Yellow Staining, No Odor, Water, Very Moist, Droplets between Fractures	24
28			1.4			25'	Same as Above, More Yellow Stains, Also Reddish Brown Stains (Iron Staining), No Odor, Wet	28
32			1.1		30'-35'	33'	Gley 1 5/10G Greenish Gray, No Odor, Hard, Dry, Compact	32
36						34'6"	Change to 10YR 7/2 Light Gray, Fine-Medium Grained Sand with Trace Gravels <3mm, Dry to Slightly Moist, No Odor, Mostly Compact but Breaks with Fingers	36
40						35'	Bottom of Hole	40
44								44

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-10</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4867.7'</u>	CASING: Diam. <u>4"</u> Length <u>20'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 8, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Organic Matter Top 1', Then Fine, Dry, Loose, Silty Clay, No Odor, 10YR 6/3 Pale Brown	0
4			2.1			6'6"	Sand, Fine to Coarse with Some Gravels <5mm, Trace Cobbles & Rock Fragments, Dry, Loose, 10YR 8/3 Very Pale Brown	4
8			2.5			8'	Dry, Hard, Compact, 10YR 6/4 Light Yellowish Brown, Fine Sandy Silt, Trace Minerals, No Odor	8
12			2.1			10'	Very Fine Sandy Silt to Siltstone, Trace Minerals of Biotite, Medium Compaction but Crumbles with Fingers, Dry, 10YR 6/4 Light Yellowish Brown, No Odor	12
16					15'-20'	12'6"	Same as Above, Except More Compact and Hard, Trace Purple Flecks, No Odor	
20			2.9			15'	Fine Sand with Silt, 10YR 6/6 Brownish Yellow, Dry, Semi-Compact but Crumbles Easily, Trace Minerals Biotite and Purple Flecks, No Odor	16
						17'6"	Compact, Silt with Trace Very Fine Sand, 10YR 5/4 Yellowish Brown, No Odor, Dry	
						20'	Very Fine Sandy Silt to Siltstone, Hard, Platey, Compact, Dry, Trace Biotite, Purple Flecks, 10YR 6/4 Light Yellowish Brown, Grades to 10YR 5/4 Yellowish Brown toward Bottom, Smeared on Spoon but No Visible Moisture, No Odor	20

## REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-10</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4867.7'</u>	CASING: Diam. <u>4"</u> Length <u>20'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 8, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			1.9			25'	Silt to Siltstone, Trace Very Fine Sand, Slightly Moist at Top to Moist at Bottom, Trace Minerals and Yellow Staining, Compact but Crumbly, Top 2.5Y 6/3 Light Yellowish Brown, Grades to 2.5Y 5/2 Grayish Brown, No Odor	24
28			3.0			30'		28
32			4.4		30'-35'	35'	Silt to Siltstone, Trace Very Fine Sand, Moist, Trace Yellow and Reddish Brown Staining, 5Y 5/2 Olive Gray, Hard, Compact No Odor	32
36					35'-40'		Same as Above, Very Hard, Very Compact	36
40			0.9			40'	Bottom of Hole	40
44								44

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-11</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>45'</u>	SCREEN: Diam. <u>4"</u> Length <u>25'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4871.6'</u>	CASING: Diam. <u>4"</u> Length <u>22'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 8-9, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Organic Matter First Foot, Then Very Fine Silty Clay, Dry, Loose, 10YR 6/4 Light Yellowish Brown, Trace Calcium Carbonate, No Odor	0
4			1.6					4
8			2.0			8'	Sand, Very Fine to Coarse, Trace Gravels and Rock Fragments, Dry, Loose, 10YR 6/4 Light Yellowish Brown, Grades to Hard Compact, No Odor	8
12			1.1			10'	Sand, Fine to Coarse, Trace Gravels, Medium Compaction but Crumbles with Fingers, 10YR 6/4 Light Yellowish Brown, Trace Biotite, Grades to Hard @ 14', No Odor	12
16					15'-20'	15'	Sand, Medium to Coarse, Some Silt & Siltstone Fragments, Dry, 10YR 6/4 Light Yellowish Brown, Some Compaction but Mostly Loose, Trace Biotite, No Odor	16
20			2.2		20'-25'	17'	Fine Sandy Silt to Siltstone, Hard, Compact 7.5YR 6/4 Light Brown, Trace Biotite and Gravels <3mm, Dry, No Odor	20
						21'	Sand, Medium to Coarse, Dry, Fairly Loose/A Little Compact, 10YR 5/6 Yellowish Brown, No Odor	

## REMARKS:


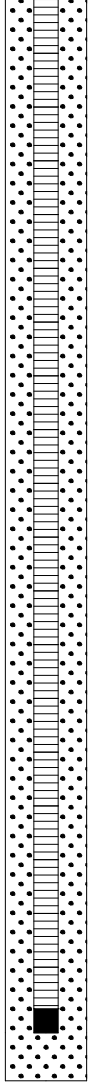



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# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-11</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>45'</u>	SCREEN: Diam. <u>4"</u> Length <u>25'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4871.6'</u>	CASING: Diam. <u>4"</u> Length <u>22'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 8-9, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			18.4		25'-30'	23'	Fine Sandy Silt to Siltstone, Compact Hard, 10YR 5/6 Yellowish Brown, Dry, Trace Biotite, No Odor	24
28			21.6			25'	Hard, Compact, Siltstone, Water Droplets in Fractures, 10YR 6/4 Light Yellowish Brown, Trace Biotite, Grades to Very Hard, 10YR 5/6 Yellowish Brown with Black Streaks that Appear to be a Mineral Vein, No Odor	28
32			7.3			31'	Very Hard, Very Compact, Siltstone with Some Fine-Medium Sand, 2.5Y 6/2 Light Brownish Gray, No Odor, Slightly Moist last 0.5' with Yellow Staining	32
36			5.2			35'	Silt to Siltstone w/Fine Sand, Compact but Crumbly, Yellow Staining throughout, Moist to Very Moist, Water Droplets in Fractures, 2.5Y 6/2 Light Yellowish Gray, No Odor	36
40			1.0		40'-45'			40
44						45'	Bottom of Hole	44

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-12</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4870.1'</u>	CASING: Diam. <u>4"</u> Length <u>20'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 9, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Organic Matter Top Foot, Then Very Fine Silty Clay, Dry, Loose, No Odor, 10YR 6/3 Pale Brown	0
4			1.7			5'	Silty Clay, Dry, Loose, No Odor, Grades to 10YR 7/3 Very Pale Brown	4
8			2.3			13'	Very Fine Sandy Silt w/Some Consolidated Siltstone Fragments, Dry, 10YR 6/4 Light Yellowish Brown, No Odor, Trace Gravels <3mm	8
12			3.1			15'	Fine-Medium Grained Sand with Some Gravels, Dry, Loose to Semi-Consolidated, Trace Crystals of Calcite, No Odor, 10YR 6/4 Light Yellowish Brown	12
16			3.3		15'-20'	17'	Grades to More Consolidated, No Gravels, 10YR 5/6 Yellowish Brown, Compact, Hard, Trace Reddish Iron Staining, Trace Calcite Crystals, Dry, No Odor	16
20					20'-25'	20'	Silt to Siltstone with Trace Fine Sand, 2.5Y 6/3 Light Yellowish Brown, Hard, Compact, Dense, No Odor, Slight Moisture	20

## REMARKS:


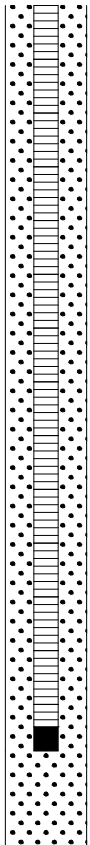


THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-12</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4870.1'</u>	CASING: Diam. <u>4"</u> Length <u>20'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Gales</u>	DATE DRILLED: <u>March 9, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			3.4			23'	Siltstone with Trace Very Fine Sand, 5Y 6/2 Light Olive Gray, Trace Biotite and Yellow Stains, Very Compact, Hard, Slight Moisture, No Odor	24
						25'	Silt to Siltstone with Some Fine Sand, Hard, Compact, Trace Biotite and Yellow Staining, Moist, 2.5Y 6/1 Gray, No Odor	
28			2.7			30'	Same as Above, Except more Yellow Staining and more Moist	28
32			2.7			35'	Same as Above, Except 5Y 6/2 Light Olive Gray	32
36			0.9		35'-40'	40'	Bottom of Hole	36
40								40
44								44

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-13</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4864.4'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 10, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Very Fine Silty Clay, Trace Organic Matter, Dry, Loose, No Odor, 10YR 7/3 Very Pale Brown	0
4			1.1			6'	Gravelly Sand, Sand is Medium to Coarse, Gravels 2mm-7mm and Trace Rock Fragments, Trace Silt, Dry, Loose, No Odor, 10YR 7/4 Very Pale Brown	4
8			1.9		10'-15'	13'6"	Sandy Silt with Trace Gravels, Sand is Fine to Medium Grained, Gravels <4mm, Hard, Compact, No Odor, 5Y 6/2 Light Olive Gray	8
12			1.9		15'-20'	15'	Fine Sandy Silt to Siltstone, Hard, Compact, Semi-Consolidated, Dry, No Odor, 5Y 6/2 Light Olive Gray	12
16			4.1			18'	Same as Above, Except More Consolidated, Slightly Moist, Very Hard, Dense	16
20						20'	Sandy Silt, Sand Very Fine to Medium Grained, Hard, Compact but Crumbly, Trace Reddish Staining Starting at 22', Moist to Very Moist, No Odor	20

## REMARKS:

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# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-13</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4864.4'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 10, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			3.8			25'		24
							Same as Above, Except Wet, Grades to More Compact at 27', 5Y 5/2 Olive Gray, No Odor	
28			2.8			30'		28
							Sandy Silt with Some Clay, Sand Fine to Medium Grained, Slight Plasticity, Compact but Soft and Crumbly, Wet, Trace Red Staining, Appears to be Iron Stains, No Odor, 5Y 6/2 Light Olive Gray	
32			1.2			36'		32
							Sand, Medium to Coarse Grained, Trace Gravel <5mm, Semi-Loose, Breaks Easily with Fingers, Dry to Slightly Moist, No Odor, 10YR 7/2 Light Gray	
36			2.2		35'-40'	40'		36
							Bottom of Hole	
40								40
44								44

REMARKS:

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# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-14</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4863.7'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 10, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Trace Organic Matter Top 6", Sand with Gravel, Sand Medium to Coarse, Gravel <7mm, Some Silt and Clay, Dry, Loose, No Odor, 10YR 6/3 Pale Brown	0
4			2.6			5'	Gravelly Sand, Trace Cobbles and Rock Fragments, Dry, Loose, No Odor, 10YR 7/3 Very Pale Brown, Sand Very Coarse	4
8			3.6			11'	Fine Sandy Silt to Siltstone, Hard, Compact, Semi-Consolidated but Crumbly, Trace Black Minerals(Biotite) and Purple Flecks, Slightly Moist, No Odor, 10YR 5/4 Yellowish Brown	8
12			5.1		10'-15'	15'	Same as Above, Except No Purple Flecks, Moist	12
16			6.2			21'	Fine Sand with Silt and Pieces of Siltstone, Very Hard, Very Compact, Biotite- Trace, Trace Gravels <4mm, Trace Yellow Staining, Moist, No	16
20					20'-25'			20

## REMARKS:













THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-14</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4863.7'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Gales</u>	DATE DRILLED: <u>March 10, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			7.2			25'	Odor, 10YR 6/2 Light Brownish Gray	24
28			4.4				Same as Above, except 5Y 6/3 Pale Olive	28
32			14.2		30'-35'	30'	Same as Above, Some Yellow and Red Staining, Very Slight Odor, Wet, Slight Plasticity, 5Y 5/3 Olive	32
36			2.1		35'-40'	35'	Silty Clay, Wet, Trace Yellow Staining, Medium Plasticity, No Odor, 5Y 6/3 Pale Olive	36
40						40'	Bottom of Hole	40
44								44

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-15</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>35'</u>	SCREEN: Diam. <u>4"</u> Length <u>15'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4861.4'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Gales</u>	DATE DRILLED: <u>March 11, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'		0
4			2.4				Silty Clay, Trace Organic Matter, Dry, Loose, No Odor, 10YR 7/3 Very Pale Brown	4
8			2.4			7'	Grades to Sand with Gravel, Sand is Very Fine to Medium Grained, Trace Gravel is <5mm, Dry, Loose, No Odor, 10YR 6/4 Light Yellowish Brown, Grades to Hard, More Compact at 8.5'	8
12			3.7			12'6"	Fine Sandy Silt, Trace Consolidated Siltstone Fragments, Hard, Compact but Breaks with Fingers, Trace Minerals of Biotite, Very Slight Moisture around 14- 15', 10YR 6/4 Light Yellowish Brown, No Odor	12
16					15'-20'			16
20			3.7		20'-25'	19'	Very Fine Sandy Silt to Siltstone, Hard, Compact, Semi-Consolidated, Slight Odor, Slight Moisture, 2.5Y 6/2 Light Brownish Gray	20
						20'	Silt to Siltstone, Moist, Hard, Compact, Semi-Consolidated, Red Staining, Odor Starting at 23', 5Y 5/2 Olive Gray	

## REMARKS:

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# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-15</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>35'</u>	SCREEN: Diam. <u>4"</u> Length <u>15'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4861.4'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 11, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			318.8		25'-30'	25'	Same as Above, Yellow & Red Staining, Odor, Very Moist to Wet, 5Y 5/2 Olive Gray	24
28			399		30'-34'6"	30'	Same as Above, Wet	28
32			247		34'-35'	34'	Siltstone, Hard, Compact to Consolidated, Dry, Gley1 5/5G Greenish Gray	32
36			5.0			34'6"-35'	Sandy Silt with Trace Gravels <3mm, Dry to Slightly Moist, Crumbly, 5Y 5/3 Olive	36
40							Bottom of Hole	40
44								44

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-16</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4863.4'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 11, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'		0
4			2.3			5'	Silty Clay with Trace Gravels and Organic Matter, Dry, Loose, No Odor, 10YR 7/3 Very Pale Brown	4
8			2.9			7'	Gravelly Sand, Sand is Medium to Coarse, Gravels <3mm, Trace Rock Fragments, Dry, Loose, No Odor, 10YR 6/4 Light Yellowish Brown	8
12			3.3		10'-15'	10'	Fine Sandy Silt, Trace Gravels and Rock Fragments, Harder than Above with Pieces of Consolidated Siltstone, Dry, No Odor, 10YR 6/4 Light Yellowish Brown	12
16					15'-20'	15'	Sandy Silt, Sand Very Fine to Fine, Trace Biotite, Hard but Breaks Easily, Grades to More Compact at 12.5', Dry, No Odor, 10YR 5/6 Yellowish Brown	16
20			70.6		20'-25'	20'	Same as Above, Odor Starting at 17', Grades to Very Hard, Very Compact at 18', Trace Biotite, 10YR 5/4 Yellowish Brown	20
							Sandy Silt, Moist, Odor, Hard, Semi-Compact, 10YR 5/4 Yellowish Brown	

## REMARKS:
















THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-16</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4863.4'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 11, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			1,069		25'-30'	22'6"	Very Hard, Very Compact Semi-Consolidated Silt to Siltstone, Very Moist, Odor, 5Y 5/3 Olive	24
28			1,301		30'-35'	30'	Same as Above, Except Wet, Strong Odor, Red Staining, 5Y 5/2 Olive Gray	28
32			618.9		35'-37'6"	37'6"	Same as Above, Red & Yellow Staining	32
36			594		37'6"-40'	40'	Siltstone, Wet, Hard, Compact, Mostly Consolidated, No Odor, Gley1 4/10GY Dark Greenish Gray	36
40			26.3				Bottom of Hole	40
44								44

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-17</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>45'</u>	SCREEN: Diam. <u>4"</u> Length <u>25'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4866.0'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Gales</u>	DATE DRILLED: <u>March 15, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Organic Matter, Moist for Top Foot, Then Dry, Loose, Silty Clay with Trace Organic Matter, 10YR 7/3 Very Pale Brown, No Odor	0
4			0.5			7'	Grades to Gravelly Sand, Sand is Fine Grained, Gravels <5mm, Dry, Loose, No Odor, 10YR 7/4 Very Pale Brown	4
8			0.8			10'	Gravelly Sand w/Silt, Sand is Very Fine to Fine, Trace Gravels <3mm, Dry, Semi Hard but Breaks Easily, 10YR 5/6 Yellowish Brown, No Odor	8
12			1.1			13'	Fine Sandy Silt, Hard, Compact, Trace Biotite, Trace Siltstone Fragments, Dry, 10YR 5/6 Yellowish Brown, No Odor	12
16						17'	Silt to Siltstone, Very Hard, Very Compact to Consolidated, Trace Biotite, 10YR 5/6 Yellowish Brown, Dry, No Odor	16
20			4.7		20'-25'	20'	Same as Above, Except Slight Odor	20

## REMARKS:

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# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-17</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>45'</u>	SCREEN: Diam. <u>4"</u> Length <u>25'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4866.0'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 15, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			15.2		25'-30'	22'6"	Siltstone, Very Hard, Dense, Consolidated, Odor, Slightly Moist, 2.5Y 6/2 Light Brownish Gray	24
28			970.6		30'-35'	30'	Silt to Siltstone, Hard, Compact, Flakey with Siltstone Parts, Moist to Wet, Trace Biotite, Odor, 2.5Y 6/2 Light Brownish Gray	28
32			1,470				Same as Above, Plus Yellow and Red Staining and Strong Odor	32
36			217.6		40'-42'	42'		36
40			385.4		42'-45'	42'	Silt to Siltstone, Hard, Compact to Consolidated, Flakey, Moist, No Odor, Gley1 4/5G Dark Greenish Gray	40
44			44			45'	Bottom of Hole	44

REMARKS:

THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT



# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-18</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>45'</u>	SCREEN: Diam. <u>4"</u> Length <u>25'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4868.6'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galle</u>	DATE DRILLED: <u>March 15, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Organic Matter Top Foot, Then Very Fine Silty Clay, Dry, Loose, 10YR 7/3 Very Pale Brown, No Odor	0
4			0.2					4
8			0.5			8'	Grades to Gravelly Sand, Sand is Fine-Medium Grained, Gravel is <3mm, 10YR 7/4 Very Pale Brown, Dry, Loose, No Odor	8
						9'	Grades to Very Fine Sandy Silt, Hard, Compact, Trace Biotite, No Odor, 10YR 6/4 Light Yellowish Brown	
						10'	Same as Above, Grades to Very hard, Semi-Consolidated at 12.5'	
12			3.1					12
16					15'-20'			16
			12.9					
20					20'-25'	20'	Same as Above, Except Slightly Moist	20
						22'	Silt to Siltstone, Very Hard, Compact, Slight Odor, Moist, 10YR 6/2	

## REMARKS:

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# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-18</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>45'</u>	SCREEN: Diam. <u>4"</u> Length <u>25'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4868.6'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 15, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			32.4		25'-30'	25'	Light Brownish Gray, Trace Biotite, Semi-Consolidated to Consolidated	24
28			7.9			30'	Same as Above, Strong Odor, Wet, Yellow Staining, Grades Color to 5Y 6/2 at 29' Light Olive Gray	28
32			0.5			35'	Silt to Siltstone, Hard, Compact but Crumbly, Trace Biotite, Yellow Staining Increases with Depth, Very Moist to Wet, Odor, 5Y 6/2 Light Olive Gray	32
36			0.5			40'	Same as Above, Except Consolidated, Slight Odor, Lots of Yellow Staining	36
40			0.0		40'-45'	45'	Clayey Silt, Hard, Crumbly, Yellow Staining, But No Odor, Wet, Slight Plasticity, 5Y 6/2 Light Olive Gray	40
44							Bottom of Hole	44

REMARKS:

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# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-19</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4870.2'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 16, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Moist, Organic Matter Top 1.5', Then Very Fine Silty Clay, Dry, Loose, No Odor, 10YR 7/4 Very Pale Brown	0
4			0.0			4'	Sandy Silt, Hard, Compact, Trace Calcium Carbonate Deposits, Dry, No Odor, 10YR 7/4 Very Pale Brown	4
8			0.0			6'	Silty Sand, Sand Very Fine to Fine Grained, Trace Gravels < 3mm, Dry, Trace Siltstone Fragments, No Odor, 10YR 6/4 Light Yellowish Brown, Grades to Hard/Compact at 9'	8
12			0.0			10'	Silt/Siltstone, Hard, Compact, but Crumbly, Trace Biotite, 10YR 5/4 Yellowish Brown, Dry, No Odor	12
16			0.0		15'-20'			16
20			0.0		20'-25'	19'	Gravelly Sand, Sand is Fine Grained, Gravels < 5mm, Trace Silt and Siltstone Fragments, Moist, No Odor, 10YR 5/6 Yellowish Brown	20
						20'	Silt to Siltstone with Some Fine Sand, Moist, Hard, Compact, but Crumbly, Trace Gravels < 3mm and Biotite, No Odor, 10YR 5/4 Yellowish Brown	

## REMARKS:

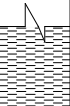
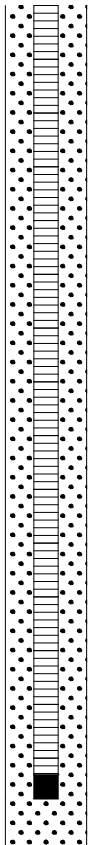


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# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-19</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4870.2'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 16, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			2.5					24
28			1.5			28'	Same as Above, but Changes to 5Y 6/2 Light Olive Gray, No Odor	28
32			0.0			30'	Same as Above, but Very Moist to Wet, Very Slight Odor, Trace Yellow Stains	32
36			0.2		35'-40'	35'	Siltstone, Very Hard, Very Compact, Wet, Trace Yellow Stains, No Odor, 5Y 6/2 Light Olive Gray	36
40						40'	Bottom of Hole	40
44								44

REMARKS:

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# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-20</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4867.0'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Gales</u>	DATE DRILLED: <u>March 16, 2016</u>

PAGE 1 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
0						0'	Organic Matter Top Foot, Then Very Fine Silty Clay, Dry, Loose, No odor, 10YR 7/3 Very Pale Brown	0
4			0.0			5'	Gravelly Sand, Sand Fine at Top and Grades to Medium at Bottom, Gravels 3-7mm, Dry, Loose, No Odor, Some Silt, 10YR 6/4 Light Yellowish Brown	4
8			0.0					8
12			0.0			14'	Silt with Some Fine Sand and Trace Gravels < 3mm, Hard, Compact, 5Y 6/3 Pale Olive, Dry, No Odor	12
16			0.0		15'-20'	15'	Silt to Siltstone, Hard, Compact and Semi-Consolidated, Trace Fine Sand and Biotite, Crumbles Easily to Siltstone Fragments, Trace Yellow and Purple Stains, 5Y 6/2 Light Olive Gray, Slightly Moist, No Odor	16
20						22'	Same as Above, Except Wet & More Yellow Staining, 5Y 5/3 Olive,	20

## REMARKS:

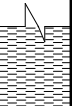



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# SOIL BORING / MONITORING WELL LOG

PROJECT: <u>Whiting Oil</u>	DRILLING COMPANY: <u>Drilling Engineers</u>
PROJECT NUMBER: <u>701530.020.04</u>	DRILLER: <u>Rob</u>
CLIENT: <u>Whiting Oil &amp; Gas</u>	DRILLING METHOD: <u>Hollow Stem Auger</u>
BORING / WELL NUMBER: <u>MW-20</u>	BORE HOLE DIAMETER: <u>7 7/8"</u>
TOTAL DEPTH: <u>40'</u>	SCREEN: Diam. <u>4"</u> Length <u>20'</u> Slot Size <u>0.010</u>
SURFACE ELEVATION: <u>4867.0'</u>	CASING: Diam. <u>4"</u> Length <u>23'</u> Type <u>Sch. 40 PVC</u>
GEOLOGIST: <u>Jennifer Galles</u>	DATE DRILLED: <u>March 16, 2016</u>

PAGE 2 of 2

Depth (FT.)	Soil Symbol	Well Construction	PID Readings	Samples	Sample Interval	Description Interval	Description of Stratum	Depth (FT.)
24			6.8			25'	No Odor	24
28			4.7			30'	Siltstone, Very Hard, Compact, Semi-Consolidated, Orange Staining, Wet, No Odor, 5Y 5/3 Olive	28
32			1,196			35'	Silt to Siltstone, Some Fine Sand, Crumbly, Wet, Yellow Staining and Odor, 5Y 5/3 Olive	32
36			199.6		35'-37'6"	37'6"	Same as Above, Except also Some clay, Slight Plasticity, Odor, Wet	36
40			9.5		37'6"-40'	40'	Siltstone with Some Clay, Hard, Dense, Compact, Moist, Slight Plasticity	40
44							Bottom of Hole	44

REMARKS:


THIS WELL DIAGRAM AND BORING LOG SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT





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
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
## Strata symbols

 Silty low plasticity clay


 Well graded gravel and sand


 Silty sand


 Siltstone


 Low plasticity clay


 Silt


 Poorly graded gravel and sand

 Well graded sand with silt


 Poorly graded gravel with silt


 Inorganic silts and clays

 Well graded sand


 Poorly graded sand

## Misc. Symbols


 Boring continues

 Water table at boring completion


## Soil Samplers


 Split Spoon sampler


## Monitor Well Details

 Capped riser with locking cover


Symbol Description


 Concrete seal

 Bentonite pellets

 Silica sand, blank PVC

 Slotted pipe w/ sand

 Endcap on pipe  
Packed in sand

 Silica sand, no pipe  
(end plug)



**Attachment 4**  
**Analytical Reports**

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

February 19, 2016

Jennifer Galles  
Talon/LPE  
1811 E Mulberry  
Ft Collins, CO 80524  
RE: Nelson C1

Enclosed are the results of analyses for samples received by Summit Scientific on 02/12/16 14:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury  
President



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
02/19/16 10:56

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-05@15-20	1602102-01	Soil	02/11/16 10:40	02/12/16 14:45
MW-05@30-35	1602102-02	Soil	02/11/16 11:10	02/12/16 14:45
MW-05@35-39.5	1602102-03	Soil	02/11/16 11:15	02/12/16 14:45
MW-05@39.5-40	1602102-04	Soil	02/11/16 11:18	02/12/16 14:45
MW-06@15-20	1602102-05	Soil	02/11/16 12:50	02/12/16 14:45
MW-06@20-25	1602102-06	Soil	02/11/16 13:00	02/12/16 14:45
MW-06@25-30	1602102-07	Soil	02/11/16 13:10	02/12/16 14:45
MW-06@30-35	1602102-08	Soil	02/11/16 13:20	02/12/16 14:45
MW-06@35-40	1602102-09	Soil	02/11/16 13:30	02/12/16 14:45
MW-06@40-43	1602102-10	Soil	02/11/16 13:40	02/12/16 14:45
MW-06@43-45	1602102-11	Soil	02/11/16 13:45	02/12/16 14:45
MW-07@15-20	1602102-12	Soil	02/12/16 09:15	02/12/16 14:45
MW-07@20-25	1602102-13	Soil	02/12/16 09:20	02/12/16 14:45
MW-07@25-30	1602102-14	Soil	02/12/16 09:30	02/12/16 14:45
MW-07@30-35	1602102-15	Soil	02/12/16 09:35	02/12/16 14:45
MW-07@38-40	1602102-16	Soil	02/12/16 09:50	02/12/16 14:45
MW-08@10-15	1602102-17	Soil	02/12/16 11:05	02/12/16 14:45
MW-08@15-20	1602102-18	Soil	02/12/16 11:15	02/12/16 14:45
MW-08@20-25	1602102-19	Soil	02/12/16 11:20	02/12/16 14:45
MW-08@25-30	1602102-20	Soil	02/12/16 11:25	02/12/16 14:45
MW-08@30-35	1602102-21	Soil	02/12/16 11:30	02/12/16 14:45
MW-08@35-37.5	1602102-22	Soil	02/12/16 11:45	02/12/16 14:45
MW-08@37.5-40	1602102-23	Soil	02/12/16 11:48	02/12/16 14:45

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.*



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

# Summit Scientific

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

Page 1 of 3

Client: Talon LPE (Bill Whiting)  
Address: \_\_\_\_\_  
City/State/Zip: FTC  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Sampler Name: J. Leventer / J. Galles

Project Manager: Jennifer Galles  
E-Mail: JGalles@TalonLPE.com  
Project Name: Nelson C-1  
Project Number: 701530.020.04

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:			Special Instructions	
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTEX	GRO		DRO
MW-05@15-20	2.11.16	10:40	1			X		X				X	X	X	
MW-05@30-35	2.11.16	11:10	1												
MW-05@35-39.5	2.11.16	11:15	1												
MW-05@39.5-40	2.11.16	11:18	1												
MW-06@15-20	2.11.16	12:50	1												
MW-06@30-35	2.11.16	13:00	1												
MW-06@25-30	2.11.16	13:10	1												
MW-06@30-35	2.11.16	13:20	1												
MW-06@35-40	2.11.16	13:30	1												
MW-06@40-43	2.11.16	13:40	1												

Relinquished by: <u>[Signature]</u>	Date/Time: <u>14:45 2.12.16</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2-12-16 14:45</u>	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>	Notes:
Relinquished by: <u>[Signature]</u>	Date/Time: <u>2-12-16 18:00</u>	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: <u>6.7°C</u>	
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

www.s2scientific.com



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1

Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

# Summit Scientific

1602102.2

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-374-5933 Fax

Page 2 of 3

Client: Talon LPE (B.V. Wasting)  
Address: \_\_\_\_\_  
City/State/Zip: FE  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Sampler Name: J. Leventon / J. Galles

Project Manager: Jennifer Galles  
E-Mail: JGalles@TalonLPE.com  
Project Name: Nelson C-1  
Project Number: 701530.020.04

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:				Special Instructions	
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTX	GR	DR		
MW-06@43-45	2.11.16	15:43	1			X							X	X	X	
MW-07@15-20	2.12.16	9:15	1													
MW-07@20-25	2.12.16	9:20	1													
MW-07@25-30	2.12.16	9:30	1													
MW-07@30-35	2.12.16	9:35	1													
MW-07@38-40	2.12.16	9:50	1													
MW-08@10-15	2.12.16	11:05	1													
MW-08@15-20	2.12.16	11:15	1													
MW-08@20-25	2.12.16	11:20	1													
MW-08@25-30	2.12.16	11:25	1													
Relinquished by: <u>[Signature]</u> Date/Time: <u>14:45 2.12.16</u>				Received by: <u>[Signature]</u> Date/Time: <u>2-12-16 14:45</u>				Turn Around Time (Check)				Notes:				
								Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>								
								24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>								
								48 Hours <input type="checkbox"/>								
Relinquished by: <u>[Signature]</u> Date/Time: <u>2-12-16 15:00</u>				Received by: _____ Date/Time: _____				Sample Integrity:								
								Temperature Upon Receipt: <u>6.7°C</u>								
Relinquished by: _____ Date/Time: _____				Received in Lab by: _____ Date/Time: _____				Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>								

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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]

Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1

Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
02/19/16 10:56

## Summit Scientific

741 Corporate Circle Suite I ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-374-5933 Fax

Page 3 of 3

Client: Tolson LFE (Bill Whiting)  
Address:  
City/State/Zip: Ftc  
Phone: Fax:  
Sampler Name: J. Leaverton / J. Gales

Project Manager: Jennifer Galles  
E-Mail:  
Project Name: Nelson C-1  
Project Number: 70530.020.04

				Preservative			Matrix			Analyze For:						
Sample Description	Date Sampled	Time Sampled	Number of Containers	HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTEX	PFOA	GPB		Special Instructions
MW-08@30-35	2.12.16	11:30	1			X			X			X	X	X		
MW-08@35-37.5	2.12.16	11:45	1			X			X			X	X	X		
MW-08@37.5-40	2.12.16	11:48	1			X			X			X	X	X		
Relinquished by: 	Date/Time: 14:45 2.12.16	Received by:	Date/Time:	Turn Around Time (Check) Same Day 24 Hours 48 Hours									72 Hours Standard	<input checked="" type="checkbox"/>	Notes:	
Relinquished by: 	Date/Time: 2-12-16 19:00	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: 67° Intact: Yes No									<input checked="" type="checkbox"/> <input type="checkbox"/>			
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:													

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**MW-05@15-20**  
**1602102-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/11/16 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/11/16 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		89.6 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/11/16 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 02/11/16 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.9 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
02/19/16 10:56

**MW-05@30-35**  
**1602102-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/11/16 11:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/11/16 11:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		88.4 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/11/16 11:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.0033</b>	0.0020	mg/kg	1	1602146	02/16/16	02/17/16	EPA 8260B	
<b>Toluene</b>	<b>0.013</b>	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.028</b>	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>0.77</b>	0.50	"	"	"	"	"	"	

Date Sampled: 02/11/16 11:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	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.





Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
02/19/16 10:56

**MW-05@35-39.5**  
**1602102-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/11/16 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/11/16 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.7 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/11/16 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.014</b>	0.0020	mg/kg	1	1602146	02/16/16	02/18/16	EPA 8260B	
<b>Toluene</b>	<b>0.022</b>	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.0073</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.081</b>	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>13</b>	0.50	"	"	"	"	"	"	

Date Sampled: 02/11/16 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
02/19/16 10:56

**MW-05@39.5-40**  
**1602102-04 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/11/16 11:18

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/11/16 11:18

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		73.5 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/11/16 11:18

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 02/11/16 11:18

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.7 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
02/19/16 10:56

**MW-06@15-20**  
**1602102-05 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/11/16 12:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/11/16 12:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		85.8 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/11/16 12:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 02/11/16 12:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.1 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
02/19/16 10:56

**MW-06@20-25**  
**1602102-06 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/11/16 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/11/16 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		86.2 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/11/16 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 02/11/16 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.3 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**MW-06@25-30**  
**1602102-07 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/11/16 13:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/11/16 13:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		88.0 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/11/16 13:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.82	0.50	"	"	"	"	"	"	

Date Sampled: 02/11/16 13:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.9 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
02/19/16 10:56

**MW-06@30-35**  
**1602102-08 (Soil)**

### Summit Scientific

#### Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/11/16 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	330	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/11/16 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.0 %	30-150		"	"	"	"	

#### Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/11/16 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/18/16	EPA 8260B	
Toluene	0.11	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.68	0.0050	"	"	"	"	"	"	
Xylenes (total)	4.3	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	870	50	"	100	"	"	02/17/16	"	

Date Sampled: 02/11/16 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	02/18/16	"	
Surrogate: Toluene-d8		72.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		202 %	21-167		"	"	"	"	S-02

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**MW-06@35-40**  
**1602102-09 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/11/16 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/11/16 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		86.5 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/11/16 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/18/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 02/11/16 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.8 %	21-167		"	"	"	"	

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**MW-06@40-43**  
**1602102-10 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/11/16 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/11/16 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		87.6 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/11/16 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/18/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 02/11/16 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**MW-06@43-45**  
**1602102-11 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/11/16 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/11/16 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		86.3 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/11/16 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 02/11/16 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.0 %	21-167		"	"	"	"	

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**MW-07@15-20**  
**1602102-12 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/12/16 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/12/16 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		92.8 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/12/16 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/18/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 02/12/16 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**MW-07@20-25**  
**1602102-13 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/12/16 09:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/12/16 09:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.6 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/12/16 09:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/18/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.98	0.50	"	"	"	"	"	"	

Date Sampled: 02/12/16 09:20

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		99.8 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**MW-07@25-30**  
**1602102-14 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/12/16 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	150	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/12/16 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.8 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/12/16 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.0040	0.0020	mg/kg	1	1602146	02/16/16	02/18/16	EPA 8260B	
Toluene	0.054	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.12	0.0050	"	"	"	"	"	"	
Xylenes (total)	1.2	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	250	50	"	100	"	"	02/17/16	"	

Date Sampled: 02/12/16 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	02/18/16	"	
Surrogate: Toluene-d8		95.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		125 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
02/19/16 10:56

**MW-07@30-35**  
**1602102-15 (Soil)**

### Summit Scientific

#### Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/12/16 09:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/12/16 09:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		94.2 %	30-150		"	"	"	"	

#### Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/12/16 09:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 02/12/16 09:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.6 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**MW-07@38-40**  
**1602102-16 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/12/16 09:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/12/16 09:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		91.7 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/12/16 09:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 02/12/16 09:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**MW-08@10-15**  
**1602102-17 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/12/16 11:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/12/16 11:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.5 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/12/16 11:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/17/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 02/12/16 11:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**MW-08@15-20**  
**1602102-18 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/12/16 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	86	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/12/16 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.8 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/12/16 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/18/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.073	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.81	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	86	0.50	"	"	"	"	"	"	

Date Sampled: 02/12/16 11:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**MW-08@20-25**  
**1602102-19 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/12/16 11:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	100	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/12/16 11:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		94.1 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/12/16 11:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602146	02/16/16	02/18/16	EPA 8260B	
Toluene	0.031	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.019	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.18	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	76	0.50	"	"	"	"	"	"	

Date Sampled: 02/12/16 11:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.0 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**MW-08@25-30**  
**1602102-20 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/12/16 11:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	110	50	mg/kg	1	1602159	02/17/16	02/18/16	8015M	

Date Sampled: 02/12/16 11:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.0 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/12/16 11:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.0033	0.0020	mg/kg	1	1602146	02/16/16	02/18/16	EPA 8260B	
Toluene	0.011	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.013	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.17	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	90	0.50	"	"	"	"	"	"	

Date Sampled: 02/12/16 11:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.4 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
02/19/16 10:56

**MW-08@30-35**  
**1602102-21 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/12/16 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602140	02/16/16	02/17/16	8015M	

Date Sampled: 02/12/16 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		87.4 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/12/16 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602158	02/17/16	02/19/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	5.2	0.50	"	"	"	"	"	"	

Date Sampled: 02/12/16 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
02/19/16 10:56

**MW-08@35-37.5**  
**1602102-22 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/12/16 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602140	02/16/16	02/17/16	8015M	

Date Sampled: 02/12/16 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		89.2 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/12/16 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.0032</b>	0.0020	mg/kg	1	1602158	02/17/16	02/19/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>15</b>	0.50	"	"	"	"	"	"	

Date Sampled: 02/12/16 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		109 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**MW-08@37.5-40**  
**1602102-23 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 02/12/16 11:48

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602140	02/16/16	02/17/16	8015M	

Date Sampled: 02/12/16 11:48

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		85.8 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/12/16 11:48

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602158	02/17/16	02/19/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 02/12/16 11:48

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**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 1602140 - EPA 3550A**

**Blank (1602140-BLK1)**

Prepared & Analyzed: 02/16/16

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 11.1 " 12.5 88.8 30-150

**LCS (1602140-BS1)**

Prepared & Analyzed: 02/16/16

C10-C28 (DRO) 461 50 mg/kg 499 92.3 73-134

Surrogate: o-Terphenyl 11.9 " 12.5 95.2 30-150

**Matrix Spike (1602140-MS1)**

Source: 1602083-01

Prepared & Analyzed: 02/16/16

C10-C28 (DRO) 1220 50 mg/kg 475 1190 5.64 50-148 QM-07

Surrogate: o-Terphenyl 11.4 " 11.9 95.7 30-150

**Matrix Spike Dup (1602140-MSD1)**

Source: 1602083-01

Prepared & Analyzed: 02/16/16

C10-C28 (DRO) 1340 50 mg/kg 486 1190 30.1 50-148 9.35 13 QM-07

Surrogate: o-Terphenyl 10.9 " 12.2 89.3 30-150

**Batch 1602159 - EPA 3550A**

**Blank (1602159-BLK1)**

Prepared: 02/17/16 Analyzed: 02/18/16

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 11.2 " 12.5 89.5 30-150

**LCS (1602159-BS1)**

Prepared: 02/17/16 Analyzed: 02/18/16

C10-C28 (DRO) 442 50 mg/kg 499 88.5 73-134

Surrogate: o-Terphenyl 11.3 " 12.5 90.4 30-150

**Matrix Spike (1602159-MS1)**

Source: 1602102-01

Prepared: 02/17/16 Analyzed: 02/18/16

C10-C28 (DRO) 430 50 mg/kg 488 ND 88.1 50-148

Surrogate: o-Terphenyl 11.0 " 12.2 90.1 30-150

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
02/19/16 10:56

**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 1602159 - EPA 3550A**

**Matrix Spike Dup (1602159-MSD1)**

**Source: 1602102-01**

Prepared: 02/17/16 Analyzed: 02/18/16

C10-C28 (DRO)	430	50	mg/kg	488	ND	88.2	50-148	0.0812	13	
Surrogate: o-Terphenyl	11.1		"	12.2		90.8	30-150			

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
02/19/16 10:56

**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 1602146 - EPA 5030 Soil MS**

**Blank (1602146-BLK1)**

Prepared: 02/16/16 Analyzed: 02/17/16

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0436		"	0.0400		109	23-173			
Surrogate: Toluene-d8	0.0393		"	0.0400		98.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		96.9	21-167			

**LCS (1602146-BS1)**

Prepared: 02/16/16 Analyzed: 02/17/16

Benzene	0.117	0.0020	mg/kg	0.100		117	58-130			
Toluene	0.103	0.0050	"	0.100		103	61-134			
Ethylbenzene	0.137	0.0050	"	0.0992		138	74-139			
m,p-Xylene	0.260	0.010	"	0.200		130	73-137			
o-Xylene	0.125	0.0050	"	0.0980		127	73-141			
Xylenes (total)	0.384	0.0050	"				30-150			
Gasoline Range Hydrocarbons	2.55	0.50	"				30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0412		"	0.0400		103	23-173			
Surrogate: Toluene-d8	0.0396		"	0.0400		98.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.6	21-167			

**Matrix Spike (1602146-MS1)**

Source: 1602102-01

Prepared: 02/16/16 Analyzed: 02/17/16

Benzene	0.117	0.0020	mg/kg	0.100	ND	117	30-131			
Toluene	0.104	0.0050	"	0.100	ND	104	30-134			
Ethylbenzene	0.141	0.0050	"	0.0992	ND	142	22-153			
m,p-Xylene	0.267	0.010	"	0.200	ND	134	10-159			
o-Xylene	0.130	0.0050	"	0.0980	ND	133	31-151			
Xylenes (total)	0.397	0.0050	"		ND		30-150			
Gasoline Range Hydrocarbons	2.64	0.50	"		ND		30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0416		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0390		"	0.0400		97.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	21-167			

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
02/19/16 10:56

**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 1602146 - EPA 5030 Soil MS**

Matrix Spike Dup (1602146-MSD1)	Source: 1602102-01			Prepared: 02/16/16 Analyzed: 02/17/16						
Benzene	0.118	0.0020	mg/kg	0.100	ND	118	30-131	0.332	34	
Toluene	0.103	0.0050	"	0.100	ND	103	30-134	1.56	30	
Ethylbenzene	0.141	0.0050	"	0.0992	ND	142	22-153	0.234	24	
m,p-Xylene	0.268	0.010	"	0.200	ND	134	10-159	0.303	68	
o-Xylene	0.129	0.0050	"	0.0980	ND	132	31-151	0.881	38	
Xylenes (total)	0.397	0.0050	"		ND		30-150	0.0832	20	
Gasoline Range Hydrocarbons	2.59	0.50	"		ND		30-150	2.05	20	
Surrogate: 1,2-Dichloroethane-d4	0.0411		"	0.0400		103	23-173			
Surrogate: Toluene-d8	0.0388		"	0.0400		96.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.6	21-167			

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
02/19/16 10:56

### 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.

QM-07    The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.

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

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

February 24, 2016

Colby Sterling  
Talon/LPE  
1811 E Mulberry  
Ft Collins, CO 80524  
RE: Nelson C1

Enclosed are the results of analyses for samples received by Summit Scientific on 02/17/16 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 read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury  
President



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

**Reported:**  
02/24/16 16:26

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	1602138-01	Water	02/17/16 12:00	02/17/16 17:00
MW-2	1602138-02	Water	02/17/16 12:05	02/17/16 17:00
MW-4	1602138-03	Water	02/17/16 12:15	02/17/16 17:00
MW-8	1602138-04	Water	02/17/16 12:25	02/17/16 17:00

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1

Project Number: 701530.020.04  
Project Manager: Colby Sterling

**Reported:**  
02/24/16 16:26

## Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-374-5933 Fax

Page 1 of 1

Client: Talon LPE/RE. V. Writing  
Address: 181 E Mulberry  
City/State/Zip: Fort CO 80501  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Sampler Name: J. Larson / J. Coates

Project Manager: Colby Stelling  
E-Mail: CStelling@Talamonte.com  
Project Name: Nelson C-1  
Project Number: 701530 020.04

[illegible]

[www.2sidedlife.com](http://www.2sidedlife.com)

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.*





Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

**Reported:**  
02/24/16 16:26

**MW-1**  
**1602138-01 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/17/16 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>15000</b>	100	ug/l	100	1602192	02/24/16	02/24/16	EPA 8260B	
<b>Toluene</b>	<b>13000</b>	100	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>990</b>	100	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>5500</b>	100	"	"	"	"	"	"	

Date Sampled: 02/17/16 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.9 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.9 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		96.1 %	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.*



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

**Reported:**  
02/24/16 16:26

**MW-2**  
**1602138-02 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/17/16 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Benzene</b>	<b>16000</b>	100	ug/l	100	1602192	02/24/16	02/24/16	EPA 8260B	
<b>Toluene</b>	<b>14000</b>	100	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>1400</b>	100	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>8200</b>	100	"	"	"	"	"	"	

Date Sampled: **02/17/16 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.3 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.7 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97.2 %	45-146		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

**Reported:**  
02/24/16 16:26

**MW-4**  
**1602138-03 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/17/16 12:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>13000</b>	100		ug/l	100	1602192	02/24/16	02/24/16	EPA 8260B	
<b>Toluene</b>	<b>15000</b>	100		"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>910</b>	100		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>5500</b>	100		"	"	"	"	"	"	

Date Sampled: **02/17/16 12:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.4 %		37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.0 %		45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		95.3 %		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.*





Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

Reported:  
02/24/16 16:26

**MW-8**  
**1602138-04 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/17/16 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>12000</b>	100	ug/l	100	1602192	02/24/16	02/24/16	EPA 8260B	
<b>Toluene</b>	<b>13000</b>	100	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>1000</b>	100	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>5300</b>	100	"	"	"	"	"	"	

Date Sampled: 02/17/16 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.7 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96.2 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		96.8 %	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.*



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

Reported:  
02/24/16 16:26

## 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 1602192 - EPA 5030 Water MS

##### Blank (1602192-BLK1)

Prepared & Analyzed: 02/20/16

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.4		"	13.3	101	37-154				
Surrogate: Toluene-d8	13.0		"	13.3	97.1	45-149				
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3	97.7	45-146				

##### LCS (1602192-BS1)

Prepared & Analyzed: 02/20/16

Benzene	41.0	1.0	ug/l	33.3	123	51-132				
Toluene	34.4	1.0	"	33.3	103	51-138				
Ethylbenzene	45.6	1.0	"	33.1	138	58-146				
m,p-Xylene	87.5	2.0	"	66.5	132	57-144				
o-Xylene	42.2	1.0	"	32.7	129	53-146				
Surrogate: 1,2-Dichloroethane-d4	13.1		"	13.3	98.0	37-154				
Surrogate: Toluene-d8	13.2		"	13.3	99.2	45-149				
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3	99.5	45-146				

##### Matrix Spike (1602192-MS1)

Source: 1602135-01

Prepared & Analyzed: 02/20/16

Benzene	41.4	1.0	ug/l	33.3	ND	124	34-141			
Toluene	35.0	1.0	"	33.3	ND	105	27-151			
Ethylbenzene	46.3	1.0	"	33.1	ND	140	29-160			
m,p-Xylene	89.3	2.0	"	66.5	ND	134	20-166			
o-Xylene	42.5	1.0	"	32.7	ND	130	33-159			
Surrogate: 1,2-Dichloroethane-d4	13.5		"	13.3	101	37-154				
Surrogate: Toluene-d8	13.0		"	13.3	97.1	45-149				
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3	98.3	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

Reported:  
02/24/16 16:26

**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 1602192 - EPA 5030 Water MS**

Matrix Spike Dup (1602192-MSD1)	Source: 1602135-01			Prepared & Analyzed: 02/20/16						
Benzene	42.4	1.0	ug/l	33.3	ND	127	34-141	2.24	32	
Toluene	35.1	1.0	"	33.3	ND	105	27-151	0.200	25	
Ethylbenzene	47.6	1.0	"	33.1	ND	144	29-160	2.60	50	
m,p-Xylene	91.8	2.0	"	66.5	ND	138	20-166	2.75	36	
o-Xylene	43.9	1.0	"	32.7	ND	134	33-159	3.31	26	
Surrogate: 1,2-Dichloroethane-d4	13.5		"	13.3		101	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		96.7	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	45-146			

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

**Reported:**  
02/24/16 16:26

### 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 'MSM'.

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 18, 2016

Jennifer Galles  
Talon/LPE  
1811 E Mulberry  
Ft Collins, CO 80524  
RE: Nelson C1

Enclosed are the results of analyses for samples received by Summit Scientific on 03/10/16 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 read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury  
President



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:01

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-9@10-15'	1603086-01	Soil	03/07/16 13:35	03/10/16 17:00
MW-9@15-20'	1603086-02	Soil	03/08/16 09:15	03/10/16 17:00
MW-9@30-35'	1603086-03	Soil	03/08/16 09:55	03/10/16 17:00
MW-10@15-20'	1603086-04	Soil	03/08/16 12:38	03/10/16 17:00
MW-10@30-35'	1603086-05	Soil	03/08/16 13:15	03/10/16 17:00
MW-10@35-40'	1603086-06	Soil	03/08/16 13:25	03/10/16 17:00
MW-11@15-20'	1603086-07	Soil	03/08/16 15:28	03/10/16 17:00
MW-11@20-25'	1603086-08	Soil	03/08/16 15:42	03/10/16 17:00
MW-11@25-30'	1603086-09	Soil	03/08/16 15:56	03/10/16 17:00
MW-11@40-45'	1603086-10	Soil	03/08/16 09:50	03/10/16 17:00
MW-12@15-20'	1603086-11	Soil	03/09/16 14:30	03/10/16 17:00
MW-12@20-25'	1603086-12	Soil	03/09/16 14:47	03/10/16 17:00
MW-12@35-40'	1603086-13	Soil	03/09/16 15:26	03/10/16 17:00
MW-13@10-15'	1603086-14	Soil	03/10/16 09:57	03/10/16 17:00
MW-13@15-20'	1603086-15	Soil	03/10/16 10:18	03/10/16 17:00
MW-13@35-40'	1603086-16	Soil	03/10/16 11:15	03/10/16 17:00
MW-14@10-15'	1603086-17	Soil	03/10/16 13:58	03/10/16 17:00
MW-14@20-25'	1603086-18	Soil	03/10/16 14:24	03/10/16 17:00
MW-14@30-35'	1603086-19	Soil	03/10/16 14:48	03/10/16 17:00
MW-14@35-40'	1603086-20	Soil	03/10/16 15:00	03/10/16 17:00

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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.*



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1

Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

## Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-374-5913 Fax

Page 1 of 3

Client: Talon/LPE Bill to Whiting  
Address: 1811 E Mulberry St  
City/State/Zip: Ft Collins, CO 80524  
Phone: 970-818-5330 Fax:  
Sampler Name: J. Galles

Project Manager: Jennifer Galles  
E-Mail: jgalles@talonlpe.com  
Project Name: Nelson C-1  
Project Number: 701530.020.04

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Analyze For:				Special Instructions		
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTEX	GRO		DRO	Naphthalene
MW-8@10-15'	3/7/16	1325	1			X						X	X	X		
MW-9@15-20'	3/8/16	0915	1			X						X	X	X		
MW-9@30-35'	3/8/16	0955	1			X						X	X	X		
MW-10@15-20'	3/8/16	1238	1			X						X	X	X		
MW-10@30-35'	3/8/16	1315	1			X						X	X	X		
MW-10@35-40'	3/8/16	1325	1			X						X	X	X		
MW-11@15-20'	3/8/16	1528	1			X						X	X	X		
MW-11@20-25'	3/8/16	1542	1			X						X	X	X		
MW-11@25-30'	3/8/16	1556	1			X						X	X	X		
MW-11@40-45'	3/9/16	0950	1			X						X	X	X		
Relinquished by: <u>KA</u>	Date/Time: <u>3-10-16 1700</u>	Received by: <u>KA</u>	Date/Time: <u>3-10-16 17:00</u>	Turn Around Time (Check)				Notes:								
Relinquished by: <u>KA</u>	Date/Time: <u>3-10-16 18:30</u>	Received by:	Date/Time:	Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>				Sample Integrity: Temperature Upon Receipt: Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>								
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/>												

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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.

Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1

Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:01

## Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-374-5933 Fax

Page 2 of 2

Client: Talon/LPE Bill to Whiting  
Address: 1811 E Mulberry St  
City/State/Zip: Fort Collins, CO 98524  
Phone: 970-818-5330 Fax:  
Sampler Name: T. Coates

Project Manager: Jennifer Galle  
E-Mail: jgalle@talon1pe.com  
Project Name: Nelson C-1  
Project Number: 701530.020.04

[illegible]

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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.*







Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1

Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

## Summit Scientific

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Page 3 of 3

Client: Talon/LPE Bill to Whiting  
Address: 1811 E Mulberry St  
City/State/Zip: Ft Collins, CO 80524  
Phone: 970-818-5330 Fax:  
Sampler Name: J. Galles

Project Manager: Jennifer Galles  
E-Mail: jgalles@talonlpe.com  
Project Name: Nelson C-1  
Project Number: 701530.020.04

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:				Special Instructions
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTEX	GRD	DRD	Naphthalene	
MW-13 @ 10-15'	3/10/16	0957	1			X										
MW-13 @ 15-20'		1010	1			X										
MW-13 @ 25-40'		1115	1													
MW-14 @ 10-15'		1358	1													
MW-14 @ 20-25'		1424	1													
MW-14 @ 30-35'		1448	1													
MW-14 @ 35-40'		1500	1													
Relinquished by: <u>[Signature]</u> Date/Time: <u>3-10-16 1700</u> Received by: <u>SA</u> Date/Time: <u>3-10-16 17:00</u> Turn Around Time (Check) Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:01

**MW-9@10-15'**  
**1603086-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/07/16 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/12/16	8015M	

Date Sampled: **03/07/16 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		110 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/07/16 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/14/16	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: **03/07/16 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.4 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**MW-9@15-20'**  
**1603086-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/08/16 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/12/16	8015M	

Date Sampled: **03/08/16 09:15**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/08/16 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/14/16	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: **03/08/16 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**MW-9@30-35'**  
**1603086-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/08/16 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/12/16	8015M	

Date Sampled: **03/08/16 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		118 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/08/16 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/14/16	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: **03/08/16 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.9 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**MW-10@15-20'**  
**1603086-04 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/08/16 12:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/12/16	8015M	

Date Sampled: **03/08/16 12:38**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/08/16 12:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/14/16	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: **03/08/16 12:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane- <i>d</i> 4		101 %	23-173		"	"	"	"	
Surrogate: Toluene- <i>d</i> 8		98.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.2 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**MW-10@30-35'**  
**1603086-05 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/08/16 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/12/16	8015M	

Date Sampled: **03/08/16 13:15**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/08/16 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/14/16	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: **03/08/16 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.6 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**MW-10@35-40'**  
**1603086-06 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/08/16 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/13/16	8015M	

Date Sampled: **03/08/16 13:25**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/08/16 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/14/16	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: **03/08/16 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**MW-11@15-20'**  
**1603086-07 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/08/16 15:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/13/16	8015M	

Date Sampled: **03/08/16 15:28**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/08/16 15:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/14/16	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: **03/08/16 15:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**MW-11@20-25'**  
**1603086-08 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/08/16 15:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/13/16	8015M	

Date Sampled: **03/08/16 15:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		109 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/08/16 15:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/14/16	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: **03/08/16 15:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:01

**MW-11@25-30'**  
**1603086-09 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/08/16 15:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/13/16	8015M	

Date Sampled: **03/08/16 15:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		115 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/08/16 15:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/15/16	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: **03/08/16 15:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane- <i>d</i> 4		100 %	23-173		"	"	"	"	
Surrogate: Toluene- <i>d</i> 8		99.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**MW-11@40-45'**  
**1603086-10 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/08/16 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/13/16	8015M	

Date Sampled: **03/08/16 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		111 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/08/16 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/15/16	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: **03/08/16 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**MW-12@15-20'**  
**1603086-11 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/09/16 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/15/16	8015M	

Date Sampled: **03/09/16 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		110 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/09/16 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/15/16	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: **03/09/16 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.4 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**MW-12@20-25'**  
**1603086-12 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/09/16 14:47

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/15/16	8015M	

Date Sampled: 03/09/16 14:47

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: 03/09/16 14:47

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/15/16	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: 03/09/16 14:47

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:01

**MW-12@35-40'**  
**1603086-13 (Soil)**

### Summit Scientific

#### Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 03/09/16 15:26

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/15/16	8015M	

Date Sampled: 03/09/16 15:26

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		111 %	30-150		"	"	"	"	

#### Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 03/09/16 15:26

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/15/16	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: 03/09/16 15:26

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**MW-13@10-15'**  
**1603086-14 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/10/16 09:57

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/15/16	8015M	

Date Sampled: 03/10/16 09:57

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: 03/10/16 09:57

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/15/16	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: 03/10/16 09:57

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.7 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**MW-13@15-20'**  
**1603086-15 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/10/16 10:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/15/16	8015M	

Date Sampled: **03/10/16 10:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		112 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/10/16 10:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/15/16	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: **03/10/16 10:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.6 %	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.





Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**MW-13@35-40'**  
**1603086-16 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/10/16 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/15/16	8015M	

Date Sampled: **03/10/16 11:15**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/10/16 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/15/16	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: **03/10/16 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.0 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:01

**MW-14@10-15'**  
**1603086-17 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/10/16 13:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/15/16	8015M	

Date Sampled: **03/10/16 13:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		111 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/10/16 13:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/15/16	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: **03/10/16 13:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		114 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.3 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:01

**MW-14@20-25'**  
**1603086-18 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/10/16 14:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/15/16	8015M	

Date Sampled: **03/10/16 14:24**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/10/16 14:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/15/16	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: **03/10/16 14:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.9 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:01

**MW-14@30-35'**  
**1603086-19 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/10/16 14:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/15/16	8015M	

Date Sampled: **03/10/16 14:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		110 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/10/16 14:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/15/16	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: **03/10/16 14:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**MW-14@35-40'**  
**1603086-20 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/10/16 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603124	03/11/16	03/15/16	8015M	

Date Sampled: **03/10/16 15:00**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/10/16 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603136	03/14/16	03/15/16	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: **03/10/16 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane- <i>d</i> 4		99.8 %	23-173		"	"	"	"	
Surrogate: Toluene- <i>d</i> 8		95.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:01

**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 1603124 - EPA 3550A**

**Blank (1603124-BLK1)**

Prepared: 03/11/16 Analyzed: 03/12/16

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 14.3 " 12.5 114 30-150

**LCS (1603124-BS1)**

Prepared: 03/11/16 Analyzed: 03/12/16

C10-C28 (DRO) 279 50 mg/kg 250 112 73-134

Surrogate: o-Terphenyl 14.2 " 12.5 113 30-150

**Matrix Spike (1603124-MS1)**

Source: 1603086-01

Prepared: 03/11/16 Analyzed: 03/12/16

C10-C28 (DRO) 288 50 mg/kg 468 25.3 56.0 50-148

Surrogate: o-Terphenyl 12.9 " 11.7 110 30-150

**Matrix Spike Dup (1603124-MSD1)**

Source: 1603086-01

Prepared: 03/11/16 Analyzed: 03/12/16

C10-C28 (DRO) 249 50 mg/kg 460 25.3 48.7 50-148 14.3 13 QM-07

Surrogate: o-Terphenyl 12.6 " 11.5 109 30-150

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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**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 1603136 - EPA 5030 Soil MS**

**Blank (1603136-BLK1)**

Prepared & Analyzed: 03/14/16

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>0.0392</i>		<i>"</i>	<i>0.0396</i>		<i>98.9</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>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>21-167</i>			

**LCS (1603136-BS1)**

Prepared & Analyzed: 03/14/16

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0929	0.0020	"	0.100		92.9	58-130			
Toluene	0.103	0.0050	"	0.100		103	61-134			
Ethylbenzene	0.107	0.0050	"	0.0992		108	74-139			
m,p-Xylene	0.201	0.010	"	0.200		101	73-137			
o-Xylene	0.0980	0.0050	"	0.0984		99.6	73-141			
Xylenes (total)	0.299	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.43	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0365</i>		<i>"</i>	<i>0.0396</i>		<i>92.1</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0420</i>		<i>"</i>	<i>0.0400</i>		<i>105</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.6</i>	<i>21-167</i>			

**Matrix Spike (1603136-MS1)**

Source: 1603086-01

Prepared & Analyzed: 03/14/16

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.100	0.0020	"	0.0994	ND	101	30-131			
Toluene	0.107	0.0050	"	0.0994	ND	107	30-134			
Ethylbenzene	0.117	0.0050	"	0.0986	ND	119	22-153			
m,p-Xylene	0.220	0.010	"	0.198	ND	111	10-159			
o-Xylene	0.108	0.0050	"	0.0978	ND	111	31-151			
Xylenes (total)	0.328	0.010	"		ND		30-160			
Gasoline Range Hydrocarbons	2.66	0.50	"		ND		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0383</i>		<i>"</i>	<i>0.0394</i>		<i>97.2</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0398</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0401</i>		<i>"</i>	<i>0.0398</i>		<i>101</i>	<i>21-167</i>			

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:01

**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 1603136 - EPA 5030 Soil MS**

Matrix Spike Dup (1603136-MSD1)		Source: 1603086-01			Prepared & Analyzed: 03/14/16					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.102	0.0020	"	0.0986	ND	103	30-131	1.53	34	
Toluene	0.111	0.0050	"	0.0986	ND	112	30-134	3.56	30	
Ethylbenzene	0.122	0.0050	"	0.0978	ND	125	22-153	3.80	24	
m,p-Xylene	0.229	0.010	"	0.197	ND	116	10-159	4.22	68	
o-Xylene	0.114	0.0050	"	0.0970	ND	118	31-151	5.37	38	
Xylenes (total)	0.344	0.010	"		ND		30-160	4.60	30	
Gasoline Range Hydrocarbons	2.87	0.50	"		ND		30-160	7.59	30	
Surrogate: 1,2-Dichloroethane-d4	0.0382		"	0.0391		97.8	23-173			
Surrogate: Toluene-d8	0.0399		"	0.0394		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0394		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.





Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:01

### 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/LCSD recovery.

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

---

Summit Scientific

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

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 18, 2016

Jennifer Galles  
Talon/LPE  
1811 E Mulberry  
Ft Collins, CO 80524  
RE: Nelson C1

Enclosed are the results of analyses for samples received by Summit Scientific on 03/11/16 17:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury  
President



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:21

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-15@15-20'	1603093-01	Soil	03/11/16 10:08	03/11/16 17:35
MW-15@20-25'	1603093-02	Soil	03/11/16 10:22	03/11/16 17:35
MW-15@25-30'	1603093-03	Soil	03/11/16 10:35	03/11/16 17:35
MW-15@30-34.5'	1603093-04	Soil	03/11/16 11:00	03/11/16 17:35
MW-15@34.5-35'	1603093-05	Soil	03/11/16 11:05	03/11/16 17:35
MW-16@10-15'	1603093-06	Soil	03/11/16 13:05	03/11/16 17:35
MW-16@15-20'	1603093-07	Soil	03/11/16 13:15	03/11/16 17:35
MW-16@20-25'	1603093-08	Soil	03/11/16 13:28	03/11/16 17:35
MW-16@25-30'	1603093-09	Soil	03/11/16 13:40	03/11/16 17:35
MW-16@30-35'	1603093-10	Soil	03/11/16 13:50	03/11/16 17:35
MW-16@35-37.5'	1603093-11	Soil	03/11/16 14:10	03/11/16 17:35
MW-16@37.5-40'	1603093-12	Soil	03/11/16 14:15	03/11/16 17:35

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:21

## Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-374-5933 Fax

1603093.1

Client: Talon/LPE Bill to Whiting  
Address: 1811 E Mulberry St  
City/State/Zip: Ft Collins, CO 80524  
Phone: 970-818-5330 Fax: \_\_\_\_\_  
Sampler Name: \_\_\_\_\_

Project Manager: Jennifer Galles  
E-Mail: jgalles@talonlpe.com  
Project Name: Nelson C1  
Project Number: 701530.020.04

Page 1 of 2

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:				Special Instructions
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTEX	GRO	DRO	Nightthalene	
MW-15 @ 15-20'	3/11/16	1008	1			X										
MW-15 @ 20-25'		1022														
MW-15 @ 25-30'		1035														
MW-15 @ 30-34.5'		1100														
MW-15 @ 34.5-35'		1105														
MW-16 @ 10-15'		1505														
MW-16 @ 15-20'		1315														
MW-16 @ 20-25'		1328														
MW-16 @ 25-30'		1340														
MW-16 @ 30-35'		1350														
Relinquished by: <u>[Signature]</u> Date/Time: <u>3-11-16 17:35</u>				Received by: <u>[Signature]</u> Date/Time: <u>3-11-16 17:35</u>				Turn Around Time (Check)				Notes:				
Relinquished by: <u>[Signature]</u> Date/Time: <u>3-11-16 18:40</u>				Received by: <u>[Signature]</u> Date/Time: <u>3-11-16 18:40</u>				Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>								
								24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>								
Relinquished by: _____ Date/Time: _____				Received in Lab by: _____ Date/Time: _____				Sample Integrity: _____								
								Temperature Upon Receipt: <u>9.9</u>								
								Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>								

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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.

Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1

Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:21

## Summit Scientific

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

Page 2 of 2

Client: Dakota LPE (Bill Whitting)  
Address: 1811 E Mulberry St  
City/State/Zip: Ft. Co 80524  
Phone: 970.818.5530 Fax: 866.467.0622  
Sample Name: \_\_\_\_\_

Project Manager: Celby Sterling  
E-Mail: csterling@TalenLPS.com  
Project Name: Moleman C-1  
Project Number: 701530 020 04

[illegible]

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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.*





Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:21

**MW-15@15-20'**  
**1603093-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/11/16 10:08

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603145	03/15/16	03/17/16	8015M	

Date Sampled: 03/11/16 10:08

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		114 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 03/11/16 10:08

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603144	03/15/16	03/15/16	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: 03/11/16 10:08

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:21

**MW-15@20-25'**  
**1603093-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/11/16 10:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603145	03/15/16	03/17/16	8015M	

Date Sampled: **03/11/16 10:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		116 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/11/16 10:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603144	03/15/16	03/15/16	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: **03/11/16 10:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:21

**MW-15@25-30'**  
**1603093-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/11/16 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603145	03/15/16	03/17/16	8015M	

Date Sampled: **03/11/16 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		118 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/11/16 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603144	03/15/16	03/15/16	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: **03/11/16 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane- <i>d</i> 4		104 %	23-173		"	"	"	"	
Surrogate: Toluene- <i>d</i> 8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:21

**MW-15@30-34.5'**  
**1603093-04 (Soil)**

### Summit Scientific

#### Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 03/11/16 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603145	03/15/16	03/17/16	8015M	

Date Sampled: 03/11/16 11:00

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: 03/11/16 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603144	03/15/16	03/15/16	EPA 8260B	
<b>Benzene</b>	<b>0.0029</b>	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>0.84</b>	0.50	"	"	"	"	"	"	

Date Sampled: 03/11/16 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:21

**MW-15@34.5-35'**  
**1603093-05 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/11/16 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603145	03/15/16	03/17/16	8015M	

Date Sampled: **03/11/16 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		109 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/11/16 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603144	03/15/16	03/15/16	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: **03/11/16 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane- <i>d</i> 4		96.3 %	23-173		"	"	"	"	
Surrogate: Toluene- <i>d</i> 8		93.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:21

**MW-16@10-15'**  
**1603093-06 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/11/16 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603145	03/15/16	03/17/16	8015M	

Date Sampled: **03/11/16 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		110 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/11/16 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603144	03/15/16	03/15/16	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: **03/11/16 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:21

**MW-16@15-20'**  
**1603093-07 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/11/16 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603145	03/15/16	03/17/16	8015M	

Date Sampled: **03/11/16 13:15**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/11/16 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603144	03/15/16	03/15/16	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: **03/11/16 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		92.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:21

**MW-16@20-25'**  
**1603093-08 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/11/16 13:28

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603145	03/15/16	03/17/16	8015M	

Date Sampled: 03/11/16 13:28

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: 03/11/16 13:28

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.021	0.010	mg/kg	1	1603144	03/15/16	03/16/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	8.7	0.50	"	"	"	"	"	"	

Date Sampled: 03/11/16 13:28

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.8 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:21

**MW-16@25-30'**  
**1603093-09 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/11/16 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603145	03/15/16	03/17/16	8015M	

Date Sampled: **03/11/16 13:40**

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: **03/11/16 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.039	0.010	mg/kg	1	1603144	03/15/16	03/16/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.014	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	11	0.50	"	"	"	"	"	"	

Date Sampled: **03/11/16 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.8 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:21

**MW-16@30-35'**  
**1603093-10 (Soil)**

### Summit Scientific

#### Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 03/11/16 13:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603145	03/15/16	03/17/16	8015M	

Date Sampled: 03/11/16 13:50

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: 03/11/16 13:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603144	03/15/16	03/16/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>1.1</b>	<b>0.50</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	

Date Sampled: 03/11/16 13:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:21

**MW-16@35-37.5'**  
**1603093-11 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/11/16 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603145	03/15/16	03/17/16	8015M	

Date Sampled: **03/11/16 14:10**

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: **03/11/16 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603144	03/15/16	03/16/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	6.6	0.50	"	"	"	"	"	"	

Date Sampled: **03/11/16 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	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.





Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:21

**MW-16@37.5-40'**  
**1603093-12 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/11/16 14:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603145	03/15/16	03/17/16	8015M	

Date Sampled: 03/11/16 14:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		91.7 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 03/11/16 14:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603144	03/15/16	03/16/16	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: 03/11/16 14:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:21

**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 1603145 - EPA 3550A**

**Blank (1603145-BLK1)**

Prepared: 03/15/16 Analyzed: 03/16/16

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 13.7 " 12.5 110 30-150

**LCS (1603145-BS1)**

Prepared: 03/15/16 Analyzed: 03/16/16

C10-C28 (DRO) 546 50 mg/kg 499 109 73-134

Surrogate: o-Terphenyl 13.9 " 12.5 111 30-150

**Matrix Spike (1603145-MS1)**

Source: 1603093-01

Prepared: 03/15/16 Analyzed: 03/16/16

C10-C28 (DRO) 512 50 mg/kg 471 20.8 104 50-148

Surrogate: o-Terphenyl 13.3 " 11.8 113 30-150

**Matrix Spike Dup (1603145-MSD1)**

Source: 1603093-01

Prepared: 03/15/16 Analyzed: 03/17/16

C10-C28 (DRO) 534 50 mg/kg 469 20.8 109 50-148 4.21 13

Surrogate: o-Terphenyl 13.6 " 11.7 116 30-150

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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/18/16 11:21

**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 1603144 - EPA 5030 Soil MS**

**Blank (1603144-BLK1)**

Prepared & Analyzed: 03/15/16

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>0.0400</i>		<i>"</i>	<i>0.0396</i>		<i>101</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0370</i>		<i>"</i>	<i>0.0400</i>		<i>92.5</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.5</i>	<i>21-167</i>			

**LCS (1603144-BS1)**

Prepared & Analyzed: 03/15/16

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0993	0.0020	"	0.100		99.3	58-130			
Toluene	0.109	0.0050	"	0.100		109	61-134			
Ethylbenzene	0.114	0.0050	"	0.0992		115	74-139			
m,p-Xylene	0.212	0.010	"	0.200		106	73-137			
o-Xylene	0.105	0.0050	"	0.0984		106	73-141			
Xylenes (total)	0.317	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.89	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0382</i>		<i>"</i>	<i>0.0396</i>		<i>96.4</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0420</i>		<i>"</i>	<i>0.0400</i>		<i>105</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.4</i>	<i>21-167</i>			

**Matrix Spike (1603144-MS1)**

Source: 1603092-01

Prepared & Analyzed: 03/15/16

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0993	0.0020	"	0.0943	ND	105	30-131			
Toluene	0.108	0.0050	"	0.0943	ND	114	30-134			
Ethylbenzene	0.113	0.0050	"	0.0936	ND	121	22-153			
m,p-Xylene	0.210	0.010	"	0.188	ND	112	10-159			
o-Xylene	0.106	0.0050	"	0.0928	ND	114	31-151			
Xylenes (total)	0.316	0.010	"		ND		30-160			
Gasoline Range Hydrocarbons	2.75	0.50	"		0.222		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0427</i>		<i>"</i>	<i>0.0374</i>		<i>114</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0377</i>		<i>104</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0383</i>		<i>"</i>	<i>0.0377</i>		<i>102</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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:21

**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 1603144 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (1603144-MSD1)</b>	<b>Source: 1603092-01</b>			<b>Prepared &amp; Analyzed: 03/15/16</b>						
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0921	0.0020	"	0.0924	ND	99.6	30-131	7.59	34	
Toluene	0.104	0.0050	"	0.0924	ND	112	30-134	3.40	30	
Ethylbenzene	0.115	0.0050	"	0.0917	ND	126	22-153	1.62	24	
m,p-Xylene	0.217	0.010	"	0.184	ND	117	10-159	2.87	68	
o-Xylene	0.106	0.0050	"	0.0909	ND	117	31-151	0.799	38	
Xylenes (total)	0.323	0.010	"		ND		30-160	2.18	30	
Gasoline Range Hydrocarbons	2.79	0.50	"		0.222		30-160	1.28	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0380</i>		<i>"</i>	<i>0.0366</i>		<i>104</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0367</i>		<i>"</i>	<i>0.0370</i>		<i>99.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0378</i>		<i>"</i>	<i>0.0370</i>		<i>102</i>	<i>21-167</i>			

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/18/16 11:21

### 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 'MSM'.

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 24, 2016

Jennifer Galles  
Talon/LPE  
1811 E Mulberry  
Ft Collins, CO 80524  
RE: Nelson C1

Enclosed are the results of analyses for samples received by Summit Scientific on 03/16/16 17:11. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury  
President



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/24/16 11:35

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-17@20-25'	1603125-01	Soil	03/15/16 10:29	03/16/16 17:11
MW-17@25-30'	1603125-02	Soil	03/15/16 10:46	03/16/16 17:11
MW-17@30-35'	1603125-03	Soil	03/15/16 11:00	03/16/16 17:11
MW-17@35-40'	1603125-04	Soil	03/15/16 11:15	03/16/16 17:11
MW-17@40-42'	1603125-05	Soil	03/15/16 11:35	03/16/16 17:11
MW-17@42-45'	1603125-06	Soil	03/15/16 11:40	03/16/16 17:11
MW-18@15-20'	1603125-07	Soil	03/15/16 13:48	03/16/16 17:11
MW-18@20-25'	1603125-08	Soil	03/15/16 14:00	03/16/16 17:11
MW-18@25-30'	1603125-09	Soil	03/15/16 14:15	03/16/16 17:11
MW-18@40-45'	1603125-10	Soil	03/15/16 15:00	03/16/16 17:11
MW-19@15-20'	1603125-11	Soil	03/16/16 10:00	03/16/16 17:11
MW-19@20-25'	1603125-12	Soil	03/16/16 10:15	03/16/16 17:11
MW-19@35-40'	1603125-13	Soil	03/16/16 10:55	03/16/16 17:11
MW-20@15-20'	1603125-14	Soil	03/16/16 13:05	03/16/16 17:11
MW-20@30-35'	1603125-15	Soil	03/16/16 13:55	03/16/16 17:11
MW-20@35-37.5'	1603125-16	Soil	03/16/16 14:20	03/16/16 17:11
MW-20@37.5-40'	1603125-17	Soil	03/16/16 14:25	03/16/16 17:11

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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.*



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1

Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

## Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-374-5933 Fax

Page 1 of 2

Client: Talon/LPE Bill to Inhibiting  
Address: 1811 E Mulberry St  
City/State/Zip: Ft Collins, CO 80524  
Phone: 970-818-5530 Fax:  
Sampler Name: Jennifer Galles

Project Manager: Jennifer Galles  
E-Mail: jgalles@talonlpe.com  
Project Name: Nelson C-1  
Project Number: 701530.020.04

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:				Special Instructions
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTE-X	Geo	DPO	Nagathalant	
MW-17@ 20-25'	3/15/16	10:29	1			X										
MW-17@ 25-30'		10:46	1													
MW-17@ 30-35'		11:00	1													
MW-17@ 35-40'		11:15	1													
MW-17@ 40-42'		11:35	1													
MW-17@ 42-45'		11:40	1													
MW-18@ 15-20'		13:43	1													
MW-18@ 20-25'		14:00	1													
MW-18@ 25-30'		14:15	1													
MW-18@ 40-45'		15:00	1													
Relinquished by: [Signature] 3/16/16 Date/Time: 17:11				Received by: [Signature] 3/16/16 Date/Time: 17:11				Turn Around Time (Check)				Notes:				
								Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>								
								24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>								
								48 Hours <input type="checkbox"/>								
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				
Relinquished by:				Date/Time:				Sample Integrity:								
								Temperature Upon Receipt: 6.1								
								Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>								

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

## Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-374-5933 Fax

Page 2 of 2

Client: Talon/LPE Bill to Whiting  
Address: 1811 E Mulberry St  
City/State/Zip: Ft Collins, CO 80524  
Phone: 970-819-5330 Fax:  
Sampler Name:

Project Manager: Jennifer Galles  
E-Mail: jgalles@talonlpe.com  
Project Name: Nelson C1  
Project Number: 701530.020.04

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative			Matrix			Analyze For:					Special Instructions	
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Container Serial #	Other (Specify)	BTEX	GRD	DRO		Naphthalene
MW19 @ 15-20	3/16/16	10:00	1			X						X	X	X		
MW19 @ 20-25		10:15														
MW19 @ 35-40		10:55														
MW20 @ 15-20		13:05														
MW20 @ 30-35		13:55														
MW20 @ 35-37.5		14:20														
MW20 @ 37.5-40		14:25														
Relinquished by: <u>[Signature]</u> 3/16/16 Date/Time: <u>17:11</u> Received by: <u>[Signature]</u> 3-16-16 17:11 Date/Time: <u>17:11</u>																
Turn Around Time (Check) Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>																
Sample Integrity: Temperature Upon Receipt: <u>6.1</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**MW-17@20-25'**  
**1603125-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/15/16 10:29

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: 03/15/16 10:29

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		111 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 03/15/16 10:29

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603204	03/21/16	03/21/16	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: 03/15/16 10:29

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**MW-17@25-30'**  
**1603125-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/15/16 10:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/15/16 10:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		110 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/15/16 10:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603204	03/21/16	03/21/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1.0	0.50	"	"	"	"	"	"	

Date Sampled: **03/15/16 10:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**MW-17@30-35'**  
**1603125-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/15/16 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	55	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/15/16 11:00**

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: **03/15/16 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.095	0.010	mg/kg	1	1603204	03/21/16	03/22/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	28	0.50	"	"	"	"	"	"	

Date Sampled: **03/15/16 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**MW-17@35-40'**  
**1603125-04 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/15/16 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/15/16 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		115 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/15/16 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603204	03/21/16	03/21/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	3.4	0.50	"	"	"	"	"	"	

Date Sampled: **03/15/16 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**MW-17@40-42'**  
**1603125-05 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/15/16 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/15/16 11:35**

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: **03/15/16 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.028	0.010	mg/kg	1	1603204	03/21/16	03/21/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	12	0.50	"	"	"	"	"	"	

Date Sampled: **03/15/16 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		108 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		115 %	21-167		"	"	"	"	

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/24/16 11:35

**MW-17@42-45'**  
**1603125-06 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/15/16 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/15/16 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		100 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/15/16 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603204	03/21/16	03/21/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>0.75</b>	<b>0.50</b>	"	"	"	"	"	"	

Date Sampled: **03/15/16 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		108 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		113 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**MW-18@15-20'**  
**1603125-07 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/15/16 13:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/15/16 13:48**

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: **03/15/16 13:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603204	03/21/16	03/22/16	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: **03/15/16 13:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**MW-18@20-25'**  
**1603125-08 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/15/16 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/15/16 14:00**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/15/16 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603204	03/21/16	03/22/16	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: **03/15/16 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**MW-18@25-30'**  
**1603125-09 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/15/16 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/15/16 14:15**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/15/16 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603204	03/21/16	03/22/16	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: **03/15/16 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	21-167		"	"	"	"	

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/24/16 11:35

**MW-18@40-45'**  
**1603125-10 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/15/16 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/15/16 15:00**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/15/16 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603204	03/21/16	03/22/16	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: **03/15/16 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane- <i>d</i> 4		101 %	23-173		"	"	"	"	
Surrogate: Toluene- <i>d</i> 8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	21-167		"	"	"	"	

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**MW-19@15-20'**  
**1603125-11 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/16/16 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/16/16 10:00**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/16/16 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603204	03/21/16	03/22/16	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: **03/16/16 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane- <i>d</i> 4		104 %	23-173		"	"	"	"	
Surrogate: Toluene- <i>d</i> 8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**MW-19@20-25'**  
**1603125-12 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/16/16 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/16/16 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		111 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/16/16 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603204	03/21/16	03/22/16	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: **03/16/16 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		113 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**MW-19@35-40'**  
**1603125-13 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/16/16 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/16/16 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		116 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/16/16 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603204	03/21/16	03/22/16	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: **03/16/16 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**MW-20@15-20'**  
**1603125-14 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/16/16 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/16/16 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		110 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/16/16 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603204	03/21/16	03/22/16	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: **03/16/16 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**MW-20@30-35'**  
**1603125-15 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/16/16 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/16/16 13:55**

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: **03/16/16 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.019	0.010	mg/kg	1	1603204	03/21/16	03/22/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	3.9	0.50	"	"	"	"	"	"	

Date Sampled: **03/16/16 13:55**

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

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**MW-20@35-37.5'**  
**1603125-16 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/16/16 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/16/16 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		111 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/16/16 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.046	0.010	mg/kg	1	1603204	03/21/16	03/22/16	EPA 8260B	
Benzene	0.0049	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	17	0.50	"	"	"	"	"	"	

Date Sampled: **03/16/16 14:20**

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

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**MW-20@37.5-40'**  
**1603125-17 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/16/16 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603200	03/21/16	03/22/16	8015M	

Date Sampled: **03/16/16 14:25**

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: **03/16/16 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603204	03/21/16	03/22/16	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: **03/16/16 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/24/16 11:35

**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 1603200 - EPA 3550A**

**Blank (1603200-BLK1)**

Prepared: 03/21/16 Analyzed: 03/22/16

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 14.8 " 12.5 118 30-150

**LCS (1603200-BS1)**

Prepared: 03/21/16 Analyzed: 03/22/16

C10-C28 (DRO) 475 50 mg/kg 499 95.1 73-134

Surrogate: o-Terphenyl 13.6 " 12.5 109 30-150

**Matrix Spike (1603200-MS1)**

**Source: 1603125-01**

Prepared: 03/21/16 Analyzed: 03/22/16

C10-C28 (DRO) 453 50 mg/kg 475 13.2 92.5 50-148

Surrogate: o-Terphenyl 12.6 " 11.9 106 30-150

**Matrix Spike Dup (1603200-MSD1)**

**Source: 1603125-01**

Prepared: 03/21/16 Analyzed: 03/22/16

C10-C28 (DRO) 469 50 mg/kg 487 13.2 93.5 50-148 3.48 13

Surrogate: o-Terphenyl 12.9 " 12.2 105 30-150

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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**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 1603204 - EPA 5030 Soil MS**

**Blank (1603204-BLK1)**

Prepared & Analyzed: 03/21/16

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>0.0379</i>		<i>"</i>	<i>0.0376</i>		<i>101</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0376</i>		<i>106</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0407</i>		<i>"</i>	<i>0.0376</i>		<i>108</i>	<i>21-167</i>			

**LCS (1603204-BS1)**

Prepared & Analyzed: 03/21/16

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0862	0.0020	"	0.0921		93.6	58-130			
Toluene	0.0883	0.0050	"	0.0921		95.9	61-134			
Ethylbenzene	0.0980	0.0050	"	0.0913		107	74-139			
m,p-Xylene	0.204	0.010	"	0.184		111	73-137			
o-Xylene	0.0951	0.0050	"	0.0902		105	73-141			
Xylenes (total)	0.299	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.27	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0351</i>		<i>"</i>	<i>0.0368</i>		<i>95.4</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0386</i>		<i>"</i>	<i>0.0368</i>		<i>105</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0402</i>		<i>"</i>	<i>0.0368</i>		<i>109</i>	<i>21-167</i>			

**Matrix Spike (1603204-MS1)**

Source: 1603125-01

Prepared & Analyzed: 03/21/16

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0928	0.0020	"	0.0954	ND	97.3	30-131			
Toluene	0.0929	0.0050	"	0.0954	ND	97.3	30-134			
Ethylbenzene	0.105	0.0050	"	0.0947	ND	111	22-153			
m,p-Xylene	0.216	0.010	"	0.190	ND	114	10-159			
o-Xylene	0.0999	0.0050	"	0.0935	ND	107	31-151			
Xylenes (total)	0.316	0.010	"		ND		30-160			
Gasoline Range Hydrocarbons	2.43	0.50	"		ND		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0368</i>		<i>"</i>	<i>0.0382</i>		<i>96.5</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0382</i>		<i>104</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0404</i>		<i>"</i>	<i>0.0382</i>		<i>106</i>	<i>21-167</i>			

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

Reported:  
03/24/16 11:35

**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 1603204 - EPA 5030 Soil MS**

Matrix Spike Dup (1603204-MSD1)	Source: 1603125-01			Prepared & Analyzed: 03/21/16						
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0902	0.0020	"	0.0951	ND	94.9	30-131	2.85	34	
Toluene	0.0900	0.0050	"	0.0951	ND	94.7	30-134	3.13	30	
Ethylbenzene	0.103	0.0050	"	0.0943	ND	109	22-153	2.03	24	
m,p-Xylene	0.211	0.010	"	0.190	ND	111	10-159	2.45	68	
o-Xylene	0.0972	0.0050	"	0.0932	ND	104	31-151	2.70	38	
Xylenes (total)	0.308	0.010	"		ND		30-160	2.53	30	
Gasoline Range Hydrocarbons	2.35	0.50	"		ND		30-160	3.19	30	
Surrogate: 1,2-Dichloroethane-d4	0.0369		"	0.0380		97.0	23-173			
Surrogate: Toluene-d8	0.0394		"	0.0380		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0405		"	0.0380		106	21-167			

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Jennifer Galles

**Reported:**  
03/24/16 11:35

### 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 'MSM'.

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 30, 2016

Colby Sterling  
Talon/LPE  
1811 E Mulberry  
Ft Collins, CO 80524  
RE: Nelson C1

Enclosed are the results of analyses for samples received by Summit Scientific on 03/22/16 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury  
President



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

**Reported:**  
03/30/16 09:23

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW9	1603161-01	Water	03/22/16 12:00	03/22/16 16:00
MW11	1603161-02	Water	03/22/16 12:05	03/22/16 16:00
MW13	1603161-03	Water	03/22/16 12:10	03/22/16 16:00
MW14	1603161-04	Water	03/22/16 12:15	03/22/16 16:00
MW15	1603161-05	Water	03/22/16 12:20	03/22/16 16:00
MW16	1603161-06	Water	03/22/16 12:25	03/22/16 16:00
MW18	1603161-07	Water	03/22/16 12:30	03/22/16 16:00

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1

Project Number: 701530.020.04

Project Manager: Colby Sterling

**Reported:**

03/30/16 09:23

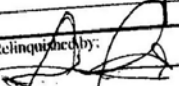

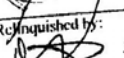
## Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-374-5933 Fax

Page 1 of 1

(Client: Talbot LPE/B.I. Writing)  
 Address: 1811 E Milwaukee  
 City/State/Zip: Fre CO 80521 Fax:  
 Phone:  
 Sampler Name: Steve Taylor / J. Colles

Project Manager: Colby Sterling  
E-Mail: Csterling@TalentPE.com  
Project Name: Nelson C-1  
Project Number: 701530.0202.04

Sample Description		Date Sampled	Time Sampled	Number of Containers	Preservative					Matrix			Analyze For:										Special Instructions	
					HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)												
MW 9		3-22-16	12:00	3	X				X				X BTEX											
MW 11			12:05																					
MW 13			12:10																					
MW 14			12:15																					
MW 15			12:20																					
MW 16			12:25																					
MW 18			12:30																					
			12:35																					
Relinquished by: 		Date/Time: 3-22-16 16:00		Received by: 		Date/Time: 3-22-16 16:00		Turn Around Time (Check)		Same Day <input type="checkbox"/>		72 Hours <input type="checkbox"/>		24 Hours <input type="checkbox"/>		Standard <input checked="" type="checkbox"/>		Notes:						
Relinquished by: 		Date/Time: 3-22-16 17:50		Received by:		Date/Time:		48 Hours <input type="checkbox"/>		Sample Integrity:		Temperature Upon Receipt: 20.5		Intact: Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>								
Relinquished by:		Date/Time:		Received in Lab by:		Date/Time:																		

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Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

**Reported:**  
03/30/16 09:23

**MW9**  
**1603161-01 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/22/16 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1603244	03/24/16	03/24/16	EPA 8260B	
<b>Toluene</b>	<b>1.6</b>	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>3.9</b>	1.0	"	"	"	"	"	"	

Date Sampled: **03/22/16 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>105 %</i>	<i>37-154</i>		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		<i>108 %</i>	<i>45-149</i>		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>110 %</i>	<i>45-146</i>		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

Reported:  
03/30/16 09:23

**MW11**  
**1603161-02 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/22/16 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>1.6</b>	1.0	ug/l	1	1603244	03/24/16	03/24/16	EPA 8260B	
<b>Toluene</b>	<b>1.1</b>	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **03/22/16 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		104 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	45-146		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

Reported:  
03/30/16 09:23

**MW13**  
**1603161-03 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/22/16 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1603244	03/24/16	03/24/16	EPA 8260B	
<b>Toluene</b>	<b>1.3</b>	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **03/22/16 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		104 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	45-146		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

Reported:  
03/30/16 09:23

**MW14**  
**1603161-04 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/22/16 12:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>2500</b>	100		ug/l	100	1603244	03/24/16	03/24/16	EPA 8260B	
<b>Toluene</b>	<b>2300</b>	100		"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>480</b>	100		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>1300</b>	100		"	"	"	"	"	"	

Date Sampled: **03/22/16 12:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		109 %		37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		104 %		45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		105 %		45-146		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

Reported:  
03/30/16 09:23

**MW15**  
**1603161-05 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/22/16 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>4300</b>	100		ug/l	100	1603244	03/24/16	03/24/16	EPA 8260B	
<b>Toluene</b>	<b>6400</b>	100		"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>420</b>	100		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>3500</b>	100		"	"	"	"	"	"	

Date Sampled: **03/22/16 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		109 %		37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		102 %		45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		103 %		45-146		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

Reported:  
03/30/16 09:23

**MW16**  
**1603161-06 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/22/16 12:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>14000</b>	100		ug/l	100	1603244	03/24/16	03/24/16	EPA 8260B	
<b>Toluene</b>	<b>16000</b>	100		"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>680</b>	100		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>6100</b>	100		"	"	"	"	"	"	

Date Sampled: **03/22/16 12:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		112 %		37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		108 %		45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		104 %		45-146		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

Reported:  
03/30/16 09:23

**MW18**  
**1603161-07 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/22/16 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>84</b>	1.0	ug/l	1	1603244	03/24/16	03/24/16	EPA 8260B	
<b>Toluene</b>	<b>47</b>	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>2.6</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>7.4</b>	1.0	"	"	"	"	"	"	

Date Sampled: **03/22/16 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.6 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		104 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		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.*





Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

Reported:  
03/30/16 09:23

## 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 1603244 - EPA 5030 Water MS

##### Blank (1603244-BLK1)

Prepared & Analyzed: 03/23/16

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.4		"	13.3	101	37-154				
Surrogate: Toluene-d8	14.1		"	13.3	106	45-149				
Surrogate: 4-Bromofluorobenzene	14.3		"	13.3	107	45-146				

##### LCS (1603244-BS1)

Prepared & Analyzed: 03/23/16

Benzene	32.4	1.0	ug/l	33.3	97.1	51-132				
Toluene	31.9	1.0	"	33.3	95.7	51-138				
Ethylbenzene	34.0	1.0	"	33.1	103	58-146				
m,p-Xylene	71.2	2.0	"	66.5	107	57-144				
o-Xylene	33.3	1.0	"	32.7	102	53-146				
Surrogate: 1,2-Dichloroethane-d4	13.2		"	13.3	99.3	37-154				
Surrogate: Toluene-d8	14.0		"	13.3	105	45-149				
Surrogate: 4-Bromofluorobenzene	14.5		"	13.3	109	45-146				

##### Matrix Spike (1603244-MS1)

Source: 1603149-01

Prepared & Analyzed: 03/23/16

Benzene	32.1	1.0	ug/l	33.3	ND	96.3	34-141			
Toluene	31.6	1.0	"	33.3	ND	94.8	27-151			
Ethylbenzene	34.3	1.0	"	33.1	ND	104	29-160			
m,p-Xylene	73.1	2.0	"	66.5	ND	110	20-166			
o-Xylene	34.2	1.0	"	32.7	ND	105	33-159			
Surrogate: 1,2-Dichloroethane-d4	13.7		"	13.3	103	37-154				
Surrogate: Toluene-d8	13.6		"	13.3	102	45-149				
Surrogate: 4-Bromofluorobenzene	14.6		"	13.3	110	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

Reported:  
03/30/16 09:23

**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 1603244 - EPA 5030 Water MS**

Matrix Spike Dup (1603244-MSD1)	Source: 1603149-01			Prepared & Analyzed: 03/23/16						
Benzene	30.8	1.0	ug/l	33.3	ND	92.5	34-141	4.07	32	
Toluene	30.2	1.0	"	33.3	ND	90.7	27-151	4.50	25	
Ethylbenzene	33.2	1.0	"	33.1	ND	100	29-160	3.20	50	
m,p-Xylene	69.2	2.0	"	66.5	ND	104	20-166	5.51	36	
o-Xylene	32.4	1.0	"	32.7	ND	99.2	33-159	5.37	26	
Surrogate: 1,2-Dichloroethane-d4	13.6		"	13.3		102	37-154			
Surrogate: Toluene-d8	13.8		"	13.3		104	45-149			
Surrogate: 4-Bromofluorobenzene	13.9		"	13.3		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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.04  
Project Manager: Colby Sterling

**Reported:**  
03/30/16 09:23

### 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

---

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 'MSM'.

Thursday, September 03, 2015

Colby Sterling  
Talon LPE  
921 N Bivins  
Amarillo, TX 79107

Re: ALS Workorder: 1508471  
Project Name: Nelson C-1  
Project Number: 701530.020.03

Dear Mr. Sterling:

Seven soil samples were received from Talon LPE, on 8/26/2015. The samples were scheduled for the following analyses:

GC/MS Volatiles

Total Extractable Petroleum Hydrocarbons (Diesel)

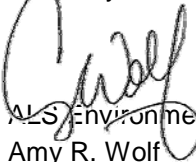
Total Volatile Petroleum Hydrocarbons (Gasoline)

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,



ALS Environmental  
Amy R. Wolf  
Project Manager

ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Connecticut (CT)	PH-0232
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
L-A-B (DoD ELAP/ISO 170250)	L2257
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280



**1508471**

**GC/MS Volatiles:**

The samples were analyzed using GC/MS following the current revision of SOP 525 based on SW-846 Method 8260C.

All acceptance criteria were met.

**GRO:**

The sample was analyzed following the current revision of SOP 425 generally based on SW-846 Methods 8000C and 8015D. TVPH is a multicomponent mixture and is quantitated by summing the entire carbon range, rather than individual peaks. The carbon range integrated in this test extends from C6 to C10.

The surrogate recovery for sample -5 was outside control limits (high). Inspection of the chromatogram indicated co-elution of the surrogate peak with a target component peak, biasing the surrogate result high. No further action was taken.

All remaining acceptance criteria were met.

**DRO:**

The sample was analyzed following the current revision of SOP 406 generally based on SW-846 Methods 8000C and 8015D. TEPH is a multicomponent mixture and is quantitated by summing the entire carbon range, rather than individual peaks. The carbon range integrated in this test extends from C10 to C28.

All acceptance criteria were met.

# ALS Environmental -- FC

## Sample Number(s) Cross-Reference Table

---

**OrderNum:** 1508471

**Client Name:** Talon LPE

**Client Project Name:** Nelson C-1

**Client Project Number:** 701530.020.03

**Client PO Number:**

---

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
SB-14 20-25	1508471-1		SOIL	25-Aug-15	14:28
SB-14 25-30	1508471-2		SOIL	25-Aug-15	14:38
SB-14 30-35	1508471-3		SOIL	25-Aug-15	15:05
SB-15 20-25	1508471-4		SOIL	25-Aug-15	16:10
SB-15 25-30	1508471-5		SOIL	25-Aug-15	16:20
SB-15 30-35	1508471-6		SOIL	25-Aug-15	16:40
SB-15 35-40	1508471-7		SOIL	25-Aug-15	16:50



# ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524  
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

## Chain-of-Custody

Form 2026

PROJECT NAME	Nelson C-1	SAMPLER	TJGrel	DATE	8-26-15	WORKORDER #	1500471
PROJECT No.	701530.020203	SITE ID		TURNAROUND	Standard	PAGE	1 of 1
COMPANY NAME	Talen/KPE	EDD FORMAT				DISPOSAL	
SEND REPORT TO	Calby Stelling	PURCHASE ORDER					
ADDRESS		BILL TO COMPANY	Whiting Petroleum				
CITY / STATE / ZIP		INVOICE ATTN TO	Kyle Waggoner				
PHONE		ADDRESS					
FAX		CITY / STATE / ZIP					
E-MAIL	cschelling@talenpc.com	PHONE					
		FAX					
		E-MAIL					
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC
① SB-14 20-25		Soil	8-25-15	1428	1	-	-
② SB-14 25-30		Soil		1438	1	-	-
③ SB-14 30-35		Soil		1505	1	-	-
④ SB-15 20-25		Soil		1610	1	-	-
⑤ SB-15 25-30		Soil		1620	1	-	-
⑥ SB-15 30-35		Soil		1640	1	-	-
⑦ SB-15 35-40		Soil		1650	1	-	-

\*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = not-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments:	QC PACKAGE (check below)
5 of 22	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw data)
Preservative Key:	1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

RELINQUISHED BY	SIGNATURE	PRINTED NAME	DATE	TIME
RECEIVED BY		TJGrel	8-26-15	1645
RELINQUISHED BY		Scott Melling	8-26-15	1645
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				





**ALS Environmental - Fort Collins**  
**CONDITION OF SAMPLE UPON RECEIPT FORM**

Client: Talon

Workorder No: 1508471

*Revd  
8/26/15*

Project Manager: ARW

Initials: SDM

Date: 08-27-15

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<input checked="" type="radio"/> NO
2. Are custody seals on shipping containers intact?	<input checked="" type="radio"/> NONE	YES	NO
3. Are Custody seals on sample containers intact?	<input checked="" type="radio"/> NONE	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<input checked="" type="radio"/> YES	NO
5. Are the COC and bottle labels complete and legible?		<input checked="" type="radio"/> YES	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<input checked="" type="radio"/> YES	NO
7. Were airbills / shipping documents present and/or removable?	<input checked="" type="radio"/> DROP OFF	YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	<input checked="" type="radio"/> N/A	YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	<input checked="" type="radio"/> N/A	YES	NO
10. Is there sufficient sample for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the proper containers for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within holding times for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<input checked="" type="radio"/> YES	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	<input checked="" type="radio"/> N/A	YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	<input checked="" type="radio"/> N/A	YES	NO
16. Were the samples shipped on ice?		<input checked="" type="radio"/> YES	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: <input checked="" type="radio"/> #2 #4		<input checked="" type="radio"/> YES	NO
Cooler #: <u>1</u>			
Temperature (°C): <u>3.6</u>			
No. of custody seals on cooler: <u>0</u>			
External µR/hr reading: <u>N/A</u>			
Background µR/hr reading: <u>12</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES / NO / <input checked="" type="radio"/> NA (If no, see Form 008.)			

**Additional Information:** PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

\* All samples received on 8-26-15 @ 1645. Logged in on 8-27-15.

If applicable, was the client contacted? YES / NO / ☒ NA Contact: \_\_\_\_\_

Date/Time: \_\_\_\_\_

Project Manager Signature / Date: \_\_\_\_\_

*Curry 8/27/15*

**Client:** Talon LPE  
**Project:** 701530.020.03 Nelson C-1  
**Sample ID:** SB-14 20-25  
**Legal Location:**  
**Collection Date:** 8/25/2015 14:28

**Date:** 03-Sep-15  
**Work Order:** 1508471  
**Lab ID:** 1508471-1  
**Matrix:** SOIL  
**Percent Moisture:** 24.5

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Diesel Range Organics</b>						
			<b>SW8015M</b>		Prep Date: <b>8/29/2015</b>	PrepBy: <b>JFN</b>
Diesel Range Organics	ND		6.5	MG/KG	1	8/31/2015 11:12
Surr: O-TERPHENYL	95		49-114	%REC	1	8/31/2015 11:12
<b>Gasoline Range Organics</b>						
			<b>SW8015</b>		Prep Date: <b>9/1/2015</b>	PrepBy: <b>JFN</b>
GASOLINE RANGE ORGANICS	ND		0.61	MG/KG	1	9/1/2015 19:56
Surr: 2,3,4-TRIFLUOROTOLUENE	100		76-126	%REC	1	9/1/2015 19:56
<b>GC/MS Volatiles</b>						
			<b>SW8260</b>		Prep Date: <b>8/30/2015</b>	PrepBy: <b>SDW</b>
<b>BENZENE</b>	<b>0.02</b>		<b>0.0065</b>	<b>MG/KG</b>	1	8/30/2015 23:32
<b>TOLUENE</b>	<b>0.0069</b>		<b>0.0065</b>	<b>MG/KG</b>	1	8/30/2015 23:32
ETHYLBENZENE	ND		0.0065	MG/KG	1	8/30/2015 23:32
<b>M+P-XYLENE</b>	<b>0.015</b>		<b>0.0065</b>	<b>MG/KG</b>	1	8/30/2015 23:32
O-XYLENE	ND		0.0065	MG/KG	1	8/30/2015 23:32
NAPHTHALENE	ND		0.0065	MG/KG	1	8/30/2015 23:32
<b>TOTAL XYLENES</b>	<b>0.015</b>		<b>0.005</b>	<b>MG/KG</b>	1	8/30/2015 23:32
Surr: DIBROMOFLUOROMETHANE	90		61-134	%REC	1	8/30/2015 23:32
Surr: TOLUENE-D8	100		57-135	%REC	1	8/30/2015 23:32
Surr: 4-BROMOFLUOROBENZENE	95		52-151	%REC	1	8/30/2015 23:32

**Client:** Talon LPE  
**Project:** 701530.020.03 Nelson C-1  
**Sample ID:** SB-14 25-30  
**Legal Location:**  
**Collection Date:** 8/25/2015 14:38

**Date:** 03-Sep-15  
**Work Order:** 1508471  
**Lab ID:** 1508471-2  
**Matrix:** SOIL  
**Percent Moisture:** 28.0

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Diesel Range Organics</b>						
			<b>SW8015M</b>		Prep Date: <b>8/29/2015</b>	PrepBy: <b>JFN</b>
Diesel Range Organics	30	L	6.7	MG/KG	1	8/29/2015 21:17
Surr: O-TERPHENYL	99		49-114	%REC	1	8/29/2015 21:17
<b>Gasoline Range Organics</b>						
			<b>SW8015</b>		Prep Date: <b>9/1/2015</b>	PrepBy: <b>JFN</b>
GASOLINE RANGE ORGANICS	1.2	GH	0.65	MG/KG	1	9/1/2015 20:19
Surr: 2,3,4-TRIFLUOROTOLUENE	114		76-126	%REC	1	9/1/2015 20:19
<b>GC/MS Volatiles</b>						
			<b>SW8260</b>		Prep Date: <b>8/30/2015</b>	PrepBy: <b>SDW</b>
BENZENE	0.032		0.0068	MG/KG	1	8/30/2015 23:56
TOLUENE	0.14		0.0068	MG/KG	1	8/30/2015 23:56
ETHYLBENZENE	0.058		0.0068	MG/KG	1	8/30/2015 23:56
M+P-XYLENE	0.29		0.0068	MG/KG	1	8/30/2015 23:56
O-XYLENE	0.13		0.0068	MG/KG	1	8/30/2015 23:56
NAPHTHALENE	0.029		0.0068	MG/KG	1	8/30/2015 23:56
TOTAL XYLENES	0.42		0.005	MG/KG	1	8/30/2015 23:56
Surr: DIBROMOFLUOROMETHANE	94		61-134	%REC	1	8/30/2015 23:56
Surr: TOLUENE-D8	98		57-135	%REC	1	8/30/2015 23:56
Surr: 4-BROMOFLUOROBENZENE	92		52-151	%REC	1	8/30/2015 23:56

**Client:** Talon LPE  
**Project:** 701530.020.03 Nelson C-1  
**Sample ID:** SB-14 30-35  
**Legal Location:**  
**Collection Date:** 8/25/2015 15:05

**Date:** 03-Sep-15  
**Work Order:** 1508471  
**Lab ID:** 1508471-3  
**Matrix:** SOIL  
**Percent Moisture:** 35.0

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Diesel Range Organics</b>			<b>SW8015M</b>		Prep Date: <b>8/29/2015</b>	PrepBy: <b>JFN</b>
Diesel Range Organics	ND		7.3	MG/KG	1	8/29/2015 21:48
Surr: O-TERPHENYL	101		49-114	%REC	1	8/29/2015 21:48
<b>Gasoline Range Organics</b>			<b>SW8015</b>		Prep Date: <b>9/1/2015</b>	PrepBy: <b>JFN</b>
<b>GASOLINE RANGE ORGANICS</b>	<b>0.82</b>	G	<b>0.65</b>	<b>MG/KG</b>	1	9/1/2015 20:40
Surr: 2,3,4-TRIFLUOROTOLUENE	101		76-126	%REC	1	9/1/2015 20:40
<b>GC/MS Volatiles</b>			<b>SW8260</b>		Prep Date: <b>8/30/2015</b>	PrepBy: <b>SDW</b>
<b>BENZENE</b>	<b>0.16</b>		<b>0.0073</b>	<b>MG/KG</b>	1	8/31/2015 00:21
<b>TOLUENE</b>	<b>0.37</b>		<b>0.07</b>	<b>MG/KG</b>	1	8/31/2015 16:14
ETHYLBENZENE	ND		0.07	MG/KG	1	8/31/2015 16:14
<b>M+P-XYLENE</b>	<b>0.16</b>		<b>0.07</b>	<b>MG/KG</b>	1	8/31/2015 16:14
O-XYLENE	ND		0.07	MG/KG	1	8/31/2015 16:14
NAPHTHALENE	ND		0.07	MG/KG	1	8/31/2015 16:14
<b>TOTAL XYLENES</b>	<b>0.16</b>		<b>0.005</b>	<b>MG/KG</b>	1	8/31/2015 16:14
Surr: DIBROMOFLUOROMETHANE	90		61-134	%REC	1	8/31/2015 16:14
Surr: DIBROMOFLUOROMETHANE	93		61-134	%REC	1	8/31/2015 00:21
Surr: TOLUENE-D8	100		57-135	%REC	1	8/31/2015 00:21
Surr: TOLUENE-D8	98		57-135	%REC	1	8/31/2015 16:14
Surr: 4-BROMOFLUOROBENZENE	93		52-151	%REC	1	8/31/2015 16:14
Surr: 4-BROMOFLUOROBENZENE	92		52-151	%REC	1	8/31/2015 00:21

**Client:** Talon LPE  
**Project:** 701530.020.03 Nelson C-1  
**Sample ID:** SB-15 20-25  
**Legal Location:**  
**Collection Date:** 8/25/2015 16:10

**Date:** 03-Sep-15  
**Work Order:** 1508471  
**Lab ID:** 1508471-4  
**Matrix:** SOIL  
**Percent Moisture:** 27.3

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Diesel Range Organics</b>						
			<b>SW8015M</b>		Prep Date: <b>8/29/2015</b>	PrepBy: <b>JFN</b>
Diesel Range Organics	32	L	6.8	MG/KG	1	8/29/2015 22:49
Surr: O-TERPHENYL	97		49-114	%REC	1	8/29/2015 22:49
<b>Gasoline Range Organics</b>						
			<b>SW8015</b>		Prep Date: <b>9/1/2015</b>	PrepBy: <b>JFN</b>
GASOLINE RANGE ORGANICS	19	ZG	0.63	MG/KG	1	9/1/2015 21:02
Surr: 2,3,4-TRIFLUOROTOLUENE	118		76-126	%REC	1	9/1/2015 21:02
<b>GC/MS Volatiles</b>						
			<b>SW8260</b>		Prep Date: <b>8/31/2015</b>	PrepBy: <b>SDW</b>
BENZENE	1.2		0.069	MG/KG	1	8/31/2015 16:37
TOLUENE	2.6		0.65	MG/KG	100	9/1/2015 14:11
ETHYLBENZENE	0.65		0.069	MG/KG	1	8/31/2015 16:37
M+P-XYLENE	2.8		0.069	MG/KG	1	8/31/2015 16:37
O-XYLENE	1		0.069	MG/KG	1	8/31/2015 16:37
NAPHTHALENE	0.1		0.0065	MG/KG	1	8/31/2015 00:46
TOTAL XYLENES	3.8		0.005	MG/KG	1	8/31/2015 00:46
Surr: DIBROMOFLUOROMETHANE	94		61-134	%REC	1	8/31/2015 00:46
Surr: DIBROMOFLUOROMETHANE	93		61-134	%REC	100	9/1/2015 14:11
Surr: DIBROMOFLUOROMETHANE	94		61-134	%REC	1	8/31/2015 16:37
Surr: TOLUENE-D8	96		57-135	%REC	100	9/1/2015 14:11
Surr: TOLUENE-D8	99		57-135	%REC	1	8/31/2015 16:37
Surr: TOLUENE-D8	101		57-135	%REC	1	8/31/2015 00:46
Surr: 4-BROMOFLUOROBENZENE	90		52-151	%REC	100	9/1/2015 14:11
Surr: 4-BROMOFLUOROBENZENE	92		52-151	%REC	1	8/31/2015 16:37
Surr: 4-BROMOFLUOROBENZENE	91		52-151	%REC	1	8/31/2015 00:46

**Client:** Talon LPE  
**Project:** 701530.020.03 Nelson C-1  
**Sample ID:** SB-15 25-30  
**Legal Location:**  
**Collection Date:** 8/25/2015 16:20

**Date:** 03-Sep-15  
**Work Order:** 1508471  
**Lab ID:** 1508471-5  
**Matrix:** SOIL  
**Percent Moisture:** 26.0

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Diesel Range Organics</b>						
			<b>SW8015M</b>		Prep Date: <b>8/29/2015</b>	PrepBy: <b>JFN</b>
Diesel Range Organics	95	L	6.5	MG/KG	1	8/29/2015 23:20
Surr: O-TERPHENYL	99		49-114	%REC	1	8/29/2015 23:20
<b>Gasoline Range Organics</b>						
			<b>SW8015</b>		Prep Date: <b>9/1/2015</b>	PrepBy: <b>JFN</b>
GASOLINE RANGE ORGANICS	37	GZ	0.63	MG/KG	1	9/1/2015 21:24
Surr: 2,3,4-TRIFLUOROTOLUENE	136	*	76-126	%REC	1	9/1/2015 21:24
<b>GC/MS Volatiles</b>						
			<b>SW8260</b>		Prep Date: <b>8/31/2015</b>	PrepBy: <b>SDW</b>
BENZENE	1.2		0.06	MG/KG	1	8/31/2015 17:00
TOLUENE	6.6		0.67	MG/KG	100	9/1/2015 14:35
ETHYLBENZENE	1.2		0.06	MG/KG	1	8/31/2015 17:00
M+P-XYLENE	8.1		0.67	MG/KG	100	9/1/2015 14:35
O-XYLENE	1.8		0.06	MG/KG	1	8/31/2015 17:00
NAPHTHALENE	0.23		0.06	MG/KG	1	8/31/2015 17:00
TOTAL XYLENES	1.8		0.005	MG/KG	1	8/31/2015 17:00
Surr: DIBROMOFLUOROMETHANE	92		61-134	%REC	100	9/1/2015 14:35
Surr: DIBROMOFLUOROMETHANE	93		61-134	%REC	1	8/31/2015 17:00
Surr: TOLUENE-D8	99		57-135	%REC	1	8/31/2015 17:00
Surr: TOLUENE-D8	99		57-135	%REC	100	9/1/2015 14:35
Surr: 4-BROMOFLUOROBENZENE	92		52-151	%REC	100	9/1/2015 14:35
Surr: 4-BROMOFLUOROBENZENE	92		52-151	%REC	1	8/31/2015 17:00

**Client:** Talon LPE  
**Project:** 701530.020.03 Nelson C-1  
**Sample ID:** SB-15 30-35  
**Legal Location:**  
**Collection Date:** 8/25/2015 16:40

**Date:** 03-Sep-15  
**Work Order:** 1508471  
**Lab ID:** 1508471-6  
**Matrix:** SOIL  
**Percent Moisture:** 35.8

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Diesel Range Organics</b>			<b>SW8015M</b>		Prep Date: <b>8/29/2015</b>	PrepBy: <b>JFN</b>
Diesel Range Organics	ND		7.6	MG/KG	1	8/29/2015 23:51
Surr: O-TERPHENYL	102		49-114	%REC	1	8/29/2015 23:51
<b>Gasoline Range Organics</b>			<b>SW8015</b>		Prep Date: <b>9/1/2015</b>	PrepBy: <b>JFN</b>
<b>GASOLINE RANGE ORGANICS</b>	<b>4.4</b>	G	<b>0.72</b>	<b>MG/KG</b>	1	9/1/2015 21:45
Surr: 2,3,4-TRIFLUOROTOLUENE	107		76-126	%REC	1	9/1/2015 21:45
<b>GC/MS Volatiles</b>			<b>SW8260</b>		Prep Date: <b>9/1/2015</b>	PrepBy: <b>SDW</b>
<b>BENZENE</b>	<b>1.5</b>		<b>0.74</b>	<b>MG/KG</b>	100	9/1/2015 15:01
<b>TOLUENE</b>	<b>1.8</b>		<b>0.74</b>	<b>MG/KG</b>	100	9/1/2015 15:01
<b>ETHYLBENZENE</b>	<b>0.23</b>		<b>0.076</b>	<b>MG/KG</b>	1	8/31/2015 17:23
<b>M+P-XYLENE</b>	<b>0.87</b>		<b>0.076</b>	<b>MG/KG</b>	1	8/31/2015 17:23
<b>O-XYLENE</b>	<b>0.39</b>		<b>0.076</b>	<b>MG/KG</b>	1	8/31/2015 17:23
NAPHTHALENE	ND		0.076	MG/KG	1	8/31/2015 17:23
<b>TOTAL XYLENES</b>	<b>1.3</b>		<b>0.005</b>	<b>MG/KG</b>	1	8/31/2015 17:23
Surr: DIBROMOFLUOROMETHANE	94		61-134	%REC	100	9/1/2015 15:01
Surr: DIBROMOFLUOROMETHANE	94		61-134	%REC	1	8/31/2015 17:23
Surr: TOLUENE-D8	100		57-135	%REC	1	8/31/2015 17:23
Surr: TOLUENE-D8	98		57-135	%REC	100	9/1/2015 15:01
Surr: 4-BROMOFLUOROBENZENE	90		52-151	%REC	100	9/1/2015 15:01
Surr: 4-BROMOFLUOROBENZENE	91		52-151	%REC	1	8/31/2015 17:23

**Client:** Talon LPE  
**Project:** 701530.020.03 Nelson C-1  
**Sample ID:** SB-15 35-40  
**Legal Location:**  
**Collection Date:** 8/25/2015 16:50

**Date:** 03-Sep-15  
**Work Order:** 1508471  
**Lab ID:** 1508471-7  
**Matrix:** SOIL  
**Percent Moisture:** 17.9

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Diesel Range Organics</b>						
			<b>SW8015M</b>		Prep Date: <b>8/29/2015</b>	PrepBy: <b>JFN</b>
Diesel Range Organics	ND		6	MG/KG	1	8/30/2015 00:21
Surr: O-TERPHENYL	93		49-114	%REC	1	8/30/2015 00:21
<b>Gasoline Range Organics</b>						
			<b>SW8015</b>		Prep Date: <b>9/1/2015</b>	PrepBy: <b>JFN</b>
GASOLINE RANGE ORGANICS	ND		0.35	MG/KG	1	9/1/2015 22:08
Surr: 2,3,4-TRIFLUOROTOLUENE	83		76-126	%REC	1	9/1/2015 22:08
<b>GC/MS Volatiles</b>						
			<b>SW8260</b>		Prep Date: <b>8/31/2015</b>	PrepBy: <b>SDW</b>
BENZENE	ND		0.0059	MG/KG	1	8/31/2015 17:47
TOLUENE	ND		0.0059	MG/KG	1	8/31/2015 17:47
ETHYLBENZENE	ND		0.0059	MG/KG	1	8/31/2015 17:47
M+P-XYLENE	ND		0.0059	MG/KG	1	8/31/2015 17:47
O-XYLENE	ND		0.0059	MG/KG	1	8/31/2015 17:47
NAPHTHALENE	ND		0.0059	MG/KG	1	8/31/2015 17:47
TOTAL XYLENES	ND		0.005	MG/KG	1	8/31/2015 17:47
Surr: DIBROMOFLUOROMETHANE	96		61-134	%REC	1	8/31/2015 17:47
Surr: TOLUENE-D8	98		57-135	%REC	1	8/31/2015 17:47
Surr: 4-BROMOFLUOROBENZENE	94		52-151	%REC	1	8/31/2015 17:47



**Client:** Talon LPE  
**Project:** 701530.020.03 Nelson C-1  
**Sample ID:** SB-15 35-40  
**Legal Location:**  
**Collection Date:** 8/25/2015 16:50

**Date:** 03-Sep-15  
**Work Order:** 1508471  
**Lab ID:** 1508471-7  
**Matrix:** SOIL  
**Percent Moisture:** 17.9

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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### Explanation of Qualifiers

#### Radiochemistry:

U or ND - Result is less than the sample specific MDC.  
 Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.  
 Y2 - Chemical Yield outside default limits.  
 W - DER is greater than Warning Limit of 1.42  
 \* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.  
 # - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.  
 G - Sample density differs by more than 15% of LCS density.  
 D - DER is greater than Control Limit  
 M - Requested MDC not met.  
 LT - Result is less than requested MDC but greater than achieved MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.  
 L - LCS Recovery below lower control limit.  
 H - LCS Recovery above upper control limit.  
 P - LCS, Matrix Spike Recovery within control limits.  
 N - Matrix Spike Recovery outside control limits  
 NC - Not Calculated for duplicate results less than 5 times MDC  
 B - Analyte concentration greater than MDC.  
 B3 - Analyte concentration greater than MDC but less than Requested MDC.

#### Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).  
 U or ND - Indicates that the compound was analyzed for but not detected.  
 E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.  
 M - Duplicate injection precision was not met.  
 N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.  
 Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.  
 \* - Duplicate analysis (relative percent difference) not within control limits.  
 S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

#### Organics:

U or ND - Indicates that the compound was analyzed for but not detected.  
 B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.  
 E - Analyte concentration exceeds the upper level of the calibration range.  
 J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).  
 A - A tentatively identified compound is a suspected aldol-condensation product.  
 X - The analyte was diluted below an accurate quantitation level.  
 \* - The spike recovery is equal to or outside the control criteria used.  
 + - The relative percent difference (RPD) equals or exceeds the control criteria.  
 G - A pattern resembling gasoline was detected in this sample.  
 D - A pattern resembling diesel was detected in this sample.  
 M - A pattern resembling motor oil was detected in this sample.  
 C - A pattern resembling crude oil was detected in this sample.  
 4 - A pattern resembling JP-4 was detected in this sample.  
 5 - A pattern resembling JP-5 was detected in this sample.  
 H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.  
 L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.  
 Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:

- gasoline
- JP-8
- diesel
- mineral spirits
- motor oil
- Stoddard solvent
- bunker C

## ALS Environmental -- FC

Date: 9/3/2015 10:08:

Client: Talon LPE

Work Order: 1508471

Project: 701530.020.03 Nelson C-1

## QC BATCH REPORT

Batch ID: HC150829-100-1 Instrument ID FUELS-1 Method: SW8015M

LCS	Sample ID: <b>HC150829-100</b>				Units: <b>MG/KG</b>		Analysis Date: <b>8/29/2015 19:13</b>				
Client ID:	Run ID: <b>HC150829-7A</b>				Prep Date: <b>8/29/2015</b>			DF: <b>1</b>			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	68.8	5	62.5		110	76-124				20	
Surr: O-TERPHENYL	5.34		6.25		85	49-114					

MB	Sample ID: HC150829-100				Units: MG/KG		Analysis Date: 8/29/2015 18:12				
Client ID:	Run ID: HC150829-7A				Prep Date: 8/29/2015			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	ND	5									
Surr: O-TERPHENYL	5.48		6.25		88	49-114					

The following samples were analyzed in this batch:

1508471-2	1508471-3	1508471-4
1508471-5	1508471-6	1508471-7

**Client:** Talon LPE  
**Work Order:** 1508471  
**Project:** 701530.020.03 Nelson C-1

## QC BATCH REPORT

Batch ID: **HC150901-61-1** Instrument ID **FUELS-1** Method: **SW8015**

<b>LCS</b>		Sample ID: <b>HC150901-61</b>			Units: <b>MG/KG</b>			Analysis Date: <b>9/1/2015 09:26</b>			
Client ID:		Run ID: <b>HC150901-6A</b>			Prep Date: <b>9/1/2015</b>			DF: <b>1</b>			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	2.45	0.5	2.5		98	79-118				20	
Surr: 2,3,4-TRIFLUOROTOLUENE	0.517		0.5		103	76-126					

<b>LCSD</b>		Sample ID: <b>HC150901-61</b>			Units: <b>MG/KG</b>			Analysis Date: <b>9/1/2015 17:04</b>			
Client ID:		Run ID: <b>HC150901-6A</b>			Prep Date: <b>9/1/2015</b>			DF: <b>1</b>			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	2.53	0.5	2.5		101	79-118		2.45	3	20	
Surr: 2,3,4-TRIFLUOROTOLUENE	0.548		0.5		110	76-126			6		

<b>MB</b>		Sample ID: <b>HC150901-61</b>			Units: <b>MG/KG</b>			Analysis Date: <b>9/1/2015 09:47</b>			
Client ID:		Run ID: <b>HC150901-6A</b>			Prep Date: <b>9/1/2015</b>			DF: <b>1</b>			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	ND	0.5									
Surr: 2,3,4-TRIFLUOROTOLUENE	0.48		0.5		96	76-126					

The following samples were analyzed in this batch:

1508471-1	1508471-2	1508471-3
1508471-4	1508471-5	1508471-6
1508471-7		

Client: Talon LPE  
 Work Order: 1508471  
 Project: 701530.020.03 Nelson C-1

## QC BATCH REPORT

Batch ID: **VL150830-2-3** Instrument ID **HPV1** Method: **SW8260**

LCS	Sample ID: <b>VL150830-2</b>			Units: <b>MG/KG</b>			Analysis Date: <b>8/30/2015 14:02</b>				
Client ID:	Run ID: <b>VL150830-2A</b>			Prep Date: <b>8/30/2015</b>			DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	0.0372	0.005	0.04		93	73-126				30	
TOLUENE	0.0424	0.005	0.04		106	71-127				30	
ETHYLBENZENE	0.0424	0.005	0.04		106	74-127				30	
M+P-XYLENE	0.0869	0.005	0.08		109	79-126				30	
O-XYLENE	0.0429	0.005	0.04		107	77-125				30	
NAPHTHALENE	0.0497	0.005	0.04		124	64-141				30	
Surr: DIBROMOFLUOROMETHANE	0.0456		0.05		91	61-134					
Surr: TOLUENE-D8	0.0501		0.05		100	57-135					
Surr: 4-BROMOFLUOROBENZENE	0.0467		0.05		93	52-151					

LCSD	Sample ID: VL150830-2			Units: MG/KG		Analysis Date: 8/30/2015 14:27					
Client ID:	Run ID: VL150830-2A			Prep Date: 8/30/2015				DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	0.0372	0.005	0.04		93	73-126		0.0372	0	30	
TOLUENE	0.0412	0.005	0.04		103	71-127		0.0424	3	30	
ETHYLBENZENE	0.0417	0.005	0.04		104	74-127		0.0424	2	30	
M+P-XYLENE	0.0849	0.005	0.08		106	79-126		0.0869	2	30	
O-XYLENE	0.0423	0.005	0.04		106	77-125		0.0429	2	30	
NAPHTHALENE	0.049	0.005	0.04		123	64-141		0.0497	1	30	
Surr: DIBROMOFLUOROMETHANE	0.0468		0.05		94	61-134			3		
Surr: TOLUENE-D8	0.0501		0.05		100	57-135			0		
Surr: 4-BROMOFLUOROBENZENE	0.0466		0.05		93	52-151			0		

**Client:** Talon LPE  
**Work Order:** 1508471  
**Project:** 701530.020.03 Nelson C-1

## QC BATCH REPORT

Batch ID: **VL150830-2-3** Instrument ID **HPV1** Method: **SW8260**

**MB** Sample ID: **VL150830-2** Units: **MG/KG** Analysis Date: **8/30/2015 14:51**

Client ID: Run ID: **VL150830-2A** Prep Date: **8/30/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	ND	0.005									
TOLUENE	ND	0.005									
ETHYLBENZENE	ND	0.005									
M+P-XYLENE	ND	0.005									
O-XYLENE	ND	0.005									
NAPHTHALENE	ND	0.005									
TOTAL XYLENES	ND	0.005									
Surr: DIBROMOFLUOROMETHANE	0.0456		0.05		91	61-134					
Surr: TOLUENE-D8	0.0513		0.05		103	57-135					
Surr: 4-BROMOFLUOROBENZENE	0.0469		0.05		94	52-151					

The following samples were analyzed in this batch:

1508471-1	1508471-2	1508471-3
1508471-4		

Client: Talon LPE  
 Work Order: 1508471  
 Project: 701530.020.03 Nelson C-1

## QC BATCH REPORT

Batch ID: **VL150831-2-4** Instrument ID **HPV1** Method: **SW8260**

LCS	Sample ID: VL150831-2			Units: MG/KG		Analysis Date: 8/31/2015 13:26					
Client ID:	Run ID: VL150831-2A			Prep Date: 8/31/2015				DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	0.0364	0.005	0.04		91	73-126				30	
TOLUENE	0.0405	0.005	0.04		101	71-127				30	
ETHYLBENZENE	0.0403	0.005	0.04		101	74-127				30	
M+P-XYLENE	0.0832	0.005	0.08		104	79-126				30	
O-XYLENE	0.0415	0.005	0.04		104	77-125				30	
NAPHTHALENE	0.0456	0.005	0.04		114	64-141				30	
Surr: DIBROMOFLUOROMETHANE	0.0464		0.05		93	61-134					
Surr: TOLUENE-D8	0.0503		0.05		101	57-135					
Surr: 4-BROMOFLUOROBENZENE	0.0472		0.05		94	52-151					

LCSD	Sample ID: VL150831-2			Units: MG/KG		Analysis Date: 8/31/2015 13:49					
Client ID:	Run ID: VL150831-2A			Prep Date: 8/31/2015				DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	0.0363	0.005	0.04		91	73-126		0.0364	0	30	
TOLUENE	0.0411	0.005	0.04		103	71-127		0.0405	2	30	
ETHYLBENZENE	0.0403	0.005	0.04		101	74-127		0.0403	0	30	
M+P-XYLENE	0.0843	0.005	0.08		105	79-126		0.0832	1	30	
O-XYLENE	0.042	0.005	0.04		105	77-125		0.0415	1	30	
NAPHTHALENE	0.0452	0.005	0.04		113	64-141		0.0456	1	30	
Surr: DIBROMOFLUOROMETHANE	0.0477		0.05		95	61-134				3	
Surr: TOLUENE-D8	0.0508		0.05		102	57-135				1	
Surr: 4-BROMOFLUOROBENZENE	0.0473		0.05		95	52-151				0	

**Client:** Talon LPE  
**Work Order:** 1508471  
**Project:** 701530.020.03 Nelson C-1

## QC BATCH REPORT

Batch ID: **VL150831-2-4** Instrument ID **HPV1** Method: **SW8260**

**MB** Sample ID: **VL150831-2** Units: **MG/KG** Analysis Date: **8/31/2015 14:11**

Client ID: Run ID: **VL150831-2A** Prep Date: **8/31/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	ND	0.005									
TOLUENE	ND	0.005									
ETHYLBENZENE	ND	0.005									
M+P-XYLENE	ND	0.005									
O-XYLENE	ND	0.005									
NAPHTHALENE	ND	0.005									
TOTAL XYLENES	ND	0.005									
Surr: DIBROMOFLUOROMETHANE	0.0456		0.05		91	61-134					
Surr: TOLUENE-D8	0.0505		0.05		101	57-135					
Surr: 4-BROMOFLUOROBENZENE	0.0459		0.05		92	52-151					

The following samples were analyzed in this batch:

1508471-3	1508471-4	1508471-5
1508471-6	1508471-7	

Client: Talon LPE  
 Work Order: 1508471  
 Project: 701530.020.03 Nelson C-1

## QC BATCH REPORT

Batch ID: **VL150901-2-6** Instrument ID **HPV1** Method: **SW8260**

LCS	Sample ID: VL150901-2			Units: MG/KG			Analysis Date: 9/1/2015 11:04				
Client ID:	Run ID: VL150901-2A			Prep Date: 9/1/2015			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	0.0366	0.005	0.04		91	73-126				30	
TOLUENE	0.0416	0.005	0.04		104	71-127				30	
ETHYLBENZENE	0.0413	0.005	0.04		103	74-127				30	
M+P-XYLENE	0.0862	0.005	0.08		108	79-126				30	
O-XYLENE	0.0432	0.005	0.04		108	77-125				30	
NAPHTHALENE	0.0451	0.005	0.04		113	64-141				30	
Surr: DIBROMOFLUOROMETHANE	0.0468		0.05		94	61-134					
Surr: TOLUENE-D8	0.0492		0.05		98	57-135					
Surr: 4-BROMOFLUOROBENZENE	0.0469		0.05		94	52-151					

LCSD	Sample ID: VL150901-2			Units: MG/KG		Analysis Date: 9/1/2015 11:28					
Client ID:	Run ID: VL150901-2A			Prep Date: 9/1/2015				DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	0.0364	0.005	0.04		91	73-126		0.0366	0	30	
TOLUENE	0.041	0.005	0.04		103	71-127		0.0416	1	30	
ETHYLBENZENE	0.0409	0.005	0.04		102	74-127		0.0413	1	30	
M+P-XYLENE	0.0849	0.005	0.08		106	79-126		0.0862	2	30	
O-XYLENE	0.0424	0.005	0.04		106	77-125		0.0432	2	30	
NAPHTHALENE	0.0444	0.005	0.04		111	64-141		0.0451	2	30	
Surr: DIBROMOFLUOROMETHANE	0.0464		0.05		93	61-134			1		
Surr: TOLUENE-D8	0.0503		0.05		101	57-135			2		
Surr: 4-BROMOFLUOROBENZENE	0.0478		0.05		96	52-151			2		



**Client:** Talon LPE  
**Work Order:** 1508471  
**Project:** 701530.020.03 Nelson C-1

## QC BATCH REPORT

Batch ID: **VL150901-2-6**      Instrument ID: **HPV1**      Method: **SW8260**

<b>MB</b>		Sample ID: <b>VL150901-2</b>			Units: <b>MG/KG</b>			Analysis Date: <b>9/1/2015 11:52</b>			
Client ID:		Run ID: <b>VL150901-2A</b>			Prep Date: <b>9/1/2015</b>			DF: <b>1</b>			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	ND	0.005									
TOLUENE	ND	0.005									
ETHYLBENZENE	ND	0.005									
M+P-XYLENE	ND	0.005									
O-XYLENE	ND	0.005									
NAPHTHALENE	ND	0.005									
TOTAL XYLENES	ND	0.005									
Surr: DIBROMOFLUOROMETHANE	0.0466		0.05		93	61-134					
Surr: TOLUENE-D8	0.0512		0.05		102	57-135					
Surr: 4-BROMOFLUOROBENZENE	0.0475		0.05		95	52-151					

<b>MB</b>		Sample ID: <b>VL150901-2M</b>			Units: <b>MG/KG</b>			Analysis Date: <b>9/1/2015 12:14</b>			
Client ID:		Run ID: <b>VL150901-2A</b>			Prep Date: <b>9/1/2015</b>			DF: <b>50</b>			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	ND	0.25									
TOLUENE	ND	0.25									
ETHYLBENZENE	ND	0.25									
M+P-XYLENE	ND	0.25									
O-XYLENE	ND	0.25									
NAPHTHALENE	ND	0.25									
TOTAL XYLENES	ND	0.005									
Surr: DIBROMOFLUOROMETHANE	2.28		2.5		91	61-134					
Surr: TOLUENE-D8	2.51		2.5		100	57-135					
Surr: 4-BROMOFLUOROBENZENE	2.34		2.5		94	52-151					

The following samples were analyzed in this batch:

1508471-4	1508471-5	1508471-6
-----------	-----------	-----------

Friday, September 11, 2015

Colby Sterling  
Talon LPE  
921 N Bivins  
Amarillo, TX 79107

Re: ALS Workorder: 1509078  
Project Name: Nelson C-1  
Project Number: 701530.020.03

Dear Mr. Sterling:

One water sample was received from Talon LPE, on 9/3/2015. The sample was scheduled for the following analysis:

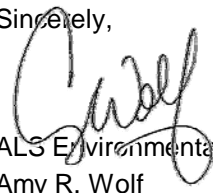
GC/MS Volatiles

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

  
ALS Environmental  
Amy R. Wolf  
Project Manager

ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Connecticut (CT)	PH-0232
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
L-A-B (DoD ELAP/ISO 170250)	L2257
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280



**1509078**

**GC/MS Volatiles:**

The samples were analyzed using GC/MS following the current revision of SOP 525 based on SW-846 Method 8260C.

All acceptance criteria were met.

# ALS Environmental -- FC

## Sample Number(s) Cross-Reference Table

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**OrderNum:** 1509078

**Client Name:** Talon LPE

**Client Project Name:** Nelson C-1

**Client Project Number:** 701530.020.03

**Client PO Number:**

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Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
SB-15	1509078-1		WATER	03-Sep-15	11:30

## Chain-of-Custody

Form 202r8

[illegible]

\*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

**For metals or anions, please detail analytes below.**

For metals or anions, please detail analytes below.		Comments: <div style="border: 1px solid black; width: 100px; height: 20px;"></div>		QC PACKAGE (check below) <div style="display: flex; justify-content: space-between;"> <div>LEVEL II (Standard QC)</div> <div></div> </div> <div style="display: flex; justify-content: space-between;"> <div>LEVEL III (Std QC + forms)</div> <div></div> </div> <div style="display: flex; justify-content: space-between;"> <div>LEVEL IV (Std QC + forms + raw data)</div> <div></div> </div>	
Preservative Key: 1-HCl 2-HNO <sub>3</sub> 3-H <sub>2</sub> SO <sub>4</sub> 4-NaOH 5-NaHSO <sub>4</sub> 7-Other 8-4 degrees C 9-5035		<div style="text-align: center; font-size: 2em; margin-top: 20px;">2.02</div>			



**ALS Environmental - Fort Collins**  
**CONDITION OF SAMPLE UPON RECEIPT FORM**

Client: Talco

Workorder No: ISO 9078

Project Manager: ARW

Initials: SDM Date: 09-3-15

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<input checked="" type="radio"/> NO
2. Are custody seals on shipping containers intact?	<input checked="" type="radio"/> NONE	YES	NO
3. Are Custody seals on sample containers intact?	<input checked="" type="radio"/> NONE	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<input checked="" type="radio"/> YES	NO
5. Are the COC and bottle labels complete and legible?		<input checked="" type="radio"/> YES	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<input checked="" type="radio"/> YES	NO
7. Were airbills / shipping documents present and/or removable?	<input checked="" type="radio"/> DROP OFF	YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	<input checked="" type="radio"/> N/A	YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	<input checked="" type="radio"/> N/A	YES	NO
10. Is there sufficient sample for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the proper containers for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within holding times for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<input checked="" type="radio"/> YES	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	N/A	<input checked="" type="radio"/> YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	N/A	YES	<input checked="" type="radio"/> NO
16. Were the samples shipped on ice?		<input checked="" type="radio"/> YES	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: <input checked="" type="radio"/> #2 #4 RAD ONLY		<input checked="" type="radio"/> YES	NO
Cooler #: <u>1</u>			
Temperature (°C): <u>2.0</u>			
No. of custody seals on cooler: <u>2</u>			
External µR/hr reading: <u>N/A</u>			
Background µR/hr reading: <u>11</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES / NO <input checked="" type="radio"/> NA (If no, see Form 008.)			

**Additional Information:** PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? YES / NO ☒ NA Contact: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager Signature / Date: Gudy 9/4/15

**Client:** Talon LPE  
**Project:** 701530.020.03 Nelson C-1  
**Sample ID:** SB-15  
**Legal Location:**  
**Collection Date:** 9/3/2015 11:30

**Date:** 11-Sep-15  
**Work Order:** 1509078  
**Lab ID:** 1509078-1  
**Matrix:** WATER  
**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>GC/MS Volatiles</b>		<b>SW8260_25</b>		Prep Date: <b>9/10/2015</b>		PrepBy: <b>JXK</b>
<b>BENZENE</b>	<b>15</b>		<b>1</b>	<b>MG/L</b>	1000	9/10/2015 20:40
<b>TOLUENE</b>	<b>15</b>		<b>1</b>	<b>MG/L</b>	1000	9/10/2015 20:40
<b>ETHYLBENZENE</b>	<b>0.98</b>		<b>0.05</b>	<b>MG/L</b>	50	9/10/2015 21:01
<b>M+P-XYLENE</b>	<b>3.4</b>		<b>0.05</b>	<b>MG/L</b>	50	9/10/2015 21:01
<b>O-XYLENE</b>	<b>1.4</b>		<b>0.05</b>	<b>MG/L</b>	50	9/10/2015 21:01
<b>TOTAL XYLENES</b>	<b>4.8</b>		<b>0.001</b>	<b>MG/L</b>	1	9/10/2015 20:40
<i>Surr: 4-BROMOFLUOROBENZENE</i>	<i>103</i>		<i>85-115</i>	<i>%REC</i>	50	9/10/2015 21:01
<i>Surr: 4-BROMOFLUOROBENZENE</i>	<i>109</i>		<i>85-115</i>	<i>%REC</i>	1000	9/10/2015 20:40
<i>Surr: DIBROMOFLUOROMETHANE</i>	<i>97</i>		<i>84-118</i>	<i>%REC</i>	50	9/10/2015 21:01
<i>Surr: DIBROMOFLUOROMETHANE</i>	<i>97</i>		<i>84-118</i>	<i>%REC</i>	1000	9/10/2015 20:40
<i>Surr: TOLUENE-D8</i>	<i>100</i>		<i>85-115</i>	<i>%REC</i>	50	9/10/2015 21:01
<i>Surr: TOLUENE-D8</i>	<i>99</i>		<i>85-115</i>	<i>%REC</i>	1000	9/10/2015 20:40



**Client:** Talon LPE  
**Project:** 701530.020.03 Nelson C-1  
**Sample ID:** SB-15  
**Legal Location:**  
**Collection Date:** 9/3/2015 11:30

**Date:** 11-Sep-15  
**Work Order:** 1509078  
**Lab ID:** 1509078-1  
**Matrix:** WATER  
**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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### Explanation of Qualifiers

#### Radiochemistry:

U or ND - Result is less than the sample specific MDC.  
 Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.  
 Y2 - Chemical Yield outside default limits.  
 W - DER is greater than Warning Limit of 1.42  
 \* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.  
 # - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.  
 G - Sample density differs by more than 15% of LCS density.  
 D - DER is greater than Control Limit  
 M - Requested MDC not met.  
 LT - Result is less than requested MDC but greater than achieved MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.  
 L - LCS Recovery below lower control limit.  
 H - LCS Recovery above upper control limit.  
 P - LCS, Matrix Spike Recovery within control limits.  
 N - Matrix Spike Recovery outside control limits  
 NC - Not Calculated for duplicate results less than 5 times MDC  
 B - Analyte concentration greater than MDC.  
 B3 - Analyte concentration greater than MDC but less than Requested MDC.

#### Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).  
 U or ND - Indicates that the compound was analyzed for but not detected.  
 E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.  
 M - Duplicate injection precision was not met.  
 N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.  
 Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.  
 \* - Duplicate analysis (relative percent difference) not within control limits.  
 S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

#### Organics:

U or ND - Indicates that the compound was analyzed for but not detected.  
 B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.  
 E - Analyte concentration exceeds the upper level of the calibration range.  
 J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).  
 A - A tentatively identified compound is a suspected aldol-condensation product.  
 X - The analyte was diluted below an accurate quantitation level.  
 \* - The spike recovery is equal to or outside the control criteria used.  
 + - The relative percent difference (RPD) equals or exceeds the control criteria.  
 G - A pattern resembling gasoline was detected in this sample.  
 D - A pattern resembling diesel was detected in this sample.  
 M - A pattern resembling motor oil was detected in this sample.  
 C - A pattern resembling crude oil was detected in this sample.  
 4 - A pattern resembling JP-4 was detected in this sample.  
 5 - A pattern resembling JP-5 was detected in this sample.  
 H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.  
 L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.  
 Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:  
 - gasoline  
 - JP-8  
 - diesel  
 - mineral spirits  
 - motor oil  
 - Stoddard solvent  
 - bunker C

## ALS Environmental -- FC

Date: 9/11/2015 3:39:

Client: Talon LPE

## QC BATCH REPORT

Work Order: 1509078

Project: 701530.020.03 Nelson C-1

Batch ID: VL150910-3-1

Instrument ID: HPV1

Method: SW8260\_25

LCS		Sample ID: VL150910-3				Units: %REC		Analysis Date: 9/10/2015 10:03			
Client ID:		Run ID: VL150910-3A				Prep Date: 9/10/2015			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	0.0251		0.025		101	85-115					
Surr: DIBROMOFLUOROMETHANE	0.0243		0.025		97	84-118					
Surr: TOLUENE-D8	0.0249		0.025		100	85-115					
BENZENE	0.0096	0.001	0.01		96	83-117				20	
TOLUENE	0.00956	0.001	0.01		96	82-113				20	
ETHYLBENZENE	0.01	0.001	0.01		100	81-113				20	
M+P-XYLENE	0.019	0.001	0.02		95	82-115				20	
O-XYLENE	0.00966	0.001	0.01		97	81-115				20	

LCSD		Sample ID: VL150910-3			Units: %REC		Analysis Date: 9/10/2015 10:24				
Client ID:		Run ID: VL150910-3A			Prep Date: 9/10/2015			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	0.0256		0.025		103	85-115			2		
Surr: DIBROMOFLUOROMETHANE	0.0246		0.025		98	84-118			1		
Surr: TOLUENE-D8	0.0251		0.025		101	85-115			1		
BENZENE	0.0097	0.001	0.01		97	83-117		0.0096	1	20	
TOLUENE	0.00948	0.001	0.01		95	82-113		0.00956	1	20	
ETHYLBENZENE	0.00996	0.001	0.01		100	81-113		0.01	0	20	
M+P-XYLENE	0.019	0.001	0.02		95	82-115		0.019	0	20	
O-XYLENE	0.00963	0.001	0.01		96	81-115		0.00966	0	20	

MB		Sample ID: VL150910-3				Units: %REC		Analysis Date: 9/10/2015 11:09			
Client ID:		Run ID: VL150910-3A				Prep Date: 9/10/2015				DF: 1	
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	0.0265		0.025		106	85-115					
Surr: DIBROMOFLUOROMETHANE	0.0242		0.025		97	84-118					
Surr: TOLUENE-D8	0.0252		0.025		101	85-115					
BENZENE	ND	0.001									
TOLUENE	ND	0.001									
ETHYLBENZENE	ND	0.001									
M+P-XYLENE	ND	0.001									
O-XYLENE	ND	0.001									
TOTAL XYLENES	ND	0.001									

**Client:** Talon LPE  
**Work Order:** 1509078  
**Project:** 701530.020.03 Nelson C-1

## QC BATCH REPORT

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The following samples were analyzed in this batch:

1509078-1
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# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 06, 2015

Jennifer Galles  
Talon/LPE  
1811 E Mulberry  
Ft Collins, CO 80524  
RE: Nelson C1

Enclosed are the results of analyses for samples received by Summit Scientific on 10/30/15 13:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury  
President



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.03  
Project Manager: Jennifer Galles

**Reported:**  
11/06/15 15:13

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2@20'	1510247-01	Soil	10/27/15 10:30	10/30/15 13:20
MW-2@25'	1510247-02	Soil	10/27/15 10:40	10/30/15 13:20
MW-2@30'	1510247-03	Soil	10/27/15 10:50	10/30/15 13:20
MW-3@25'	1510247-04	Soil	10/27/15 12:55	10/30/15 13:20
MW-3@30'	1510247-05	Soil	10/27/15 13:05	10/30/15 13:20
MW-4@30'	1510247-06	Soil	10/28/15 10:05	10/30/15 13:20
MW-4@35'	1510247-07	Soil	10/28/15 10:15	10/30/15 13:20
MW-4@40'	1510247-08	Soil	10/28/15 10:30	10/30/15 13:20

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.*



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.03  
Project Manager: Jennifer Galles

Reported:  
11/06/15 15:13

## Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-374-5933 Fax

1510 247

Client: Talon/LPE Built to Whiting Oil & Gas  
Address: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Sampler Name: JA Galles/Jennifer Galles

Page 1 of 1

Project Manager: Jennifer Galles  
E-Mail: jgalles@talonlpe.com  
Project Name: Nelson C1  
Project Number: 701530.020.03

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative			Matrix		Analyze For:		Special Instructions	
				HCl	HNO <sub>3</sub>	None	Groundwater	Soil	Air - Canister Serial #	Other (Specify)		
MW-2 @ 20'	10-27-15	1650	1			X						
MW-2 @ 35'	10-27-15	1040	1									
MW-2 @ 30'	10-27-15	1090	1									
MW-3 @ 25'	10-27-15	1255	1									
MW-3 @ 30'	10-27-15	1305	1									
MW-4 @ 30'	10-28-15	1005	2									
MW-4 @ 35'	10-28-15	1015	2									
MW-4 @ 40'	10-28-15	1030	2									

Relinquished by: <u>Jennifer Galles</u>	Date/Time: <u>10/30/15 1323</u>	Received by: <u>JA</u>	Date/Time: <u>10-30-15 1320</u>	Turn Around Time (Check)	Notes:
Relinquished by: <u>JA</u>	Date/Time: <u>10-30-15 17:40</u>	Received by:	Date/Time:	Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>	
				24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>	
				48 Hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	Sample Integrity:	
				Temperature Upon Receipt:	
				Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>	

www.s2scientific.com

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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.03  
Project Manager: Jennifer Galles

**Reported:**  
11/06/15 15:13

**MW-2@20'**  
**1510247-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/27/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511007	11/02/15	11/03/15	8015M	

Date Sampled: **10/27/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.7 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **10/27/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.011</b>	0.0020	mg/kg	1	1511009	11/04/15	11/06/15	EPA 8260B	
<b>Toluene</b>	<b>0.012</b>	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.010</b>	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/27/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.5 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.03  
Project Manager: Jennifer Galles

**Reported:**  
11/06/15 15:13

**MW-2@25'**  
**1510247-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/27/15 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511007	11/02/15	11/03/15	8015M	

Date Sampled: **10/27/15 10:40**

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: **10/27/15 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.24</b>	0.0020	mg/kg	1	1511009	11/04/15	11/06/15	EPA 8260B	
<b>Toluene</b>	<b>0.33</b>	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.13</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.97</b>	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>48</b>	0.50	"	"	"	"	"	"	

Date Sampled: **10/27/15 10:40**

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





Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.03  
Project Manager: Jennifer Galles

**Reported:**  
11/06/15 15:13

**MW-2@30'**  
**1510247-03 (Soil)**

### Summit Scientific

#### Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/27/15 10:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511007	11/02/15	11/03/15	8015M	

Date Sampled: 10/27/15 10:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.7 %	30-150		"	"	"	"	

#### Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/27/15 10:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1511009	11/04/15	11/06/15	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	11/05/15	"	
Ethylbenzene	ND	0.0050	"	"	"	"	11/06/15	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>3.0</b>	<b>0.50</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	

Date Sampled: 10/27/15 10:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.6 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.03  
Project Manager: Jennifer Galles

**Reported:**  
11/06/15 15:13

**MW-3@25'**  
**1510247-04 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/27/15 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511007	11/02/15	11/03/15	8015M	

Date Sampled: **10/27/15 12:55**

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: **10/27/15 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.012</b>	0.0020	mg/kg	1	1511009	11/04/15	11/06/15	EPA 8260B	
<b>Toluene</b>	<b>0.030</b>	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.043</b>	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>4.6</b>	0.50	"	"	"	"	"	"	

Date Sampled: **10/27/15 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.5 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.03  
Project Manager: Jennifer Galles

**Reported:**  
11/06/15 15:13

**MW-3@30'**  
**1510247-05 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/27/15 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511007	11/02/15	11/03/15	8015M	

Date Sampled: **10/27/15 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		94.8 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **10/27/15 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.12</b>	0.0020	mg/kg	1	1511009	11/04/15	11/06/15	EPA 8260B	
<b>Toluene</b>	<b>0.23</b>	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.024</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.17</b>	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>3.1</b>	0.50	"	"	"	"	"	"	

Date Sampled: **10/27/15 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.2 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.03  
Project Manager: Jennifer Galles

**Reported:**  
11/06/15 15:13

**MW-4@30'**  
**1510247-06 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/28/15 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511007	11/02/15	11/03/15	8015M	

Date Sampled: **10/28/15 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.7 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **10/28/15 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.036</b>	0.0020	mg/kg	1	1511009	11/04/15	11/06/15	EPA 8260B	
<b>Toluene</b>	<b>0.12</b>	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.049</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.41</b>	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>50</b>	0.50	"	"	"	"	"	"	

Date Sampled: **10/28/15 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	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.



Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.03  
Project Manager: Jennifer Galles

**Reported:**  
11/06/15 15:13

**MW-4@35'**  
**1510247-07 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/28/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511007	11/02/15	11/03/15	8015M	

Date Sampled: **10/28/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		94.0 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **10/28/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1511009	11/04/15	11/06/15	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>4.6</b>	<b>0.50</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	

Date Sampled: **10/28/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.1 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.03  
Project Manager: Jennifer Galles

**Reported:**  
11/06/15 15:13

**MW-4@40'**  
**1510247-08 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/28/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1511007	11/02/15	11/03/15	8015M	

Date Sampled: **10/28/15 10:30**

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: **10/28/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1511009	11/04/15	11/06/15	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	<b>0.049</b>	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	<b>35</b>	0.50	"	"	"	"	"	"	

Date Sampled: **10/28/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		115 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.6 %	21-167		"	"	"	"	

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.03  
Project Manager: Jennifer Galles

**Reported:**  
11/06/15 15:13

**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 1511007 - EPA 3550A**

**Blank (1511007-BLK1)**

Prepared: 11/02/15 Analyzed: 11/03/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 11.6 " 12.2 95.5 30-150

**LCS (1511007-BS1)**

Prepared: 11/02/15 Analyzed: 11/03/15

C10-C28 (DRO) 484 50 mg/kg 499 97.1 73-134

Surrogate: o-Terphenyl 12.6 " 12.2 103 30-150

**Matrix Spike (1511007-MS1)**

**Source: 1510241-01**

Prepared: 11/02/15 Analyzed: 11/03/15

C10-C28 (DRO) 446 50 mg/kg 481 22.1 88.1 50-148

Surrogate: o-Terphenyl 11.4 " 11.7 96.9 30-150

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.03  
Project Manager: Jennifer Galles

Reported:  
11/06/15 15:13

**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 1511009 - EPA 5030 Soil MS**

**Blank (1511009-BLK1)**

Prepared: 11/04/15 Analyzed: 11/05/15

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0403		"	0.0396	102	23-173				
Surrogate: Toluene-d8	0.0378		"	0.0400	94.5	20-170				
Surrogate: 4-Bromofluorobenzene	0.0370		"	0.0400	92.6	21-167				

**LCS (1511009-BS1)**

Prepared: 11/04/15 Analyzed: 11/05/15

Benzene	0.103	0.0020	mg/kg	0.100	103	58-130				
Toluene	0.0996	0.0050	"	0.100	99.6	61-134				
Ethylbenzene	0.113	0.0050	"	0.0992	114	74-139				
m,p-Xylene	0.212	0.010	"	0.200	106	73-137				
o-Xylene	0.105	0.0050	"	0.0984	107	73-141				
Xylenes (total)	0.318	0.0050	"			30-150				
Gasoline Range Hydrocarbons	2.02	0.50	"			30-150				
Surrogate: 1,2-Dichloroethane-d4	0.0402		"	0.0396	102	23-173				
Surrogate: Toluene-d8	0.0386		"	0.0400	96.6	20-170				
Surrogate: 4-Bromofluorobenzene	0.0381		"	0.0400	95.3	21-167				

**Matrix Spike (1511009-MS1)**

Source: 1510237-01

Prepared: 11/04/15 Analyzed: 11/05/15

Benzene	0.0977	0.0020	mg/kg	0.0952	ND	103	30-131			
Toluene	0.0961	0.0050	"	0.0952	ND	101	30-134			
Ethylbenzene	0.108	0.0050	"	0.0945	ND	114	22-153			
m,p-Xylene	0.205	0.010	"	0.190	ND	108	10-159			
o-Xylene	0.102	0.0050	"	0.0937	ND	108	31-151			
Xylenes (total)	0.306	0.0050	"		ND		30-150			
Gasoline Range Hydrocarbons	ND	0.50	"		2.97		30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0426		"	0.0377	113	23-173				
Surrogate: Toluene-d8	0.0371		"	0.0381	97.3	20-170				
Surrogate: 4-Bromofluorobenzene	0.0363		"	0.0381	95.3	21-167				

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.03  
Project Manager: Jennifer Galles

**Reported:**  
11/06/15 15:13

**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 1511009 - EPA 5030 Soil MS**

Matrix Spike Dup (1511009-MSD1)		Source: 1510237-01			Prepared: 11/04/15		Analyzed: 11/05/15			
Benzene	0.0968	0.0020	mg/kg	0.0956	ND	101	30-131	0.914	34	
Toluene	0.0960	0.0050	"	0.0956	ND	100	30-134	0.0951	30	
Ethylbenzene	0.110	0.0050	"	0.0948	ND	116	22-153	1.43	24	
m,p-Xylene	0.205	0.010	"	0.191	ND	107	10-159	0.0184	68	
o-Xylene	0.102	0.0050	"	0.0941	ND	108	31-151	0.325	38	
Xylenes (total)	0.307	0.0050	"		ND		30-150	0.120	20	
Gasoline Range Hydrocarbons	6.23	0.50	"		2.97		30-150		20	
Surrogate: 1,2-Dichloroethane-d4	0.0429		"	0.0379		113	23-173			
Surrogate: Toluene-d8	0.0366		"	0.0382		95.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0368		"	0.0382		96.1	21-167			

Summit Scientific

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Talon/LPE  
1811 E Mulberry  
Ft Collins CO, 80524

Project: Nelson C1  
Project Number: 701530.020.03  
Project Manager: Jennifer Galles

**Reported:**  
11/06/15 15:13

### 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

---

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 'MSM'.

Wednesday, November 11, 2015

Jennifer Galles  
Talon LPE  
921 N Bivins  
Amarillo, TX 79107

Re: ALS Workorder: 1511065  
Project Name: Nelson C-1  
Project Number: 701530.020.03

Dear Ms. Galles:

Three water samples were received from Talon LPE, on 11/4/2015. The samples were scheduled for the following analysis:

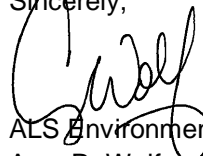
GC/MS Volatiles

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

  
ALS Environmental  
Amy R. Wolf  
Project Manager

ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Connecticut (CT)	PH-0232
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
L-A-B (DoD ELAP/ISO 170250)	L2257
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280



**1511065**

**GC/MS Volatiles:**

The sample was analyzed using GC/MS following the current revision of SOP 525 based on SW-846 Method 8260C.

Due to the concentration of target analytes, analyzed at a dilution. The reporting limits have been adjusted accordingly.

All remaining acceptance criteria were met.

# ALS Environmental -- FC

## Sample Number(s) Cross-Reference Table

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**OrderNum:** 1511065

**Client Name:** Talon LPE

**Client Project Name:** Nelson C-1

**Client Project Number:** 701530.020.03

**Client PO Number:**

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Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
MW-4	1511065-1		WATER	04-Nov-15	11:50
MW-1	1511065-2		WATER	04-Nov-15	12:10
MW-2	1511065-3		WATER	04-Nov-15	12:20



2225 Commerce Drive, Fort Collins, Colorado 80524  
 TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

## Chain-of-Custody

Form 202r8

[illegible]

\*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

**For metals or anions, please detail analytes below.**

Comments:		QC PACKAGE (check below)									
		LEVEL II (Standard QC)		LEVEL III (Std QC + forms)		LEVEL IV (Std QC + forms + raw data)					
Preservative Key:		1-HCl	2-HNO3	3-H2SO4	4-NaOH	5-NaHSO4	7-Other	8-4 degrees C	9-50/35		



ALS Environmental - Fort Collins  
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Talon

Workorder No: 1511065

Project Manager: AW

Initials: COS Date: 11-4-15

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<u>NO</u>
2. Are custody seals on shipping containers intact?	<u>NONE</u>	YES	NO
3. Are Custody seals on sample containers intact?	<u>NONE</u>	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<u>YES</u>	NO
5. Are the COC and bottle labels complete and legible?		<u>YES</u>	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<u>YES</u>	NO
7. Were airbills / shipping documents present and/or removable?	<u>DROP OFF</u>	YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	<u>N/A</u>	YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	<u>N/A</u>	YES	NO
10. Is there sufficient sample for the requested analyses?		<u>YES</u>	NO
11. Were all samples placed in the proper containers for the requested analyses?		<u>YES</u>	NO
12. Are all samples within holding times for the requested analyses?		<u>YES</u>	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<u>YES</u>	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: <u>X</u> < green pea _____ > green pea	N/A	YES	<u>NO</u>
15. Do any water samples contain sediment? Amount Amount of sediment: _____ dusting _____ moderate _____ heavy	N/A	YES	<u>NO</u>
16. Were the samples shipped on ice?		<u>YES</u>	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: <u>#2</u> #4 RAD ONLY		<u>YES</u>	NO
Cooler #: <u>1</u>			
Temperature (°C): <u>5.6</u>			
No. of custody seals on cooler: <u>0</u>			
External µR/hr reading: <u>NA</u>			
Background µR/hr reading: <u>NA</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES / NO <u>NA</u> (If no, see Form 008.)			

**Additional Information:** PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

HEADSPACE: 1511065-1-3 < green pea

If applicable, was the client contacted? YES / NO / NA Contact: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager Signature / Date: G. J. J. 11/4/15



**Client:** Talon LPE  
**Project:** 701530.020.03 Nelson C-1  
**Sample ID:** MW-4  
**Legal Location:**  
**Collection Date:** 11/4/2015 11:50

**Date:** 11-Nov-15  
**Work Order:** 1511065  
**Lab ID:** 1511065-1  
**Matrix:** WATER  
**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>GC/MS Volatiles</b>			<b>SW8260_25</b>		Prep Date: 11/6/2015	PrepBy: JXK
BENZENE	16		0.5	MG/L	500	11/6/2015 15:23
TOLUENE	20		0.5	MG/L	500	11/6/2015 15:23
ETHYLBENZENE	0.94		0.5	MG/L	500	11/6/2015 15:23
M+P-XYLENE	3.4		0.5	MG/L	500	11/6/2015 15:23
O-XYLENE	1.4		0.5	MG/L	500	11/6/2015 15:23
TOTAL XYLENES	4.8		0.001	MG/L	1	11/6/2015 15:23
Surr: 4-BROMOFLUOROBENZENE	105		85-115	%REC	500	11/6/2015 15:23
Surr: DIBROMOFLUOROMETHANE	101		84-118	%REC	500	11/6/2015 15:23
Surr: TOLUENE-D8	102		85-115	%REC	500	11/6/2015 15:23

**Client:** Talon LPE  
**Project:** 701530.020.03 Nelson C-1  
**Sample ID:** MW-1  
**Legal Location:**  
**Collection Date:** 11/4/2015 12:10

**Date:** 11-Nov-15  
**Work Order:** 1511065  
**Lab ID:** 1511065-2  
**Matrix:** WATER  
**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>GC/MS Volatiles</b>			<b>SW8260_25</b>		Prep Date: 11/6/2015	PrepBy: JXK
BENZENE	17		0.5	MG/L	500	11/6/2015 15:44
TOLUENE	18		0.5	MG/L	500	11/6/2015 15:44
ETHYLBENZENE	1		0.5	MG/L	500	11/6/2015 15:44
M+P-XYLENE	3.8		0.5	MG/L	500	11/6/2015 15:44
O-XYLENE	1.6		0.5	MG/L	500	11/6/2015 15:44
TOTAL XYLENES	5.4		0.001	MG/L	1	11/6/2015 15:44
Surr: 4-BROMOFLUOROBENZENE	106		85-115	%REC	500	11/6/2015 15:44
Surr: DIBROMOFLUOROMETHANE	101		84-118	%REC	500	11/6/2015 15:44
Surr: TOLUENE-D8	102		85-115	%REC	500	11/6/2015 15:44

**Client:** Talon LPE  
**Project:** 701530.020.03 Nelson C-1  
**Sample ID:** MW-2  
**Legal Location:**  
**Collection Date:** 11/4/2015 12:20

**Date:** 11-Nov-15  
**Work Order:** 1511065  
**Lab ID:** 1511065-3  
**Matrix:** WATER  
**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>GC/MS Volatiles</b>			<b>SW8260_25</b>		Prep Date: 11/6/2015	PrepBy: JXK
<b>BENZENE</b>	<b>18</b>		<b>0.5</b>	<b>MG/L</b>	500	11/6/2015 16:05
<b>TOLUENE</b>	<b>20</b>		<b>0.5</b>	<b>MG/L</b>	500	11/6/2015 16:05
<b>ETHYLBENZENE</b>	<b>0.96</b>		<b>0.5</b>	<b>MG/L</b>	500	11/6/2015 16:05
<b>M+P-XYLENE</b>	<b>3.5</b>		<b>0.5</b>	<b>MG/L</b>	500	11/6/2015 16:05
<b>O-XYLENE</b>	<b>1.5</b>		<b>0.5</b>	<b>MG/L</b>	500	11/6/2015 16:05
<b>TOTAL XYLENES</b>	<b>5</b>		<b>0.001</b>	<b>MG/L</b>	1	11/6/2015 16:05
<i>Surr: 4-BROMOFLUOROBENZENE</i>	<i>107</i>		<i>85-115</i>	<i>%REC</i>	500	11/6/2015 16:05
<i>Surr: DIBROMOFLUOROMETHANE</i>	<i>100</i>		<i>84-118</i>	<i>%REC</i>	500	11/6/2015 16:05
<i>Surr: TOLUENE-D8</i>	<i>102</i>		<i>85-115</i>	<i>%REC</i>	500	11/6/2015 16:05

**Client:** Talon LPE  
**Project:** 701530.020.03 Nelson C-1  
**Sample ID:** MW-2  
**Legal Location:**  
**Collection Date:** 11/4/2015 12:20

**Date:** 11-Nov-15  
**Work Order:** 1511065  
**Lab ID:** 1511065-3  
**Matrix:** WATER  
**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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### Explanation of Qualifiers

#### Radiochemistry:

U or ND - Result is less than the sample specific MDC.	M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.	L - LCS Recovery below lower control limit.
Y2 - Chemical Yield outside default limits.	H - LCS Recovery above upper control limit.
W - DER is greater than Warning Limit of 1.42	P - LCS, Matrix Spike Recovery within control limits.
* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.	N - Matrix Spike Recovery outside control limits
# - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.	NC - Not Calculated for duplicate results less than 5 times MDC
G - Sample density differs by more than 15% of LCS density.	B - Analyte concentration greater than MDC.
D - DER is greater than Control Limit	B3 - Analyte concentration greater than MDC but less than Requested MDC.
M - Requested MDC not met.	
LT - Result is less than requested MDC but greater than achieved MDC.	

#### Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).  
 U or ND - Indicates that the compound was analyzed for but not detected.  
 E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.  
 M - Duplicate injection precision was not met.  
 N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.  
 Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.  
 \* - Duplicate analysis (relative percent difference) not within control limits.  
 S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

#### Organics:

U or ND - Indicates that the compound was analyzed for but not detected.  
 B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.  
 E - Analyte concentration exceeds the upper level of the calibration range.  
 J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).  
 A - A tentatively identified compound is a suspected aldol-condensation product.  
 X - The analyte was diluted below an accurate quantitation level.  
 \* - The spike recovery is equal to or outside the control criteria used.  
 + - The relative percent difference (RPD) equals or exceeds the control criteria.  
 G - A pattern resembling gasoline was detected in this sample.  
 D - A pattern resembling diesel was detected in this sample.  
 M - A pattern resembling motor oil was detected in this sample.  
 C - A pattern resembling crude oil was detected in this sample.  
 4 - A pattern resembling JP-4 was detected in this sample.  
 5 - A pattern resembling JP-5 was detected in this sample.  
 H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.  
 L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.  
 Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:  
 - gasoline  
 - JP-8  
 - diesel  
 - mineral spirits  
 - motor oil  
 - Stoddard solvent  
 - bunker C

## ALS Environmental -- FC

Date: 11/11/2015 10:3

Client: Talon LPE

## QC BATCH REPORT

Work Order: 1511065

Project: 701530.020.03 Nelson C-1

Batch ID: VL151106-3-1

Instrument ID: HPV1

Method: SW8260\_25

LCS		Sample ID: VL151106-3			Units: %REC		Analysis Date: 11/6/2015 13:55				
Client ID:		Run ID: VL151106-3A					Prep Date: 11/6/2015		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	0.0252		0.025		101	85-115					
Surr: DIBROMOFLUOROMETHANE	0.0253		0.025		101	84-118					
Surr: TOLUENE-D8	0.0255		0.025		102	85-115					
BENZENE	0.011	0.001	0.01		110	83-117				20	
TOLUENE	0.011	0.001	0.01		110	82-113				20	
ETHYLBENZENE	0.0108	0.001	0.01		108	81-113				20	
M+P-XYLENE	0.0217	0.001	0.02		108	82-115				20	
O-XYLENE	0.0109	0.001	0.01		109	81-115				20	

LCSD		Sample ID: VL151106-3			Units: %REC		Analysis Date: 11/6/2015 14:16				
Client ID:		Run ID: VL151106-3A			Prep Date: 11/6/2015			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	0.0256		0.025		102	85-115			2		
Surr: DIBROMOFLUOROMETHANE	0.0253		0.025		101	84-118			0		
Surr: TOLUENE-D8	0.0257		0.025		103	85-115			1		
BENZENE	0.0108	0.001	0.01		108	83-117		0.011	2	20	
TOLUENE	0.011	0.001	0.01		110	82-113		0.011	0	20	
ETHYLBENZENE	0.0108	0.001	0.01		108	81-113		0.0108	0	20	
M+P-XYLENE	0.0217	0.001	0.02		108	82-115		0.0217	0	20	
O-XYLENE	0.0107	0.001	0.01		107	81-115		0.0109	1	20	

MB		Sample ID: VL151106-3			Units: %REC		Analysis Date: 11/6/2015 15:02				
Client ID:		Run ID: VL151106-3A					Prep Date: 11/6/2015		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	0.0261		0.025		104	85-115					
Surr: DIBROMOFLUOROMETHANE	0.0251		0.025		100	84-118					
Surr: TOLUENE-D8	0.0257		0.025		103	85-115					
BENZENE	ND	0.001									
TOLUENE	ND	0.001									
ETHYLBENZENE	ND	0.001									
M+P-XYLENE	ND	0.001									
O-XYLENE	ND	0.001									
TOTAL XYLENES	ND	0.001									

**Client:** Talon LPE  
**Work Order:** 1511065  
**Project:** 701530.020.03 Nelson C-1

## QC BATCH REPORT

The following samples were analyzed in this batch:

1511065-1

1511065-2

1511065-3