

Form 15

State of Colorado Oil and Gas Conservation Commission

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



OGCC RECEPTION

Document Number: 400386922

EARTHEN PIT REPORT / PERMIT

This form is to be used for both reporting and permitting pits. Rule 903 describes when a Permit with prior approval, or a Report within 30 days is required for pits. Submit required attachments and forms.

Form Type: [X] PERMIT [ ] REPORT OGCC PIT NUMBER: 432534

NOTE: Operator to provide OGCC Pit Number only if available on an existing pit for pit report

OGCC Operator Number: 96850 Contact Name: Karolina Blaney
Name of Operator: WPX ENERGY ROCKY MOUNTAIN LLC
Address: 1001 17TH STREET - SUITE #1200 Phone: (970) 6832295
City: DENVER State: CO Zip: 80202 Email: Karolina.Blaney@WPXEnergy.com

ATTACHMENTS table with rows: Detailed Site Plan, Design/Cross Sec, Topo Map, Calculations, Sensitive Area Info, Mud Program, Form 2A, Form 26, Water Analysis

Pit Location Information

Operator's Pit/Facility Name: Smith Gulch 31-32-796 Operator's Pit/Facility Number:
API Number (associated well): 05-00
OGCC Location ID (associated location): 430110 Or Form 2A #
Pit Location (QtrQtr, Sec, Twp, Rng, Meridian): NWNE-32-7S-96W-6
Latitude: 39.398863 Longitude: -108.129210 County: GARFIELD

Operation Information

Pit Use/Type (Check all that apply): Pit Type: [X] Lined [ ] Unlined
[ ] Drilling: (Ancillary, Completion, Flowback, Reserve Pits) [ ] Oil-based Mud; [ ] Salt Sections or High Chloride Mud
[ ] Production: [ ] Skimming/Settling; [ ] Produced Water Storage; [ ] Percolation; [ ] Evaporation
[ ] Special Purpose: [ ] Flare; [ ] Emergency; [ ] Blowdown; [ ] Workover; [ ] Plugging; [ ] BS&W/Tank Bottoms
[X] Multi-Well Pit: Construction Date: 04/01/2013 Actual or Planned: Planned
Method of treatment prior to discharge into pit: four phase separation
Offsite disposal of pit contents: [X] Injection; [X] Commercial; [X] Reuse/Recycle; [ ] NPDES; Permit Number:
Other Information:

Site Conditions

Distance (in feet) to the nearest surface water: 163 Ground Water (depth): 6 Water Well: 4994
Is this location in a Sensitive Area? Yes Existing Location?

Pit Design and Construction

Size of Pit (in feet): Length: 350 Width: 160 Depth: 16 Calculated Working Volume (in barrels): 97700
Flow Rates (in bbl/day): Inflow: 2000 Outflow: Evaporation: Percolation: 0
Primary Liner. Type: HDPE Thickness (mil): 60
Secondary Liner (if present): Type: HDPE + clay liner Thickness (mil): 40
Is Pit Fenced? Yes Is Pit Netted? Yes Leak Detection? Yes
Other Information: Flow rates will vary

Operator Comments:

Certification

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

Signed: Karolina Blaney Print Name: Karolina Blaney
Title: Environmental Specialist Email: Karolina.Blaney@WPXEnergy.com Date: 03/01/2013

**Approval**

Signed: \_\_\_\_\_

*Matthew Lee*

Title: \_\_\_\_\_

Director of Cogcc

Date: \_\_\_\_\_

04/18/2013

**BMP**

Type

Comment

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**CONDITIONS OF APPROVAL:**

**TEMPORARY SURFACE PIPELINES COAs:**

Operator must implement best management practices to contain any unintentional release of fluids along all portions of the surface pipeline route where temporary pumps and other necessary equipment are located.

Operator must routinely inspect the entire length of the surface pipeline to ensure integrity.

Operator must ensure 110 percent secondary containment for any potential volume of fluids that may be released from the surface pipeline at all stream, intermittent stream, ditch, and drainage crossings.

Operator will utilize, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing the surface pipelines. This will reduce surface disturbance and fragmentation of wildlife habitat in the area.

**GROUNDWATER/SURFACE WATER BASELINE SAMPLING COA:**

Baseline Water Testing: Prior to pit operations, operator shall sample at a minimum two (2) domestic water wells or springs within a one (1) mile radius of the proposed oil and gas location. Testing preference shall be given to domestic water wells and springs over surface water. If possible, the water wells or springs selected should be on opposite sides of the oil and gas location not exceeding a one (1) mile radius. If water wells or springs on opposite sides of the oil and gas location cannot be identified, then the two (2) closest wells or springs within a one (1) mile radius of the oil and gas location shall be sampled. The sample location shall be surveyed in accordance with Rule 215. Sampling and analysis shall be conducted in conformance with an accepted industry standard as described in Rule 910.b.(2).

Initial baseline testing shall include: pH, specific conductance, total dissolved solids (TDS), dissolved gases (methane, ethane, propane), alkalinity (total bicarbonate and carbonate as CaCO<sub>3</sub>), major anions (bromide, chloride, fluoride, sulfate, nitrate and nitrite as N, phosphorus), major cations (calcium, iron, magnesium, manganese, potassium, sodium), other elements (barium, boron, selenium and strontium), presence of bacteria (iron related, sulfate reducing, slime and coliform), total petroleum hydrocarbons (TPH) and BTEX compounds (benzene, toluene, ethylbenzene and xylenes). Hydrogen sulfide shall also be measured using a field test method. Field observations such as pH, temperature, specific conductance, odor, water color, sediment, bubbles, and effervescence shall also be included. COGCC recommends that the latest version of EPA SW 846 analytical methods be used where possible and that analyses of samples be performed by laboratories that maintain state or national accreditation programs.

If free gas or a dissolved methane concentration greater than 1.0 milligram per liter (mg/l) is detected in a water well, gas compositional analysis and stable isotope analysis of the methane (carbon and hydrogen: 12C, 13C, 1H and 2H) shall be performed to determine gas type. If test results indicated thermogenic or a mixture of thermogenic and biogenic gas, then the operator shall submit to the Director an action plan to determine the source of the gas. If the methane concentration increases by more than 5.0 mg/l between sampling periods, or increases to more than 10. mg/l, the operator shall notify the Director and the owner of the water well immediately.

After 90 days, but less than 180 days of use of the pit for completion operations, a "second" test shall be performed for the same analytical parameters listed above and repeated once every 12 months. Additional test(s) may be required if changes in water quality are identified during follow-up testing. The Director may require further water well sampling at any time in response to complaints from water well owners.

Copies of all test results described above shall be provided to the Director and the landowner where the water quality testing well is located within three (3) months of collecting the samples used for the test. The analytical data and surveyed well locations shall also be submitted to the Director in an electronic data deliverable format.

Documented refusal to grant access by well owner or surface owner (for water well or spring sampling), or if no water wells or springs are located/identified within one mile, shall not constitute a violation of this COA.

**FORM 15 EARTHEN PIT PERMIT COAs:**

The multi-well pit must be double-lined. The pit will also require a leak detection system (Rule 904.e).

Delivery and vacuum truck hoses will not be allowed to be placed directly onto the pit liner. Operator will construct a loading/unloading station located next to the pit, to deliver fluids to or remove fluids from the pit by truck. The loading/unloading station shall be designed and utilized to prevent hoses from being dropped into the pits and dragged over the liner, which could lead to liner damage. The loading/unloading station will be the only permitted

access for manual fluids transfers to or from the pit. Vehicles will not be allowed to approach the pit any closer than the loading/unloading station. Each station will have a catch basin in case a leak occurs while operations personnel are connecting or disconnecting hoses. Signs clearly marking the truck loading/unloading station shall be provided and maintained by the operator.

Operator must submit a professional engineer (PE) approved/stamped as-built drawing (plan view and cross-sections) of the multi-well pit within 30 calendar days of construction.

After installation of the uppermost liner and prior to operating the pit, the synthetic liner(s) shall be tested by filling the pit with at least 70 percent of operating capacity of water, measured from the base of the pit (not to exceed the 2-foot freeboard requirement). The operator shall monitor the pit for leaks for a period of 72 hours prior to either draining the pit or commencing operations. Operator shall notify the COGCC Oil and Gas Location Assessment (OGLA) Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us) 48 hours prior to start of the hydrotest. Hydrotest monitoring results must be maintained by the operator for the life of the pit and provided to COGCC prior to using the pit (via Form 4 Sundry to Dave Kubeczko; email dave.kubeczko@state.co.us) .

In lieu of conducting an initial hydrostatic test of the pit, the operator can monitor fluid levels in the pit continuously using a minimum of two pressure transducers located at the upgradient and downgradient ends of the pit (based on the original topographic profile). These pressure transducers should be linked to the operator's SCADA system such that they can be remotely monitored. In addition, the pit liner will be marked at the two foot freeboard depth line so that operations personnel (as well as COGCC inspectors) can easily verify that the required fluid free board is being maintained. The electronically collected water level measurement data shall be used to confirm changes in pit inflow and outflow during operations based on estimates from truck and/or pipeline delivery or removal activities. Any abnormalities that are noticed during operations will be reported to the operator's field supervisor immediately so that any necessary follow-up can be scheduled.

No portion of any pit that will be used to hold liquids shall be constructed on fill material, unless the pit and fill slope are designed and certified by a professional engineer, subject to review and approval by the director prior to construction of the pit. The construction and lining of the pit shall be supervised by a professional engineer or their agent. The entire base of the pit must be in cut.

The nearby downgradient hillside below the pit location must be periodically monitored for any day-lighting of fluids throughout pit operations.

The multi-well pit must be fenced and netted. The operator must maintain the fencing and netting until the pit is closed.

Operator shall pressure test pipelines in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface pipelines or configuration of the permanent pipeline network.

This multi-well pit will comply with Rule 902. PITS - GENERAL AND SPECIAL RULES. e. Pits used for a period of no more than three (3) years for storage, recycling, reuse, treatment, or disposal of E&P waste or fresh water, as applicable, may be permitted in accordance with Rule 903 to service multiple wells.

Operator has indicated that this facility may be in operation from 3 to 5 years. Should the operation of this facility continue more than three years, a Form 28 shall be submitted and approved prior to the expiration of the Form 2A and Form 15.

Surface water samples (one upgradient and one downgradient from the frac pad/multi-well pit location) from the unnamed intermittent stream located east-northeast of the location (if water is present) shall be collected prior to pit use and every 12 months (until pit closure) to evaluate potential impacts from pit operations. If water is not present in the unnamed intermittent stream, then surface water samples from Smith Gulch, located approximately 1100' to the west (if water is present), shall be collected. At a minimum, the surface water samples will be analyze for the following parameters: major cations/anions (chloride, fluoride, sulfate, sodium); total dissolved solids (TDS); and BTEX/DRO.

The operator shall submit, and receive approval of, a reuse and recycling plan per Rule 907.a.(3), prior to any offsite reuse/recycling of pit fluids.

The multi-well pit shall be closed in accordance with Rule 905. Closure of Pits, and Buried or Partially Buried Produced Water Vessels; with an approved Site Investigation and Remediation Workplan, Form 27.

Submit additional disposal facilities (wells, pits, etc.), if necessary (i.e., if original disposal option changes), for pit liquid contents to COGCC via a Form 4 Sundry prior to disposal.

At the time of pit closure, operator must submit disposal information for solids, if necessary, via a Form 4 Sundry Notice to the COGCC Location Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us).

The disposal method will need to be approved prior to operator starting pit closure.

**SITE SPECIFIC COAs:**

Notify the COGCC 48 hours prior to start of frac pad construction, pit liner installation, start of hydrostatic test, and start of hydraulic stimulation operations using Form 42 (the appropriate COGCC individuals will automatically be email notified, including the LGD for hydraulic stimulation operations).

Operator must implement best management practices to contain any unintentional release of fluids at the pit location, as well as any fluids conveyed via temporary surface or buried permanent pipelines.

Operator must ensure secondary containment for any volume of fluids contained at frac pad site during completion operations (as described on the BMP tab); including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices (BMPs) associated with stormwater management) sufficiently protective of nearby surface water. Any berm constructed at the frac pad location will be stabilized, inspected at regular intervals (at least every 14 days), and maintained in good condition.

Flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into the multi-well pit or storage vessel on the frac pad; or into tanker trucks for offsite disposal. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the frac pad or nearby well pads in an area with additional downgradient perimeter berming. The area where flowback fluids will be stored/reused must be constructed to be sufficiently impervious to contain any spilled or released material.

Additional containment shall be required where temporary or permanent pumps and other necessary equipment or chemicals are located.

Berms or other containment devices shall be constructed to be sufficiently impervious (preferably corrugated steel with poly liner) to contain any spilled or released material around crude oil, condensate, and produced water storage tanks.

PE stamped as-built drawing



**Fox Engineering Solutions, Inc.**

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June 24, 2013

Karolina Blaney  
Environmental Specialist  
WPX Energy Rocky Mountain, LLC  
1058 County Road 215  
Parachute, CO 81635

Re: SG 31-32-796 Smith Gulch Pit – As-Builts  
NEW ¼ Section 32, Township 7 South, Range 96 West, 6th P.M. Garfield County, CO

Dear Karolina,

As requested, we have prepared information to address the COGCC's condition of approval for the SG 31-32-796 Smith Gulch Pit regarding the professional engineer approved/stamped as-built. Our review has included onsite visual verification of Smith Gulch site, independent verification of the pit plan-view dimensions by Sexton Survey, and discussions with Wayne Kirkpatrick of Bookcliff Survey Services, Inc.,

On June 17, 2013 Fox Engineering Solutions, Inc. conducted an onsite visual review of the plan and cross-section as-built drawings, attached, prepared by Bookcliff Survey Services, originally dated June 4, 2013 and revised June 24, 2013. Accompanying Fox Engineering Solutions was a registered land surveyor from Sexton Surveys, Inc. Sexton Survey measured the surface dimensions of the pit along the liner keyway or anchor trench. Sexton also located permanent load-out/inlet pipes and delineated the perimeter wildlife fencing and birdnetting details. A supplemental as-built from Sexton is attached as part the certified as-built drawings.

From our observations and referenced discussions, the Bookcliff Survey Services plan and cross-section drawings, revised June 24, 2013 along with the supplemental drawing by Sexton Survey, dated June 20, 2013, correctly depicted the features and as-built conditions of the SG 31-32-796 Smith Gulch Pit site.

Should you have any questions or require additional information, please let me know.

Respectfully submitted,

David Fox, P.E.  
**Fox Engineering Solutions, Inc.**  
670 Canyon Creek Drive  
Grand Junction, CO 81503  
Ph: (970) 250-5505 Fax (626) 784-0667  
Email: [coloradofox@bresnan.net](mailto:coloradofox@bresnan.net)

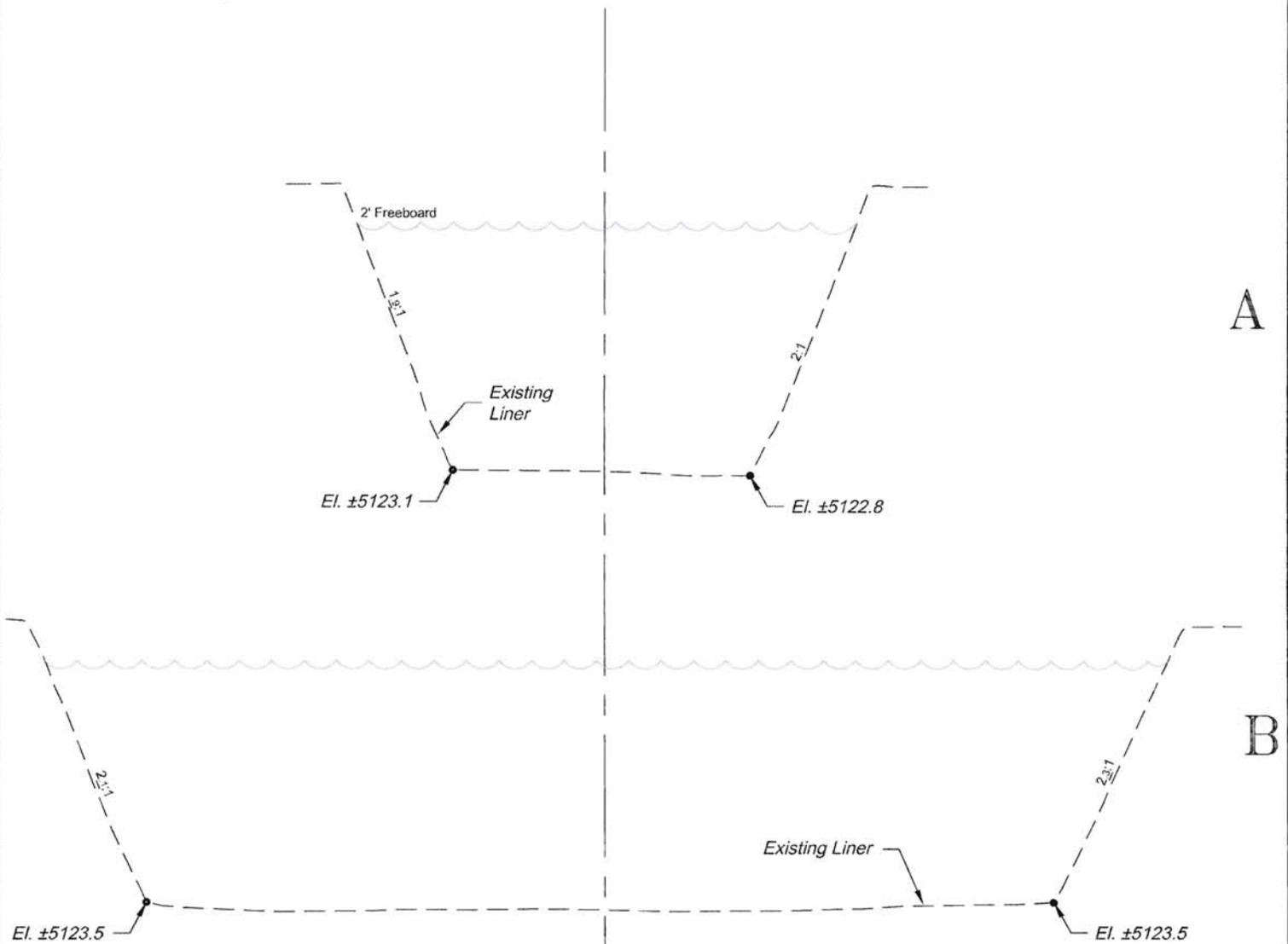


DF/djf

Attachments

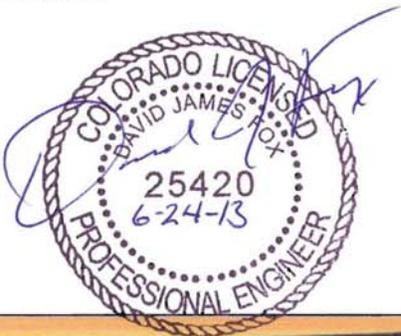


COMPLETIONS PIT



I hereby attest that I am a Licensed Professional Engineer in the State of Colorado. I attest that I have conducted a visual inspection of the SG 31-32-796 Smith Gulch Pit identified on this drawing; and that the drawing reflects the as-constructed conditions of the site.

David J. Fox, P.E. #25420  
June 24, 2013



SCALE: Horiz.: 1" = 50'  
Vert.: 1" = 10'

\*NOTE:  
CUT SLOPES: 1.5:1  
FILL SLOPES: 1.5:1,  
UNLESS OTHERWISE NOTED.

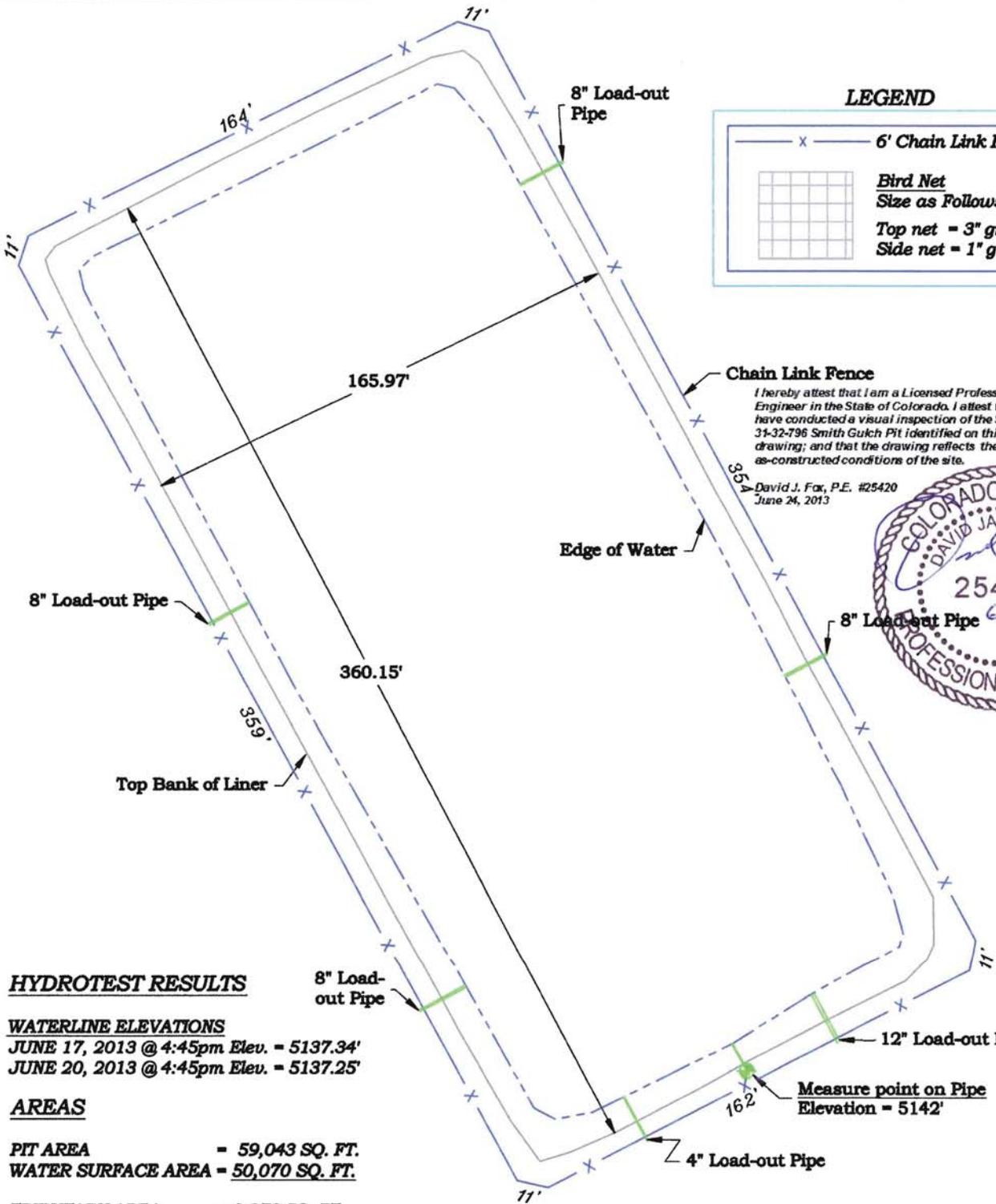
136 East Third Street  
Rifle, Colorado 81650  
Ph. (970) 625-2720  
Fax (970) 625-2773



SCALE: As Noted  
DATE: 6/4/13  
PLAT: 2 of 2  
PROJECT: Valley  
DFT: cws

Construction Plan Prepared for:  
**WPXENERGY** WPX Energy Rocky Mountain, LLC

*SG Completions Pit*  
**As-CONSTRUCTED CROSS SECTIONS**



**LEGEND**

6' Chain Link Fence  
 Bird Net  
 Size as Follows:  
 Top net = 3" grid  
 Side net = 1" grid

**Chain Link Fence**  
 I hereby attest that I am a Licensed Professional Engineer in the State of Colorado. I attest that I have conducted a visual inspection of the SG 31-32-796 Smith Gulch Pit identified on this drawing; and that the drawing reflects the as-constructed conditions of the site.  
 David J. Fox, P.E. #25420  
 June 24, 2013



**HYDROTEST RESULTS**

**WATERLINE ELEVATIONS**  
 JUNE 17, 2013 @ 4:45pm Elev. = 5137.34'  
 JUNE 20, 2013 @ 4:45pm Elev. = 5137.25'

**AREAS**

PIT AREA = 59,043 SQ. FT.  
 WATER SURFACE AREA = 50,070 SQ. FT.  
 TRIBUTARY AREA = 8,973 SQ. FT.

SCALE: 1" = 50'

**THE SEXTON SURVEY COMPANY**  
 127 E. 5TH ST  
 RIFLE CO. 81650  
 970-625-3711  
 Scott Blackard, PLS

NE1/4 of Section 32  
 T. 7 S., R. 96 W. of the 6th P.M.  
 COSP NAD 83 CENTRAL ZONE  
 LAT: 39.398863  
 LONG: -108.129210  
 Garfield County, Colorado

JOB. NO: 13039  
 DATE: 6/20/13

Hydro-test Exhibit Prepared for:  
  
**WPX Energy Rocky Mountain, LLC**  
 SG 31-32-796 (Smith Gulch) Completions Pit  
 Hydrostatic Pit Test

## Hydrostatic Test Results



## **Fox Engineering Solutions, Inc.**

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June 24, 2013

Karolina Blaney  
Environmental Specialist  
WPX Energy Rocky Mountain, LLC  
1058 County Road 215  
Parachute, CO 81635

Re: SG 31-32-796 Smith Gulch – Hydrotest Results  
NEW ¼ Section 32, Township 7 South, Range 96 West, 6th P.M. Garfield County, CO

Dear Karolina,

Attached are the results of the 72-hour hydrotest conducted June 17 through June 20, 2013 at WPX Energy's SG 31-32-796 Pit. The hydrotest indicated no observed loss in liner system integrity. The summary results, attached, include a data and calculation sheet, survey plat with water surface area and elevation data, and an outline of the procedures employed.

As per COGCC requirements, the pit was tested with the water level exceeding 70% of operating capacity and monitored for 72 hours. A weather station, consisting of a National Weather Service Class A evaporation pan and two precipitation gauges, was installed at the site. Survey data including vertical and horizontal control points along with pit water elevations and surface areas were established and collected by Sexton Survey Company.

The lining system consists of a primary 60 mil polypropylene liner and a secondary 40 mil polypropylene liner underlain with a tertiary geo-synthetic clay liner. An interstitial monitoring sump is located on the south side of the pit. Visible portions of liner, approximately the top 8-10 ft., had no visible tears, delamination or seam failures. The liner installation had recently been completed and appeared to be in excellent condition.

The fluid level of the pit dropped 1.08 inches over the 72-hour test duration. Correspondingly, evaporation and precipitation measurements provided a calculated or expected fluid level drop of 1.11 inches. An evaporation pan coefficient of 0.72 was applied to the gross pan evaporation.

Side slope measurements in the interstitial observation pipe were taken on June 17<sup>th</sup> and June 20<sup>th</sup> and indicated the presents of moisture in the sump. The moisture level in the sump did not change over the 72-hour test period, measuring 50.08 ft. at both the initiation and termination of the hydrotest. Construction water may be present between the primary and secondary liners.

In conclusion, the hydrotest results indicated no observed loss in liner system integrity. The mass balance calculations, utilizing measured evaporation and precipitation data, correlated with the fluid level change in the pit. The interstitial monitoring sump moisture level showed no apparent change over the 72-hour hydrotest period. Continued monitoring of the interstitial sump is recommended.

Should you have any questions or require additional information, please let me know.

Best regards,

David Fox, P.E.

**Fox Engineering Solutions, Inc.**

670 Canyon Creek Drive  
Grand Junction, CO 81503  
Ph: (970) 250-5505 Fax (626) 784-0667  
Email: [coloradofox@bresnan.net](mailto:coloradofox@bresnan.net)

# Hydrostatic Pit Testing Data Collection & Computation Form

Fox Engineering Solutions, Inc.



**Pit Owner:** WPX Energy Rocky Mountain, LLC  
**Pit Name:** SG 31-32-796 (Smith Gulch)  
**COGCC Facility No.:**  
**Pit Location:** NE 1/4 Section 32, T7S, R96W, 6th P.M.  
 Latitude: N 39.398863° Longitude: W108.129210° (NAD83)  
**Reported Liner:** 60 mil Primary/40 mil Secondary HDPE Liners with Tertiary GCL.  
**Approximate Elevation:** 5140 ft. msl  
**Test Conducted By:** David Fox P.E., Fox Engineering Solutions, Inc.

<b>Test Initiation:</b>		<b>Test Termination:</b>	
Date:	6/17/2012	Date:	6/20/2012
Time:	4:45 PM	Time:	4:45 PM
Total Duration:	72 hours		

	<u>Length</u>	<u>Width</u>	<u>Area</u>		<u>Comments</u>
Tributary Pit Liner Surface Area (ft <sup>2</sup> ):	-	-	59,043 ft. <sup>2</sup>		Surveyed by Sexton Survey
Initial Pit Water Surface Area:	-	-	50,070 ft. <sup>2</sup>		Surveyed by Sexton Survey
Final Pit Water Surface Area:	-	-	<u>50,070</u> ft. <sup>2</sup>		Surveyed by Sexton Survey
Average Pit Water Surface Area:			50,070 ft. <sup>2</sup>		

**Initial Pit Fluid Level:** 5137.34 ft.  
**Final Pit Fluid Level:** 5137.25 ft.  
**Difference:** 0.09 ft or  
**Est. Fluid Depth:** 12.8 ft. (from pit capacity table) 1.08 inches

**Evaporation Pan Installed:** Yes      **Location:** SE side of pit      **Measured Pan Evaporation:** 1.55 inches  
(During Test Duration)  
**Evaporation w/ Pan Coeff. 0.72** 1.11 inches  
(From published NOAA data)

**Rain Gauge Installed:** Yes - 2 Gauges      **Location:** E & S sides of pit      **Recorded Precipitation:** 0.00 inches  
**Equiv. 72-Hour Precip. Inflow:** 0.00 inches

**Other Inflow/Outflow:**

<b>Inflow (gal)</b>	<b>0</b>	<b>Equivalent Inflow:</b>	<b>0.00 inches</b>
<b>Outflow (gal)</b>	<b>0</b>	<b>Equivalent Outflow:</b>	<b>0.00 inches</b>

**Calculated Fluid Level Change in Inches:** (+ indicates fluid level increased)  
**(Precipitation - 72% Pan Evaporation + Inflows - Outflows)** -1.11 inches

**Measure Change in Inches:** (+ indicates fluid level increased) -1.08 inches

**Difference between Calculated and Measured Pit Fluid Level:** 0.03 inches

**Summary:** No observed loss in liner integrity. Fluid level drop correlated with evaporation & precipitation measurements.

**Weather:** Mostly sunny, dry and windy. Temperatures 70° - 85°.

**Liner and Pit Condition:** Treated water fluid level at approximate 12.8 ft depth (90% full). Liner is new and had just been installed.

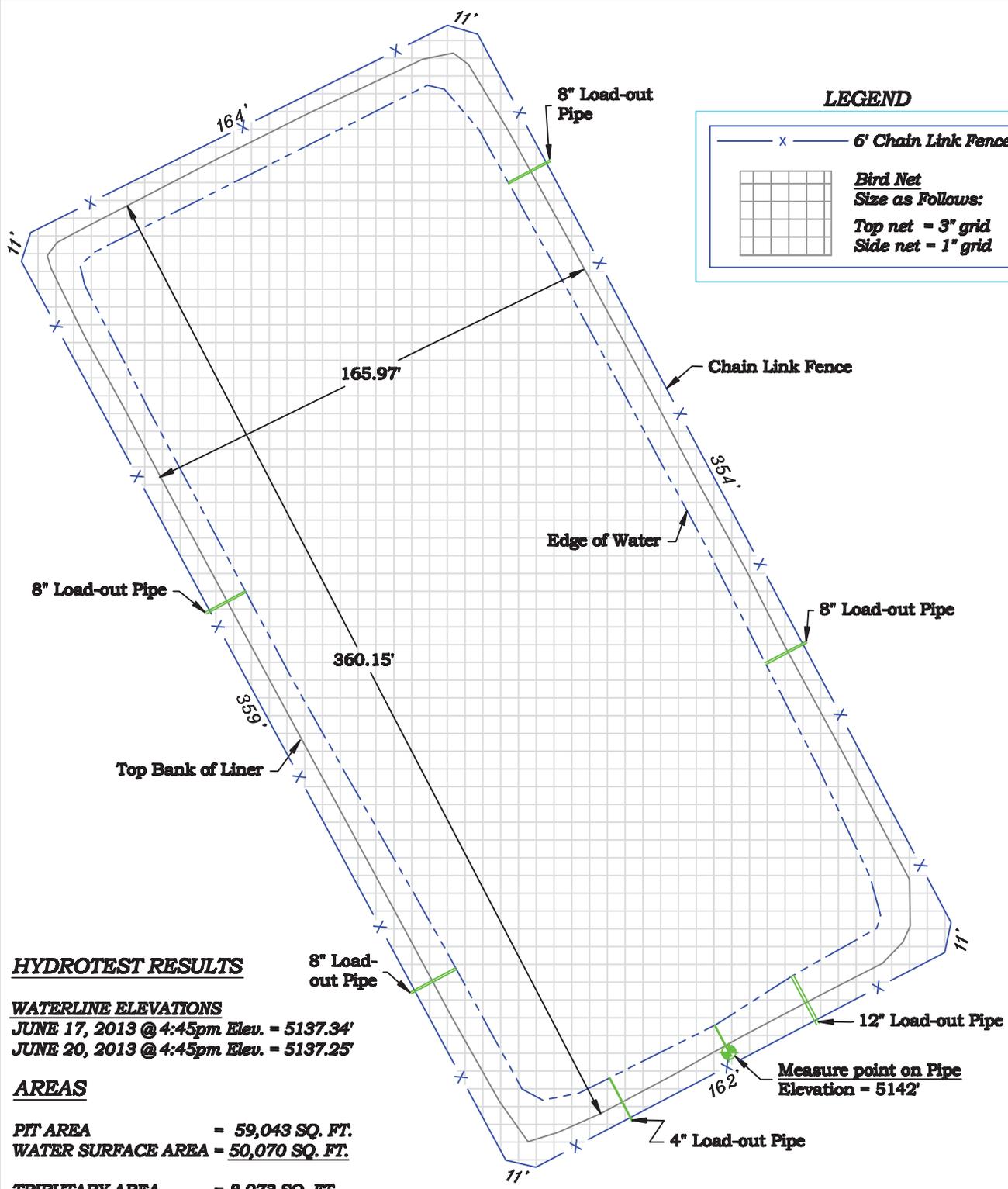
Visible portion of liner, approximately the top 8 - 10 ft., had no visible tears, delamination or seam failures.

Pit area fence with 6' high chain link & 1" birdnetting. Top of pit netted with 3" by 3" bird netting.

**Comments:** Sexton Survey utilized a Trimble Total Station for required area and elevation measurements.

WPX Energy staff indicated that no fluids were transferred from or to the pit during the duration of the test.

Evaporation pan placed within the fenced and netted area of the pit site.



**LEGEND**

— x — 6' Chain Link Fence


**Bird Net**  
 Size as Follows:  
 Top net = 3" grid  
 Side net = 1" grid

**HYDROTEST RESULTS**

**WATERLINE ELEVATIONS**  
 JUNE 17, 2013 @ 4:45pm Elev. = 5137.34'  
 JUNE 20, 2013 @ 4:45pm Elev. = 5137.25'

**AREAS**

**PIT AREA** = 59,043 SQ. FT.  
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**TRIBUTARY AREA** = 8,973 SQ. FT.

SCALE: 1" = 50'

THE SEXTON SURVEY COMPANY

127 E. 5TH ST  
 RIFLE CO. 81650  
 970-625-3711

Scott Blackard, PLS

NE1/4 of Section 32  
 T. 7 S., R. 96 W. of the 6th P.M.  
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JOB. NO: 13039  
 DATE: 6/20/13

Hydro-test Exhibit Prepared for:

**WPXENERGY**  
 WPX Energy Rocky Mountain, LLC  
 SG 31-32-796 (Smith Gulch) Completions Pit  
 Hydrostatic Pit Test



# Hydrostatic Testing Procedures for COGCC Earthen Pits

Vers. 6.0 12-15-11 ©



The purpose for hydrostatic testing earthen pits is to comply with COGCC approval conditions for verifying the fluid holding integrity of the pit lining system. These procedures are specific to existing or active earthen pits holding oil and gas related fluids including, but not limited to, produced water. During testing, the pit shall have fluid level as high as practical, without encroaching into the 2 ft. freeboard, and the test shall be conducted for a minimum of 72 hours, if practical. Visible portions of the liner, including the anchor trench and seams, shall be inspected for defects. The test shall be scheduled and coordinated with personnel to ensure that oil and gas activities do not interfere with the test. Testing procedures may be subject to changes as dictated by field and climatic factors. All personnel involved with testing, while onsite, shall comply with their respective EH&S requirements.

- If practical, a sign shall be placed in a conspicuous location during the test stating “Hydrostatic testing in Progress, Pit Closed to All Water Hauling Activities”. Contact information shall also be placed on the sign.
- A semi-permanent datum elevation point shall be established at the pit location. The surface area of the water surface and the surface area of the liner area, tributary to the pit shall be measured. The date and time of each measurement shall be documented.
- The pit fluid level; fluid surface area; and the lined surface area, tributary to the pit, shall be measured and recorded at the beginning of the test. The pit fluid level shall be measured again at the end of the test. A survey grade total station shall be utilized for accuracy to capture this information. The date and time of measurements shall be documented.
- A 4” diameter official rain gauge with funnel inlet shall be installed at the pit site. Precipitation shall be recorded for the duration of the hydrostatic test.
- During ice-free periods, pan evaporation shall be measured during the duration of the test following the procedures established by the National Weather Service – NOAA in the document entitled “National Weather Service - Observing Handbook No. 2, dated July 1989. A Class A evaporation pan shall be placed at the site, or as near as practical, with evaporation measured per established procedures. During ice-over periods at the pit, evaporation is assumed negligible and evaporation measurements will not be taken.
- For the duration of the test, all inflows and outflows, such as truck and piped transfers, shall cease. If the cessation of inflows and outflows is not practical, all pit inflows and outflows shall be accurately metered and documented during the test. 24-hour surveillance monitoring may be warranted.
- If no precipitation has occurred during the test, compare the change in the pit fluid level with the recorded pan evaporation. During ice-over periods, compare the pit levels taken at the start and end of the tests.
- If precipitation has occurred during the test, precipitation falling onto tributary portions of the liner, outside of the fluid surface area, may be added as an inflow to the pit and converted into inches of depth over the fluid surface area. During ice-over and snow conditions, precipitation inflow from tributary portions of the liner may be estimated from snow depth and corresponding water equivalent comparisons at the start and termination of the test. Other factors may also be utilized.
- The calculated change in pit level during the test is:  $\Delta L = P + I - O - E$  (all measurements converted to inches)  
  
Where:  $\Delta L$  = Change in pit fluid level      P = Precipitation Inflow      E = Evaporation  
          I = Measured Inflows                    O = Measured Outflows
- The measured change in the pit fluid level shall be compared to the calculated change, utilizing precipitation and evaporation data, in the pit fluid level during the test duration. The test procedures and results will be reviewed and analyzed for discrepancies. If the test results indicate integrity issues with the lining system, the test will be repeated.

## Liner Installation Report

# SMITH GULCH



LANGE CONTAINMENT SYSTEMS, INC.

MAY 2013



**40 MIL**



Containment Systems Inc.





**60 MIL**



Containment Systems Inc.







**40 MIL**





Containment Systems Inc.

Deployment Date 5-16-2013

Project Name: Smith Gulch

Job #

Supt: Victor Casillas

Material: 40mil/smooth Primary [ ] Secondary [x]

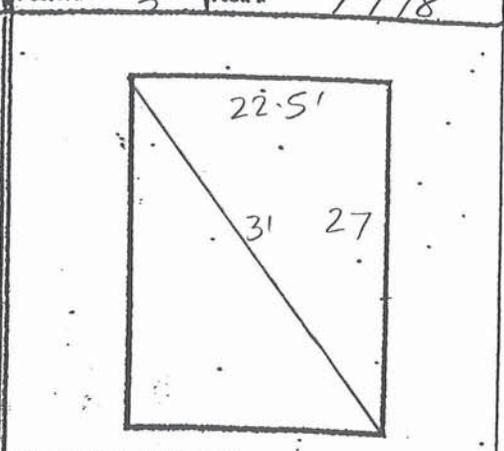
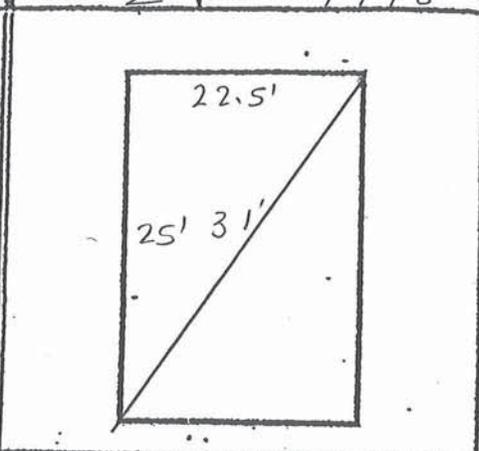
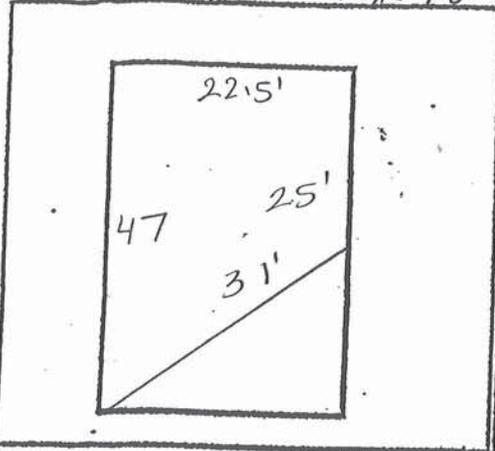
Pond #

Cell #

Pad #

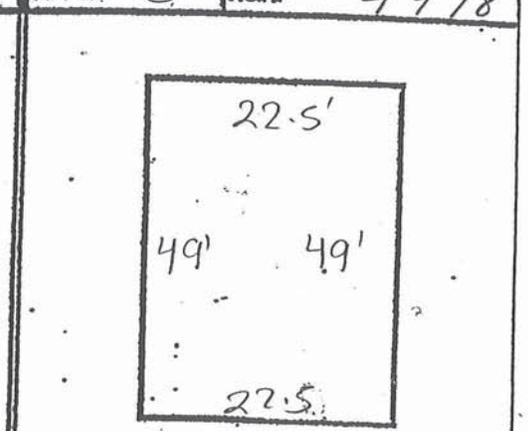
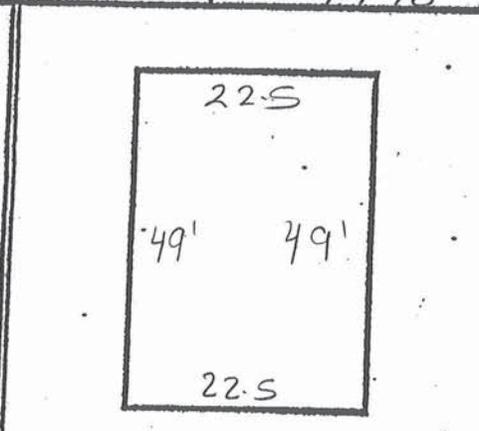
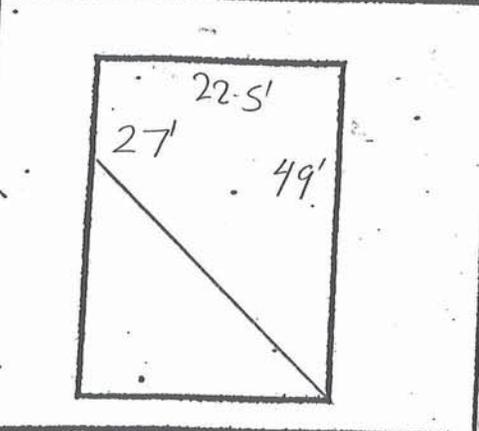
Other:

Panel # 1	Roll # 4478	Panel # 2	Roll # 4478	Panel # 3	Roll # 4478
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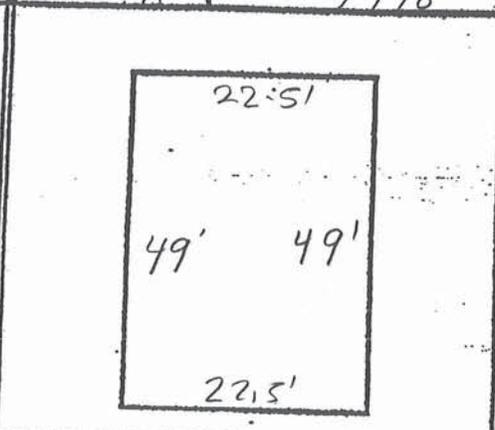
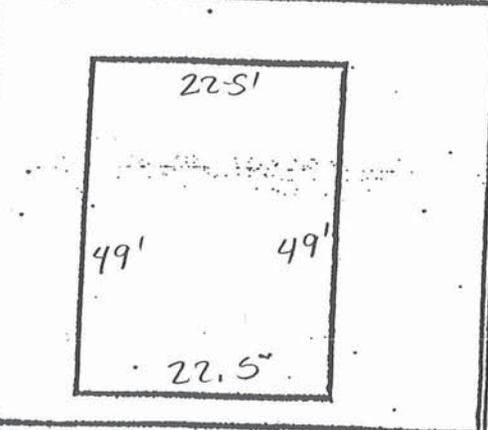
Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF 810		Final SF 28/25		Final SF 303.75	

Panel # 4	Roll # 4478	Panel # 5	Roll # 4478	Panel # 6	Roll # 4478
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Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF 855		Final SF 1102.5		Final SF 1102.5	

Panel # 7	Roll # 4478	Panel # 8	Roll # 4478
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Total Initial SF This Page	SF
Total Final SF This Page	6660 SF
Anchor Trench	
Total Linear feet trench	LF
Depth and width allowed in trench	LF
Total SF in Trench	SF

Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Total Pay Area This Page	6660 SF
Final SF 1102.5		Final SF 1102.5		Total Previous Pages	SF
				Total Pay Area to Date	6660 SF



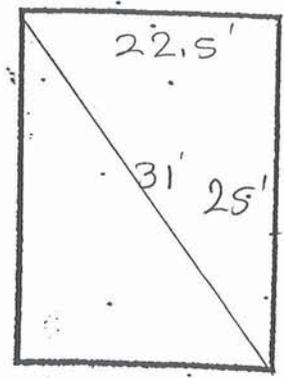
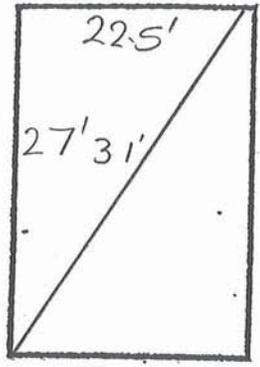
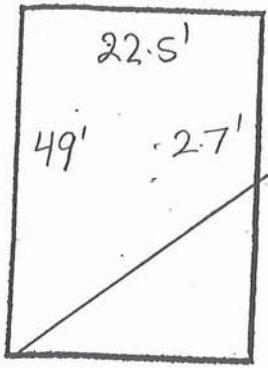
Containment Systems Inc.

Deployment Date 5-16-2013

Project Name: Smith Gulch Job # Supt: Victor Casillas

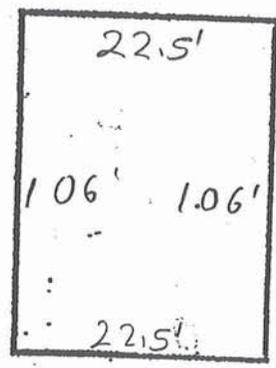
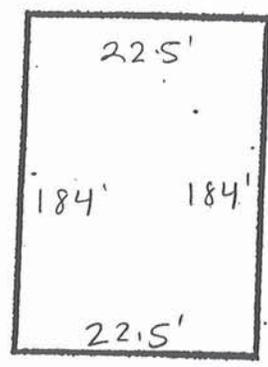
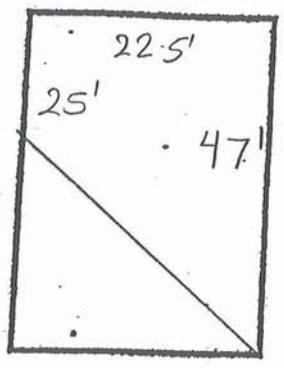
Material: 40mil DSS Primary [ ] Secondary [x] Pond # Cell # Pad # Other:

Panel # 9 Roll # 4478 Panel # 10 Roll # 4478 Panel # 11 Roll # 4478



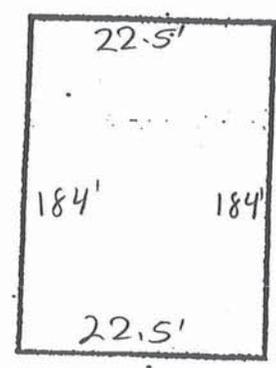
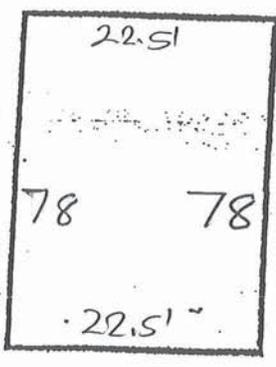
Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF 855		Final SF 303.75		Final SF 281.25	

Panel # 12 Roll # 4478 Panel # 13 Roll # 4478 Panel # 14 Roll # 4478



Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF 810		Final SF 4140		Final SF 2385	

Panel # 15 Roll # 4479 Panel # 16 Roll # 4479



Total Initial SF This Page	SF
Total Final SF This Page	14670 SF
Anchor Trench	
Total Linear feet trench	LF
Depth and width allowed in trench	LF
Total SF in Trench	SF

Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Total Pay Area This Page	14670 SF
Final SF 1755		Final SF 4140		Total Previous Pages	6660 SF
				Total Pay Area to Date	21330 SF



Containment Systems Inc.

Deployment Date 5-16-13

Project Name: Smith Gulch

Job #

Supt: Victor Casillas

Material: 40 mil DSS

Primary [ ] Secondary [x]

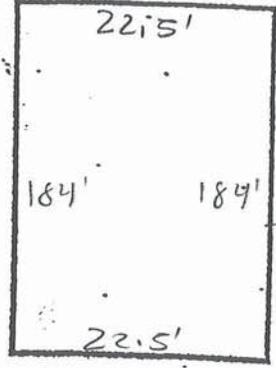
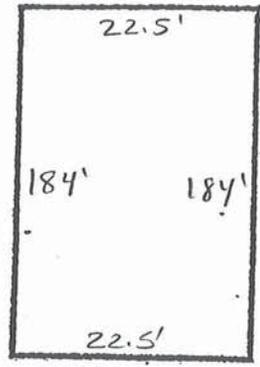
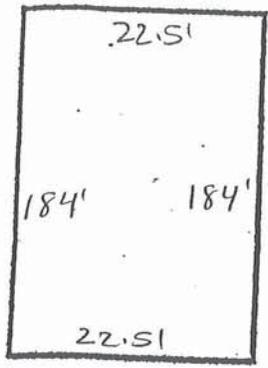
Pond #

Cell #

Pad #

Other:

Panel # 17 Roll # 4479 Panel # 18 Roll # 4479 Panel # 19 Roll # 4479



Initial SF  
Final SF 4140

Linear Feet Trench

Initial SF  
Final SF 4140

Linear Feet Trench

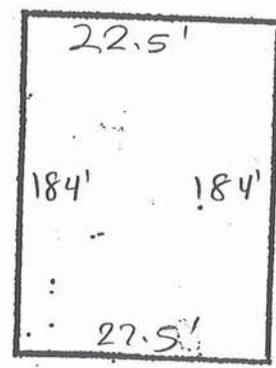
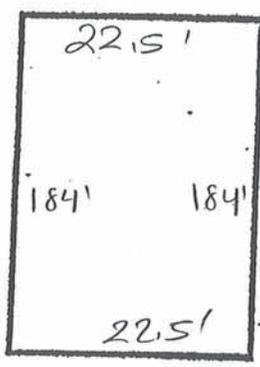
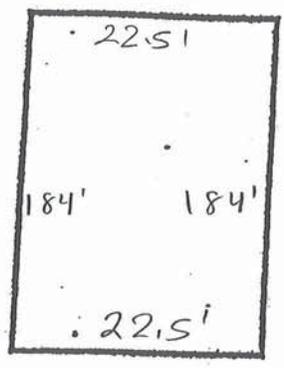
Initial SF  
Final SF 4140

Linear Feet Trench

Panel # 20 Roll # 4476

Panel # 21 Roll # 4476

Panel # 22 Roll # 4476



Initial SF  
Final SF 4140

Linear Feet Trench

Initial SF  
Final SF 4140

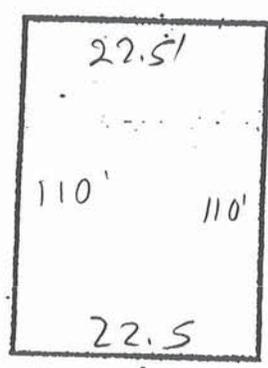
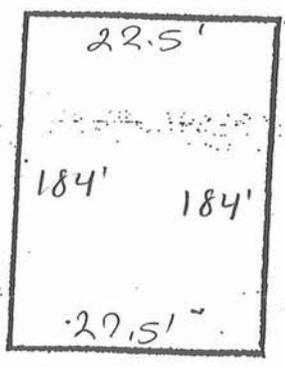
Linear Feet Trench

Initial SF  
Final SF 4140

Linear Feet Trench

Panel # 23 Roll # 4476

Panel # 24 Roll # 4477



Initial SF  
Final SF 4140

Linear Feet Trench

Initial SF  
Final SF 2475

Linear Feet Trench

Total Initial SF This Page	
Total Final SF This Page	31455 SF
Anchor Trench	
Total Linear feet trench	0 LF
Depth and width allowed in trench	0 LF
Total SF in Trench	0 SF
Total Pay Area This Page	31455 SF
Total Previous Pages	21330 SF
Total Pay Area to Date	52785 SF

Deployment Date 5-16-13



Containment Systems Inc.

Project Name: Smith Gulch

Job # \_\_\_\_\_

Supt: Victor Casillas

Material: \_\_\_\_\_

Primary [ ] Secondary

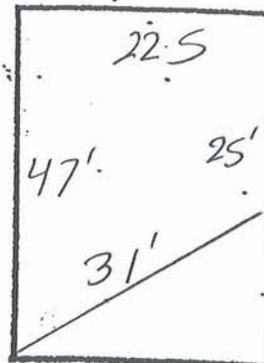
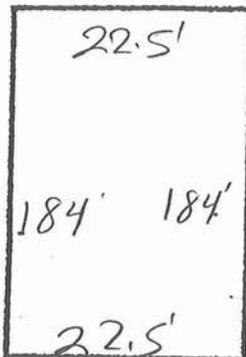
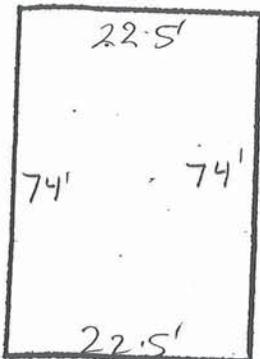
Pond # \_\_\_\_\_

Cell # \_\_\_\_\_

Pad # \_\_\_\_\_

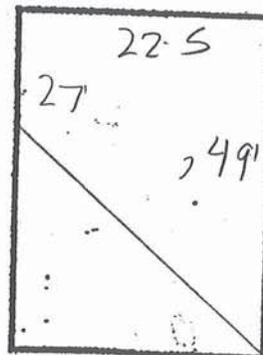
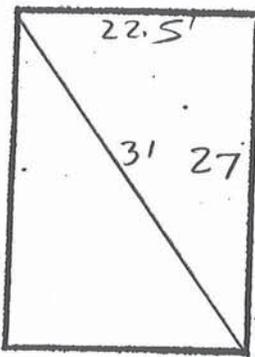
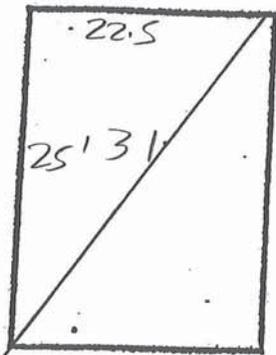
Other: \_\_\_\_\_

Panel # 25 Roll # 4476 Panel # 26 Roll # 4477 Panel # 27 Roll # 4477



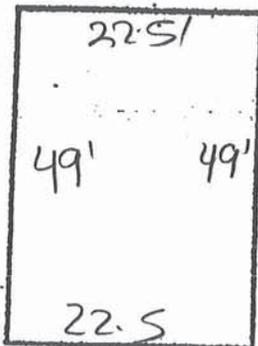
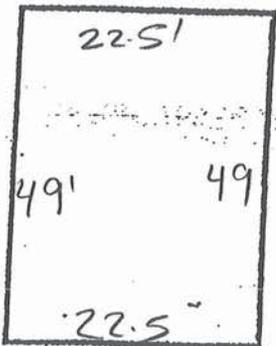
Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF <u>1665</u>		Final SF <u>4140</u>		Final SF <u>810</u>	

Panel # 28 Roll # 4477 Panel # 29 Roll # 4477 Panel # 30 Roll # 4477



Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF <u>2810.25</u>		Final SF <u>303.75</u>		Final SF <u>855</u>	

Panel # 31 Roll # 4477 Panel # 32 Roll # 4477



Total Initial SF This Page	SF
Total Final SF This Page	<u>10260</u> SF
Anchor Trench	
Total Linear feet trench	LF
X	
Depth and width allowed in trench	LF
Total SF in Trench	SF
Total Pay Area This Page	<u>10260</u> SF
Total Previous Pages	<u>52785</u> SF
Total Pay Area to Date	<u>63045</u> SF

Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF <u>1102.5</u>		Final SF <u>1102.5</u>	



Deployment Date 5-16-13

Containment Systems Inc.

Project Name: Smith Gulch

Job #

Supt: Victor Casillo

Material: 40 mil smooth Primary [ ] Secondary [x]

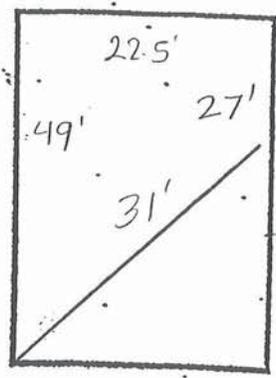
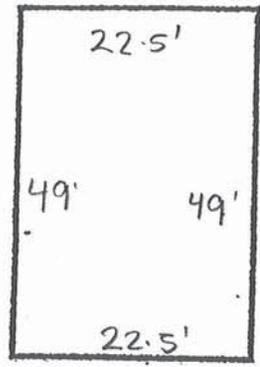
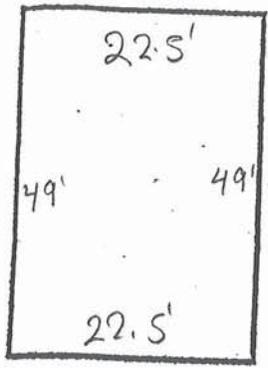
Pond #

Cell #

Pad #

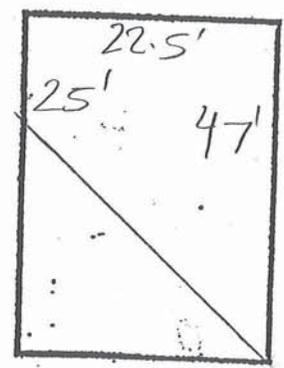
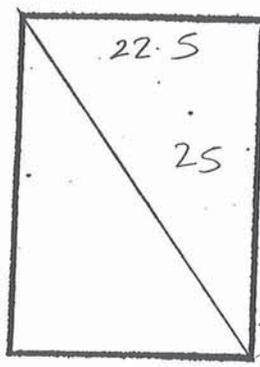
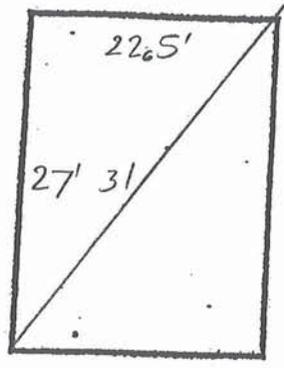
Other:

Panel # 33 Roll # 4477 Panel # 34 Roll # 4477 Panel # 35 Roll # 4477



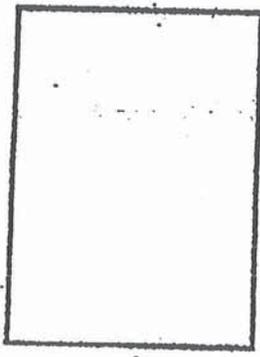
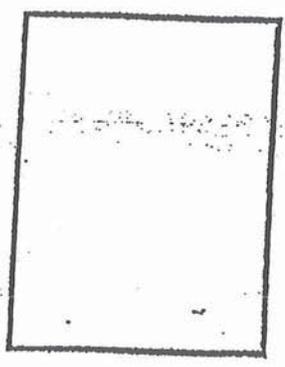
Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF 1102.5		Final SF 1102.5		Final SF 855	

Panel # 36 Roll # 4477 Panel # 37 Roll # 4477 Panel # 38 Roll # 22.5'



Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF 303.75		Final SF 281.25		Final SF 810	

Panel # Roll # Panel # Roll #



Total Initial SF This Page	4455 SF
Total Final SF This Page	SF
Anchor Trench	SF
Total Linear feet trench	LF
Depth and width allowed in trench	LF
Total SF in Trench	SF

Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Total Pay Area This Page	4455 SF
Final SF		Final SF		Total Previous Pages	63045 SF
				Total Pay Area to Date	67500 SF

**60 MIL**



Containment Systems Inc.

Deployment Date 5-18-73

Project Name: Smith Gulch

Job # \_\_\_\_\_

Supt: Victor Casillas

Material: 60mil microspike Primary  Secondary

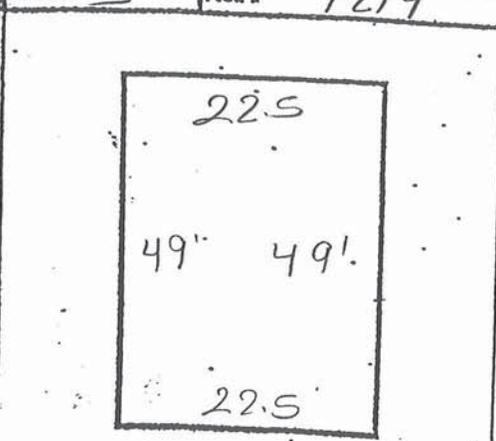
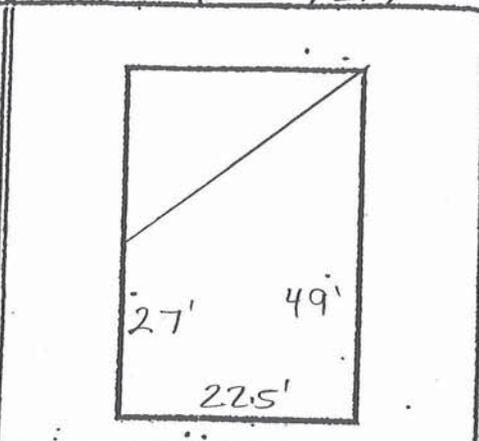
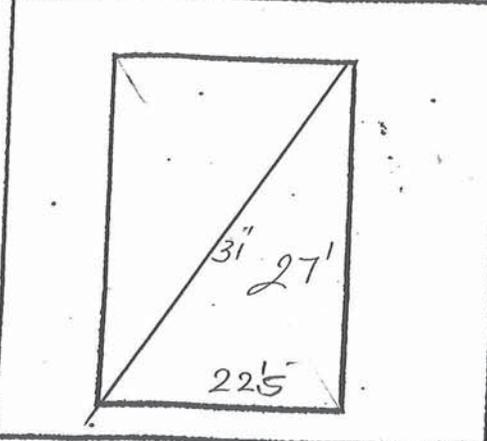
Pond # \_\_\_\_\_

Cell # \_\_\_\_\_

Pad # \_\_\_\_\_

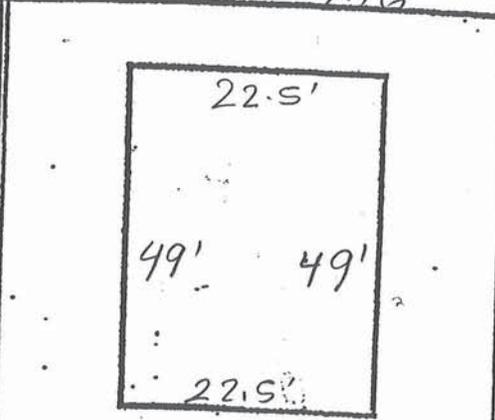
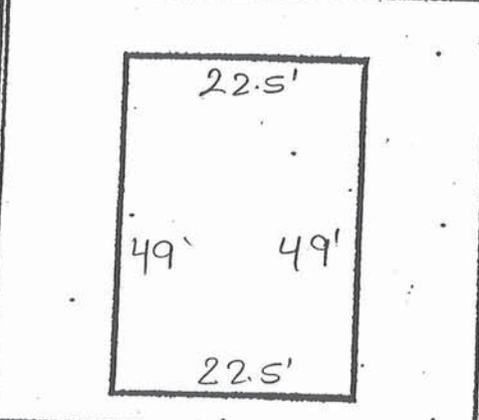
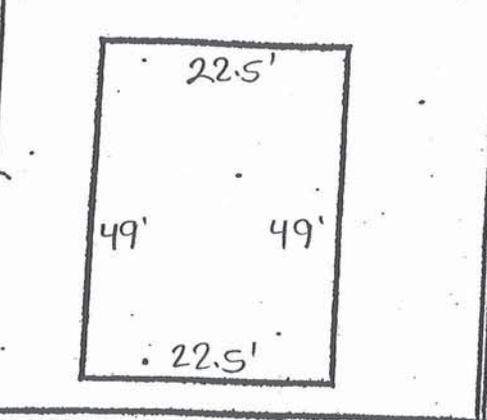
Other: \_\_\_\_\_

Panel # 1 Roll # 7219 Panel # 2 Roll # 7219 Panel # 3 Roll # 7219



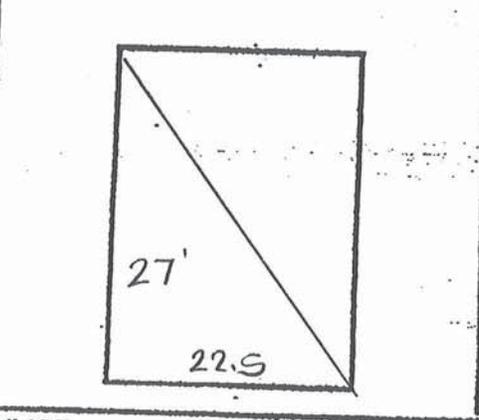
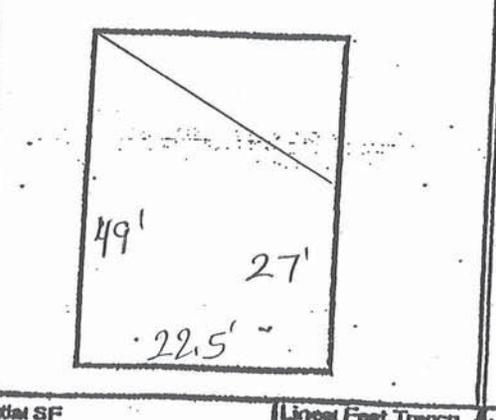
Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF <u>303.75</u>	<u>0</u>	Final SF <u>855</u>	<u>0</u>	Final SF <u>1102.5</u>	<u>0</u>

Panel # 4 Roll # 7219 Panel # 5 Roll # 7219 Panel # 6 Roll # 7116



Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF <u>1102.5</u>	<u>0</u>	Final SF <u>1102.5</u>	<u>0</u>	Final SF <u>1102.5</u>	<u>0</u>

Panel # 7 Roll # 7116 Panel # 8 Roll # 7116



Total Initial SF This Page	SF
Total Final SF This Page	<u>6727.5</u> SF
Anchor Trench	
Total Linear feet trench	<u>0</u> LF
Depth and width allowed in trench	<u>0</u> LF
Total SF in Trench	<u>0</u> SF

Total Pay Area This Page	<u>6727.5</u> SF
Total Previous Pages	<u>0</u> SF

Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Total Pay Area to Date
Final SF <u>855</u>	<u>0</u>	Final SF <u>303.75</u>	<u>0</u>	<u>6727.5</u> SF



Deployment Date 5-18-13

Containment Systems Inc.

Project Name: Smith Gulch

Job # \_\_\_\_\_

Supt: Victor Casillas

Material: 30mil mvc spike Primary  Secondary

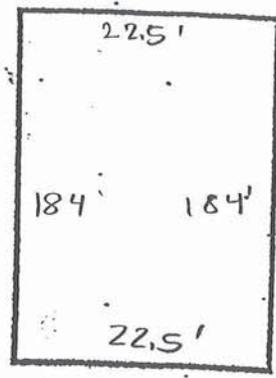
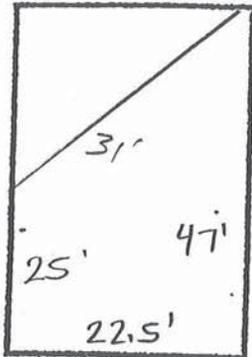
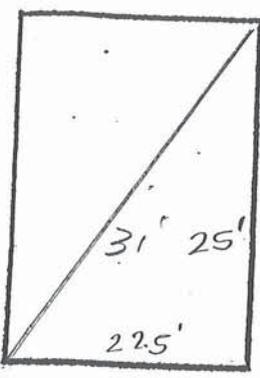
Pond # \_\_\_\_\_

Cell # \_\_\_\_\_

Pad # \_\_\_\_\_

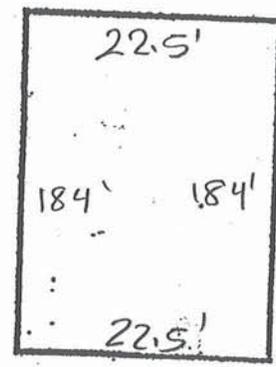
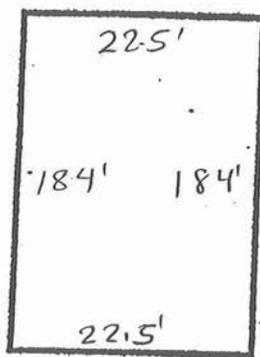
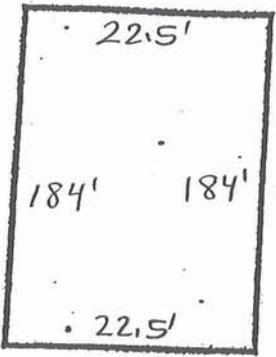
Other: \_\_\_\_\_

Panel # 9 Roll # 7116 Panel # 10 Roll # 7116 Panel # 11 Roll # 7219



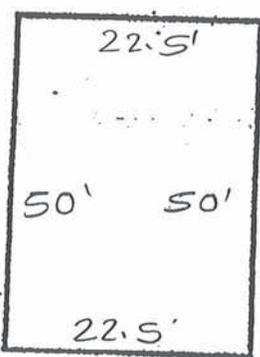
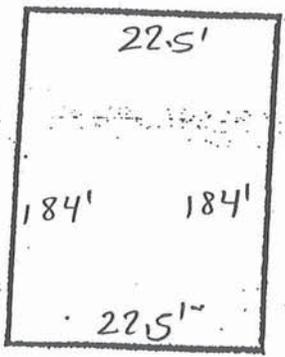
Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF <u>281.25</u>	<u>0</u>	Final SF <u>810</u>	<u>0</u>	Final SF <u>4140</u>	<u>0</u>

Panel # 12 Roll # 7116 Panel # 13 Roll # 7116 Panel # 14 Roll # 7218



Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF <u>4140</u>	<u>0</u>	Final SF <u>4140</u>	<u>0</u>	Final SF <u>4140</u>	<u>0</u>

Panel # 15 Roll # 7218 Panel # 16 Roll # 7115



Total Initial SF This Page	SF
Total Final SF This Page	<u>22491.25</u> SF
Anchor Trench	
Total Linear feet trench	<u>0</u> LF
Depth and width allowed in trench	<u>0</u> LF
Total SF in Trench	<u>0</u> SF

Total Pay Area This Page 22491.25 SF

Total Previous Pages 6727.5 SF

Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Total Pay Area to Date
Final SF <u>4140</u>	<u>0</u>	Final SF <u>700</u>	<u>0</u>	<u>29218.75</u> SF



Containment Systems Inc.

Deployment Date 5-18-13

Project Name: \_\_\_\_\_

Job # \_\_\_\_\_

Supt: Victor Casillas

Material: 60mil milicor pike Primary  Secondary

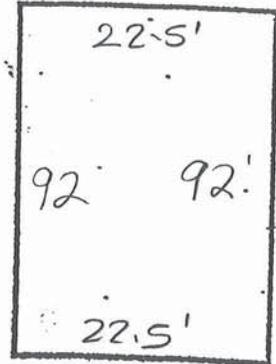
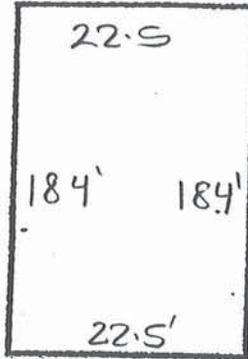
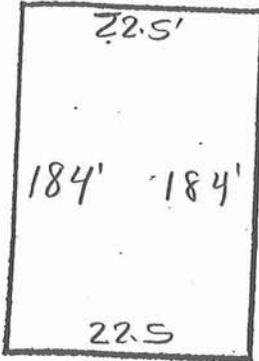
Pond # \_\_\_\_\_

Cell # \_\_\_\_\_

Pad # \_\_\_\_\_

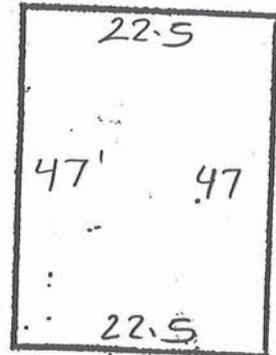
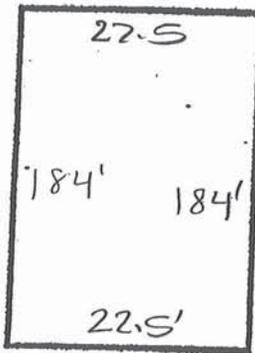
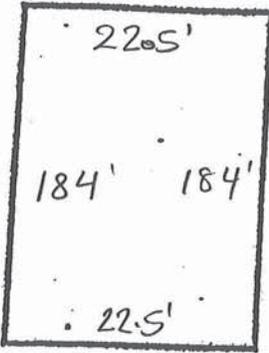
Other: \_\_\_\_\_

Panel # 17 Roll # 7115 Panel # 18 Roll # 7115 Panel # 19 Roll # 7115



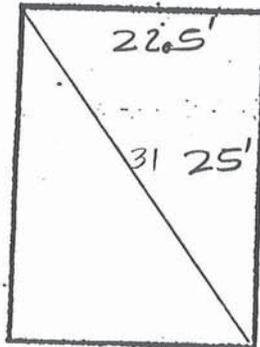
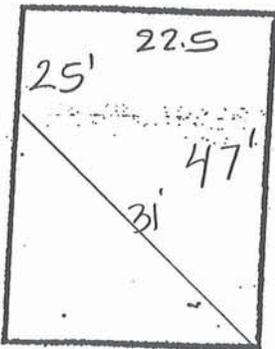
Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF <u>4140</u>	<u>0</u>	Final SF <u>4140</u>	<u>0</u>	Final SF <u>2070</u>	<u>0</u>

Panel # 20 Roll # 7114 Panel # 21 Roll # 7114 Panel # 22 Roll # 7114



Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF <u>4140</u>	<u>0</u>	Final SF <u>4140</u>	<u>0</u>	Final SF <u>1057.5</u>	<u>0</u>

Panel # 23 Roll # 7113 Panel # 24 Roll # 7113



Total Initial SF This Page	SF
Total Final SF This Page	<u>20778.75</u> SF
Anchor Trench	
Total Linear feet trench	<u>0</u> LF
Depth and width allowed in trench	<u>0</u> LF
Total SF in Trench	<u>0</u> SF

Total Pay Area This Page	<u>20778.75</u> SF
Total Previous Pages	<u>29218.75</u> SF

Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Total Pay Area to Date	SF
Final SF <u>810</u>	<u>0</u>	Final SF <u>2810.25</u>	<u>0</u>	<u>49,997.5</u>	SF

Deployment Date 5-18-2013



Project Name: \_\_\_\_\_

Job # \_\_\_\_\_

Supt: Victor Casillas

Material: 60mil microspike Primary  Secondary

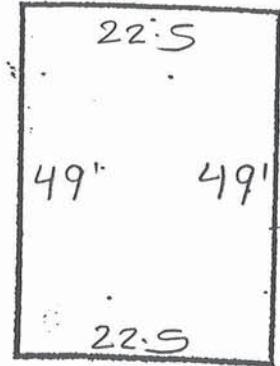
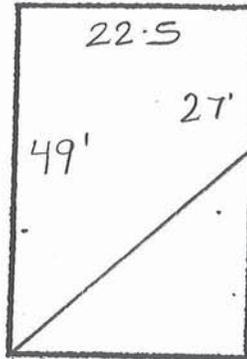
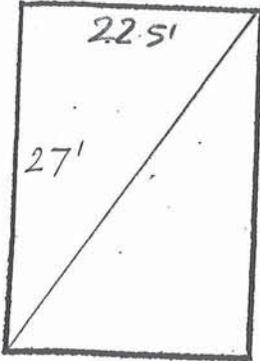
Pond # \_\_\_\_\_

Cell # \_\_\_\_\_

Pad # \_\_\_\_\_

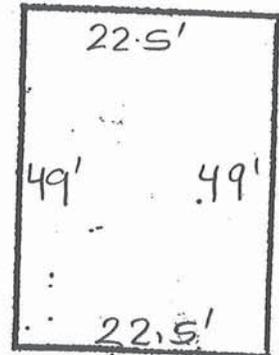
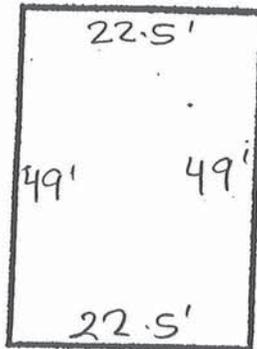
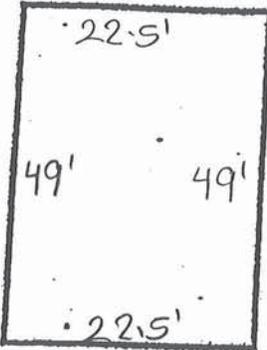
Other: \_\_\_\_\_

Panel # 25 Roll # 7113 Panel # 26 Roll # 7217 Panel # 27 Roll # 7217



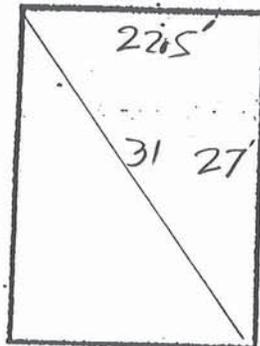
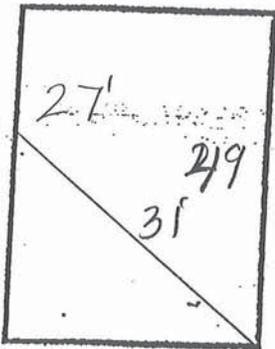
Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF <u>303.75</u>	<input checked="" type="checkbox"/>	Final SF <u>855</u>	<input checked="" type="checkbox"/>	Final SF <u>1102.5</u>	<input checked="" type="checkbox"/>

Panel # 28 Roll # 7217 Panel # 29 Roll # 7217 Panel # 30 Roll # 7217



Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench
Final SF <u>1102.5</u>	<input checked="" type="checkbox"/>	Final SF <u>1102.5</u>	<input checked="" type="checkbox"/>	Final SF <u>1102.5</u>	<input checked="" type="checkbox"/>

Panel # 31 Roll # 7217 Panel # 32 Roll # 7217



Total Initial SF This Page	SF
Total Final SF This Page	<u>6727.5</u> SF
Anchor Trench	
Total Linear feet trench	<input checked="" type="checkbox"/> LF
Depth and width allowed in trench	<input checked="" type="checkbox"/> LF
Total SF in Trench	<input checked="" type="checkbox"/> SF

Total Pay Area This Page	<u>6727.5</u> SF
Total Previous Pages	<u>49997.75</u> SF

Initial SF	Linear Feet Trench	Initial SF	Linear Feet Trench	Total Pay Area to Date
Final SF <u>855</u>	<input checked="" type="checkbox"/>	Final SF <u>303.75</u>	<input checked="" type="checkbox"/>	<u>56725.25</u> SF

Deployment Date 5-18-13



Containment Systems Inc.

Project Name: Smith Gulch

Job # \_\_\_\_\_

Supt: Vic for Casillas

Material: 60 mil microspike Primary  Secondary

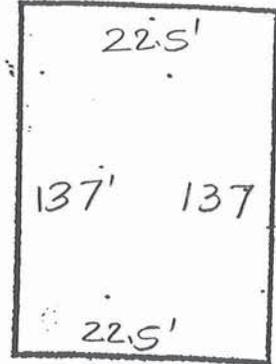
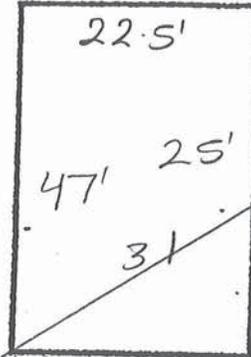
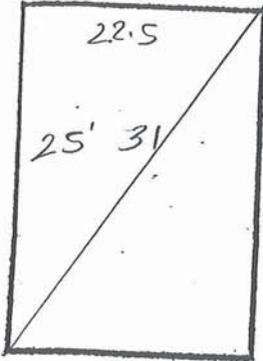
Pond # \_\_\_\_\_

Cell # \_\_\_\_\_

Pad # \_\_\_\_\_

Other: \_\_\_\_\_

Panel # 33 Roll # 7217 Panel # 34 Roll # 7217 Panel # 35 Roll # 7217



Initial SF \_\_\_\_\_  
Final SF 5620.5 Linear Feet Trench 0

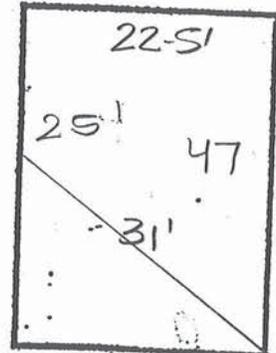
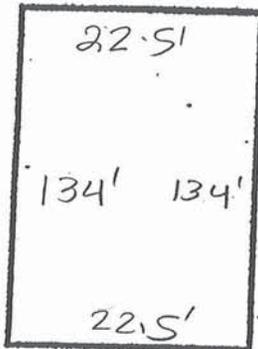
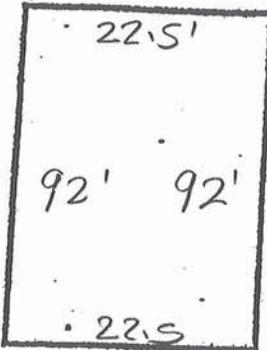
Initial SF \_\_\_\_\_  
Final SF 810 Linear Feet Trench 0

Initial SF \_\_\_\_\_  
Final SF 3082.5 Linear Feet Trench 0

Panel # 36 Roll # 7114

Panel # 37 Roll # 7218

Panel # 38 Roll # 7219



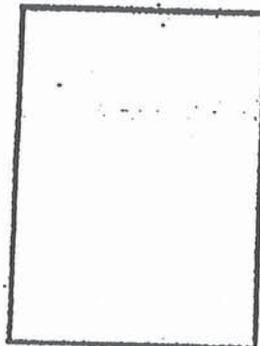
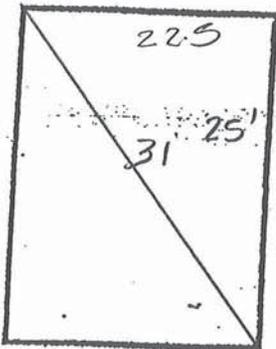
Initial SF \_\_\_\_\_  
Final SF 2070 Linear Feet Trench 0

Initial SF \_\_\_\_\_  
Final SF 3015 Linear Feet Trench 0

Initial SF \_\_\_\_\_  
Final SF 810 Linear Feet Trench 0

Panel # 39 Roll # 7219

Panel # \_\_\_\_\_ Roll # \_\_\_\_\_



Total Initial SF This Page \_\_\_\_\_ SF  
Total Final SF This Page 10631.25 SF  
Anchor Trench \_\_\_\_\_ LF  
Total Linear feet trench 0 LF  
Depth and width allowed in trench 0 LF  
Total SF in Trench 0 SF

Total Pay Area This Page 10631.25 SF

Total Previous Pages 56725.25 SF

Total Pay Area to Date 67356 SF

Initial SF \_\_\_\_\_  
Final SF 281.25 Linear Feet Trench 0

Initial SF \_\_\_\_\_  
Final SF \_\_\_\_\_ Linear Feet Trench \_\_\_\_\_



**40 MIL**



Containment Systems Inc.



Confinement Systems Inc.

1

Project Name: Smith Gulch  
Project Manager: Victor Casillas  
Superintendent: Victor Casillas  
Reported By: Victor Casillas

Primary

Secondary

Other:

Job#:

Material: 40 mil smooth

Weld Date	Seam No.	Seam Length	Time	Operator Name / ID#	Mach No.	Mach Temp	Mach Speed	Amb Temp	Test Date	Test Type	IN	Time Out	Test Results	D.S. Number (NOTES)
S-16-13	1-2	25'	11:10 am	F.A	129	800°	600		S-17-13	HT	6:08	30:29	(P) F	
S-16-13	3-4	27'	11:16 am	F.A	129	800°	600				6:09	30:28	(P) F	
S-16-13	4-5	49'	11:23 am	F.A	129	800°	600				6:10	30:30	(P) F	
S-16-13	5-6	49'	11:33 am	F.A	129	800°	600				6:11	30:30	(P) F	
S-16-13	6-7	49'	11:40 am	F.A	129	800°	600				6:13	30:30	(P) F	
S-16-13	7-8	49'	11:50 am	F.A	129	800°	600				6:14	30:29	(P) F	DS-1
S-16-13	8-9	49'	11:20 am	V.C	68	800°	600				6:19	30:29	(P) F	
S-16-13	9-10	27'	11:30 am	V.C	68	800°	600				6:20	30:28	(P) F	
S-16-13	11-12	25'	11:38 am	V.C	68	800°	600				6:21	30:29	(P) F	
S-16-13	1-13	47'	11:46 am	V.C	68	800°	600				6:28	30:30	(P) F	
S-16-13	12-13	47'	11:55 am	V.C	68	800°	600				6:29	30:30	(P) F	
S-16-13	14-15	22.5'	12:02 am	V.C	68	800°	600	CR			6:31	30:28	(P) F	DS-2
S-16-13	13-14	106'	1:00 am	V.C	68	800°	600				6:40	30:28	(P) F	
S-16-13	14-15	106'	1:10 am	V.C	68	800°	600				6:41	30:29	(P) F	
S-16-13	15-16	78'	1:20 am	V.C	68	800°	600				6:42	30:28	(P) F	
S-16-13	16-17	184'	1:38 am	V.C	68	800°	600				6:48	30:30	(P) F	
S-16-13	17-18	184'	1:42 am	V.C	68	800°	600				6:50	30:29	(P) F	DS-3
S-16-13	18-19	184'	1:42 am	V.C	68	800°	600				6:51	30:29	(P) F	
S-16-13	19-20	184'	2:00 am	V.C	68	800°	600				6:53	30:28	(P) F	
S-16-13	20-21	184'	2:20 am	V.C	68	800°	600				6:54	30:28	(P) F	
S-16-13	21-22	184'	2:22 am	V.C	68	800°	600				6:55	30:30	(P) F	DS-4
Total =														

1937.5

Air Test:

30

psi for

5

minutes-

5

psi loss allowed.

Tested By: Victor Casillas



Containment Systems Inc.

(2)

Project Name: Smith  
Project Manager: Gulch  
Superintendent: Victor Casillas  
Reported By: Victor Casillas

Primary:  Secondary:  Other:

Job#: \_\_\_\_\_

Material: 40 mil Smooth

Weld Date	Seam No.	Seam Length	Time	Operator Name / ID#	Mach No.	Mach Temp	Mach Speed	Amb Temp	Test Date	Test Type	IN	Time Out	Test Results	D. S. Number (NOTES)
S-16-13	22-23	184'	2:22 2:40 am pm	VC	68	800°	600		5/7/13	AT	7:03 7:08	30 28	P F	
S-16-13	24-25	225'	2:25 2:27 am pm	VA	129	800°	600	CR			7:01 7:06	30 29	P F	
S-16-13	23-24	110	2:30 2:40 am pm	VA	129	800°	600				7:05 7:00	30 28	P F	
S-16-13	23-25	74'	2:40 2:48 am pm	VA	129	800°	600				7:04 7:09	30 30	P F	
S-16-13	24-26	110	2:50 3:00 am pm	VC	68	800°	600				7:06 7:11	30 29	P F	DS-S
S-16-13	25-26	74'	3:00 3:08 am pm	VC	68	800°	600				7:10 7:15	30 29	P F	
S-16-13	26-27	47'	3:00 3:05 am pm	VA	129	800°	600				7:11 7:16	30 30	P F	
S-16-13	27-28	25'	3:08 3:13 am pm	VA	129	800°	600				7:12 7:17	30 29	P F	
S-16-13	29-30	27'	3:15 3:19 am pm	VA	129	800°	600				7:15 7:20	30 29	P F	
S-16-13	30-31	49'	3:13 3:18 am pm	VA	129	800°	600				7:16 7:21	30 28	P F	
S-16-13	31-32	49'	3:20 3:25 am pm	VC	68	800°	600				7:19 7:24	30 28	P F	
S-16-13	32-33	49'	3:27 3:33 am pm	VC	68	800°	600				7:21 7:26	30 29	P F	DS-G
S-16-13	33-34	49'	3:16 3:21 am pm	VA	129	800°	600				7:21 7:26	30 29	P F	
S-16-13	34-35	49'	3:24 3:30 am pm	VA	129	800°	600				7:21 7:26	30 29	P F	
S-16-13	35-36	27'	3:35 3:39 am pm	VA	129	800°	600				7:21 7:26	30 29	P F	
S-16-13	37-38	25'	3:44 3:48 am pm	VC	68	800°	600				7:36 7:41	30 30	P F	
S-16-13	26-38	47'	3:50 3:56 am pm	VC	68	800°	600				7:38 7:43	30 30	P F	
Total =														

1,017.5

Air Test:

30

psi for

5

minutes-

5

psi loss allowed.

Tested By:

Victor Casillas



Containment Systems Inc.

Project Name: Smith Gulch

Project Manager: Victor Casillas

Superintendent: Victor Casillas

Reported By: Victor Casillas

Primary  Secondary

Other: \_\_\_\_\_

Job#: \_\_\_\_\_

Material: 40mil Smooth

3

Weld Date	Seam No.	Seam Length	Time	Operator Name / ID#	Mach No.	Mach Temp	Mach Speed	Amb Temp	Test Date	Test Type	IN	Time Out	Test Results	D. S. Number (NOTES)	
5-16-13	2-3	31'	3:40 am 3:44 pm	J.A.	129	800°	600	Trein	5-17-13	AT	7:49	1:54	30	30	(P) F
5-16-13	1-4	31'	3:44 am 3:48 pm	J.A.	129	800°	600	Trein	5-17-13	AT	8:00	8:05	30	29	(P) F
5-16-13	13-5	22.5'	3:48 am 3:49 pm	J.A.	129	800°	600	Trein	5-17-13	AT	8:04	8:09	30	28	(P) F
5-16-13	13-6	22.5'	3:40 am 3:42 pm	J.A.	129	800°	600	Trein							
5-16-13	13-7	22.5'	3:42 am 3:44 pm	J.A.	129	800°	600	Trein							
5-16-13	13-8	22.5'	3:44 am 3:46 pm	J.A.	129	800°	600	Trein							
5-16-13	9-12	31'	3:46 am 3:50 pm	J.A.	129	800°	600	Trein							
5-16-13	10-11	31'	3:50 am 3:54 pm	J.A.	129	800°	600	Trein							
5-16-13	28-29	31'	4:00 am 4:04 pm	J.A.	129	800°	600	Trein							
5-16-13	27-30	31'	4:04 am 4:08 pm	J.A.	129	800°	600	Trein							
5-16-13	26-31	22.5'	4:06 am 4:10 pm	J.A.	129	800°	600	Trein							
5-16-13	26-32	22.5'	4:10 am 4:12 pm	J.A.	129	800°	600	Trein							
5-16-13	26-33	22.5'	4:12 am 4:14 pm	J.A.	129	800°	600	Trein							
5-16-13	26-34	22.5'	4:14 am 4:16 pm	J.A.	129	800°	600	Trein							
5-16-13	35-38	31'	4:16 am 4:20 pm	J.A.	129	800°	600	Trein							
5-16-13	35-37	31'	4:20 am 4:24 pm	J.A.	129	800°	600	Trein							
Total = 428															

428

Air Test: 30 psi for

5 minutes-

psi loss allowed. 5

Tested By: Victor Casillas

**60 MIL**





Containment Systems Inc.

Project Name: Smith: Gulch  
 Project Manager: Victor Casillas  
 Superintendent: Victor Casillas  
 Reported By: Victor Casillas

Primary

Secondary

Other:

Job#:

Material: GM mil microspike

Weld Date	Seam No.	Seam Length	Time	Operator Name / ID#	Mach No.	Mach Temp	Mach Speed	Amb Temp	Test Date	Test Type	IN	OUT	Test Results	D. S. Number (NOTES)		
G-18-13	1-2	27'	6:20 6:25	FA	129	850°	400		G-18-13	AT	2:30	2:31	35	35	P F	
G-18-13	2-3	49'	6:27 6:33	FA	129	850°	400				2:31	2:36	35	35	P F	
G-18-13	3-4	49'	6:35 6:45	FA	129	850°	400				2:32	2:37	35	35	P F	
G-18-13	4-5	49'	6:25 6:35	VC	68	850°	400				2:32	2:37	35	35	P F	
G-18-13	5-6	49'	6:38 6:48	VC	68	850°	400				2:33	2:38	35	35	P F	
G-18-13	6-7	49'	6:50 7:00	VC	68	850°	400				2:34	2:39	35	35	P F	
G-18-13	7-8	27'	7:03 7:08	VC	68	850°	400				2:40	2:45	35	34	P F	
G-18-13	9-10	25'	7:10 7:15	VC	68	850°	400				2:41	2:46	35	35	P F	
G-18-13	10-11	47'	6:50 7:00	FA	129	850°	400				2:44	2:49	35	35	P F	
G-18-13	11-12	184'	7:05 7:40	FA	129	850°	400				2:49	2:54	35	34	P F	
G-18-13	12-13	184'	7:25 8:10	VC	68	850°	400				2:50	2:55	35	35	P F	
G-18-13	13-14	184'	7:45 8:20	FA	129	850°	400				2:51	2:56	35	35	P F	
G-18-13	14-15	184'	8:05 8:40	VC	68	850°	400				2:58	3:03	35	34	P F	
G-18-13	16-37	22.5'	8:43 8:48	VC	68	850°	400	CR			2:59	3:04	35	35	P F	
G-18-13	15-16	50'	8:26 8:35	FA	129	850°	400				3:00	3:05	35	35	P F	
G-18-13	15-37	134'	8:35 9:00	FA	129	850°	400				3:01	3:06	35	35	P F	
G-18-13	16-17	50'	8:55 9:05	VC	68	850°	400				3:02	3:07	35	34	P F	
G-18-13	37-17	134'	9:05 9:30	VC	68	850°	400				3:03	3:08	35	35	P F	
G-18-13	17-18	184'	9:05 9:40	FA	129	850°	400				3:10	3:15	35	35	P F	
G-18-13	19-36	22.5'	9:43 9:48	FA	129	850°	400				3:11	3:16	35	33	P F	
G-18-13	18-19	92'	9:30 9:48	VC	68	850°	400	CR			3:12	3:17	35	35	P F	
G-18-13	18-36	92'	9:48 10:06	VC	68	850°	400				3:13	3:18	35	35	P F	
Total =																

Air Test: 35

psi for

5

minutes-

5

psi loss allowed.

Tested By: AS



Containment Systems Inc.

Project Name: Smith Gulch  
 Project Manager: Victor Casillas  
 Superintendent: Victor Casillas  
 Reported By: Victor Casillas

Primary  Secondary  Other

Job#: \_\_\_\_\_

Material: 60 mil microspike

Yield Date	Seam No.	Seam Length	Time	Operator Name / ID#	Mach No.	Mach Temp	Mach Speed	Amb Temp	Test Date	Test Type	Time IN	Time Out	Test Results	D. S. Number (NOTES)
5-18-13	19-20	92'	9:55 10:13 am pm	J.A	129	850°	400		5-18-13	AT	3:19 3:24	35 35	P F	
5-18-13	20-36	92'	10:13 10:31 am pm	J.A	129	850°	400				3:20 3:25	35 35	P F	
5-18-13	20-21	184'	10:10 10:45 am pm	UC	68	850°	400				3:21 3:26	35 35	P F	
5-18-13	22-35	42.5	10:35 10:40 am pm	J.A	129	850°	400	CR			3:22 3:27	35 35	P F	DS-5
5-18-13	21-22	47'	10:45 10:55 am pm	J.A	129	850°	400				3:23 3:28	35 35	P F	
5-18-13	21-35	137'	10:55 11:20 am pm	J.A	129	850°	400				3:23 3:28	35 35	P F	
5-18-13	22-23	47'	11:05 11:09 am pm	UC	68	850°	400				3:26 3:35	35 35	P F	
5-18-13	23-24	25'	11:13 11:20 am pm	UC	68	850°	400				3:35 3:40	35 35	P F	3 Air Test
5-18-13	25-26	27	11:25 11:31 am pm	UC	68	850°	400				3:40 3:45	35 35	P F	
5-18-13	26-27	49'	11:30 11:40 am pm	UC	68	850°	400				3:41 3:46	35 34	P F	
5-18-13	27-28	49'	11:44 11:54 am pm	J.A	129	850°	400				3:42 3:47	35 34	P F	
5-18-13	28-29	49'	11:35 11:45 am pm	J.A	129	850°	400				3:42 3:48	35 35	P F	
5-18-13	29-30	49'	11:47 11:57 am pm	UC	68	850°	400				3:44 3:49	35 33	P F	DS-6
5-18-13	30-31	49'	11:05 11:15 am pm	J.A	129	850°	400				3:44 3:49	35 33	P F	
5-18-13	31-32	27'	11:18 11:23 am pm	J.A	129	850°	400				3:45 3:50	35 34	P F	
5-18-13	33-34	25'	11:25 11:30 am pm	J.A	129	850°	400				3:50 3:55	35 35	P F	
5-18-13	34-35	47'	11:35 11:45 am pm	J.A	129	850°	400				3:51 3:56	35 35	P F	
5-18-13	11-38	47'	11:10 11:20 am pm	J.A	129	850°	400				3:52 3:57	35 35	P F	
5-18-13	38-39	85'	1:25 1:30 am pm	UC	68	850°	400				3:53 3:58	35 35	P F	
Total =														

Air Test: 35 psi for

5 minutes-

5 psi loss allowed.

Tested By: AS



Containment Systems Inc.

Project Name: Smith Gullch

Project Manager: Victor Casillas

Superintendent: Victor Casillas

Reported By: Victor Casillas

Primary  Secondary  Other

Job#: \_\_\_\_\_

Material: 60 mil microspike

Weld Date	Seam No.	Seam Length	Time	Operator Name / ID#	Mach No.	Mach Temp	Mach Speed	Amb Temp	Test Date	Test Type	Time IN	Time Out	Test Results	D. S. Number (NOTES)		
5-19-13	1-39	31'	6:20 C:27 6:27 pm	VC	68	850°	400	75.1	5-19-13	AT	8:00	8:05	35	35	P F	
5-19-13	2-38	31'	6:27 C:35 6:35 pm	VC	68	850°	400				8:01	8:06	35	34	P F	DS-7
5-19-13	3-11	22.5'	6:35 C:40 6:40 pm	VC	68	850°	400				8:02	8:07	35	33	P F	
5-19-13	4-11	22.5'	6:40 C:45 6:45 pm	VC	68	850°	400				8:03	8:08	35	35	P F	
5-19-13	5-11	22.5'	6:45 C:50 6:50 pm	VC	68	850°	400				8:04	8:09	35	35	P F	
5-19-13	6-11	22.5'	6:50 C:55 6:55 pm	VC	68	850°	400				8:05	8:10	35	35	P F	
5-19-13	7-10	31'	6:55 C:03 7:03 pm	VC	68	850°	400				8:06	8:11	35	35	P F	
5-19-13	8-9	31'	7:03 C:10 7:10 pm	VC	68	850°	400				8:07	8:12	35	35	P F	
5-19-13	24-25	31'	6:23 C:30 6:30 pm	FA	129	850°	400				8:10	8:15	35	35	P F	
5-19-13	23-26	31'	6:37 C:42 6:42 pm	FA	129	850°	400				8:11	8:16	35	35	P F	
5-19-13	27-35	22.5'	6:42 C:47 6:47 pm	FA	129	850°	400				8:12	8:17	35	35	P F	
5-19-13	28-35	22.5'	6:47 C:52 6:52 pm	FA	129	850°	400				8:13	8:18	35	34	P F	
5-19-13	29-35	22.5'	6:52 C:57 6:57 pm	FA	129	850°	400				8:20	8:25	35	34	P F	
5-19-13	30-35	22.5'	6:57 C:03 7:03 pm	FA	129	850°	400				8:25	8:30	35	35	P F	
5-19-13	31-34	31'	7:03 C:10 7:10 pm	FA	129	850°	400				8:26	8:31	35	35	P F	
5-19-13	32-33	31'	7:10 C:17 7:17 pm	FA	129	830°	400				8:27	8:32	35	35	P F	
Total =																

Air Test: 35

psi for

5

minutes-

5

psi loss allowed.

Tested By: Victor Casillas



**40 MIL**





Containment Systems Inc.

Project Name: Smith Gulch  
 Project Manager: Victor Casillas  
 Superintendent: Victor Casillas  
 Reported By: Victor Casillas

Primary  Secondary  Other: \_\_\_\_\_

Job#: \_\_\_\_\_  
 Material: 40 mil Smooth

Destructive Test

D.S. No.	Seam No.	Weld Time	Weld Date	Operator Name/ID	Machine Number	Peel Test(Extr.) min			Peel Test(Fusion)			Shear Test milm			Ambient Temp	Results	Machine Temp & Speed	NOTES
						Coupon 1 A/B	Coupon 2 A/B	Coupon 3 A/B	Coupon 4 A/B	Coupon 5 A/B	Coupon 1 Shear	Coupon 2 Shear	Coupon 3 Shear	Coupon 4 Shear				
DS-1	7-8	Am 5:16-13	5-16-13	FA	129	97/99	100/93	97/99	94/100	101/93	124	136	133	128	127	PF	800° 600	
DS-2	13-14	Pm 5:16-13	5-16-13	VC	68	94/96	100/95	101/95	97/96	101/100	129	739	140	144	135	PF	800° 600	
DS-3	17-18	Pm 5:16-13	5-16-13	FA	129	89/91	93/86	97/79	99/90	94/96	133	137	135	130	137	PF	800° 600	
DS-4	20-21	Pm 5:16-13	5-16-13	VC	68	90/90	101/107	93/89	91/91	91/99	130	129	139	142	140	PF	800° 600	
DS-5	23-25	Pm 5:16-13	5-16-13	FA	129	97/91	91/102	97/94	89/94	96/91	133	140	140	144	141	PF	800° 600	
DS-6	32-33	Pm 5:16-13	5-16-13	VC	68	86/96	86/99	98/92	88/90	93/95	128	139	146	141	136	PF	800° 600	
DS-7	9-12	Pm 5:16-13	5-16-13	FA	129	89/94	89/86	90/90	86/89	100/97	141	144	139	146	142	PF	800° 600	
						/	/	/	/	/	/	/	/	/	/	PF	/	
						/	/	/	/	/	/	/	/	/	/	PF	/	
						/	/	/	/	/	/	/	/	/	/	PF	/	
						/	/	/	/	/	/	/	/	/	/	PF	/	
						/	/	/	/	/	/	/	/	/	/	PF	/	
						/	/	/	/	/	/	/	/	/	/	PF	/	
						/	/	/	/	/	/	/	/	/	/	PF	/	
						/	/	/	/	/	/	/	/	/	/	PF	/	
						/	/	/	/	/	/	/	/	/	/	PF	/	
						/	/	/	/	/	/	/	/	/	/	PF	/	
						/	/	/	/	/	/	/	/	/	/	PF	/	

Samples Sent Via: \_\_\_\_\_ Last Sample #: \_\_\_\_\_ On (Date): \_\_\_\_\_  
 Notes: \_\_\_\_\_

**60 MIL**



Containment Systems Inc.





**40 MIL**





**60 MIL**





Containment Systems Inc.

Project Name: Smith Gulch  
 Project Manager: \_\_\_\_\_  
 Supintendent: Victor Casillas

HDPE  
 HDT  
 PPR  
 GO Other: microspike

Date: 05-19-13

Job#: \_\_\_\_\_

Thickness: \_\_\_\_\_

Primary Secondary Other

VT=Vacum Test ST=Spark Test PT=Probe Test

Repair Number	Damage Code	Seam # or Panel #	Location	Date	Equip #	Operator	Repair Type	Approx. Size	Test Data		
									Test	Results	Date
1	DS-1	4-5	AT 40' SEOS	5-19-13	82	AS	P	2'X5'	VT ST PT	(P) F	5-19-13
2	T	1-2-38-39	X	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
3	DS-7	2-38	AT 15' SWEOS	5-19-13	82	AS	P	2'X5'	VT ST PT	(P) F	5-19-13
4	T	2-3-11-38	X	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
5	T	3-4-11	X	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
6	T	4-5-11	X	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
7	T	5-6-11	X	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
8	T	6-7-11-11	X	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
9	T	7-8-9-10	X	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
10	B.O	11-12	AT 45' WEOS	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
11	DS-2	11-12	AT 66' WEOS	5-19-13	82	AS	P	2'X5'	VT ST PT	(P) F	5-19-13
12	CR	15-16-37	X	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
13	CR	16-17-37	X	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
14	DS-3	17-37	AT 120' WEOS	5-19-13	82	AS	P	2'X5'	VT ST PT	(P) F	5-19-13
15	CR	18-19-36	X	5-19-13	82	AS	P	2'X3'	VT ST PT	(P) F	5-19-13
16	DS-4	19-36	AT 11' NEOS	5-19-13	82	AS	P	2'X5'	VT ST PT	(P) F	5-19-13
17	CR	19-20-36	X	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
18	DS-5	20-21	AT 60' WEOS	5-19-13	82	AS	P	2'X5'	VT ST PT	(P) F	5-19-13
19	B.O	21-35	AT 65' WEOS	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
20	B.O	21-35	AT 130' WEOS	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
21	CR	21-22-35	X	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
22	T	23-24-25-26	X	5-19-13	82	AS	P	2'X3'	VT ST PT	(P) F	5-19-13
23	B.O	26-27	AT 15' NEOS	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
24	T	22-23-26-27	X	5-19-13	82	AS	P	2'X3'	VT ST PT	(P) F	5-19-13
25	DS-6	27-28	AT 30' NEOS	5-19-13	82	AS	P	2'X3'	VT ST PT	(P) F	5-19-13
26	T	27-28-35	X	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
27	T	28-29-35	X	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13
28	T	29-30-35	X	5-19-13	82	AS	P	2'X2'	VT ST PT	(P) F	5-19-13

Vacum Test:

PSI for

Seconds.

Probe Test:

PSI.

Damage Codes:

- Bo - Burn Out
- CR - Crease
- DS# - Destruct Sample
- EE - Earthwork Equipment Damage
- FM - Fish Mouth
- ES - Exposed Scrim

- SI - Subgrade Irregularity
- RW - Roller Wrinkle in Seam
- WR - Wrinkle
- WS - Welder Restart
- BL - Blister
- T - Joint

Repair Types:

- C - Cap Strip
- P - Patch
- B - Extrusion Bead
- \* TOS - Top of Slope
- \*\* BOS - Toe of Slope







### GCL PANEL DEPLOYMENT LOG

Roll Number	Lot Number	Length	Width	Total SF
1- 1478		14'	14'	196
2- 1478		38'	14'	532
3- 1470		49'	14'	686
4- 2571		49'	14'	686
5- 2571		49'	14'	686
6- 2571		49'	14'	686
7- 2571		49'	14'	686
8- 1470		49'	14'	686
9- 1470		49'	14'	686
10- 1470		41'	14'	574
11- 1478		28'	14'	392
12- 1478		10'	14'	140
13- 1478		10'	14'	140
14- 1478		28'	14'	392
15- 1478		43'	14'	602
16- 1480		99'	14'	1386
17- 1480		99'	14'	1386
18- 1475		99'	14'	1386
19- 1475		99'	14'	1386
20- 1467		99'	14'	1386
21- 1467		99'	14'	1386

11,928

4,158

Quality Control Monitor: \_\_\_\_\_

Dated: \_\_\_\_\_

16,086



### GCL PANEL DEPLOYMENT LOG

Roll Number	Lot Number	Length	Width	Total SF
22- 1479		99'	14'	1386
23- 1479		99'	14'	1386
24- 1483		99'	14'	1386
25- 1476		8'	14'	112
26 1476		22'	14'	308
27 1478		30'	14'	420
28 1476		85	14'	1190
29 1476		85'	14'	1190
30- 1483		85'	14'	1190
31- 1483		15	14'	210
32- 1472		70	14'	980
33- 1472		85	14'	1190
34- 1472		45'	14'	630
35- 1473		85	14'	1190
36- 1473		85	14'	1190
37- 1473		39'	14'	546
38- 2572		85'	14'	1190
39- 2572		99'	14'	1386
40- 0529		99'	14'	1386
41- 0529		70'	14'	980
42- 8611		29'	14'	406
43- 8611		99'	14'	1386

14,504

6,734

Quality Control Monitor: \_\_\_\_\_

Dated: \_\_\_\_\_

21,238



### GCL PANEL DEPLOYMENT LOG

Roll Number	Lot Number	Length	Width	Total SF
44- 8611		66'	14'	924
45- 5420		33'	14'	462
46- 5420		99'	14'	1386
47- 5420		64	14'	896
48- 3805		35'	14'	490
49- 3805		64'	14'	896
50- 9126		35'	14'	490
51- 9126		99'	14'	1386
52- 9126		60	14'	840
53- 5785		25'	14'	350
54- 5785		85'	14'	1190
55- 5785		85'	14'	1190
56- 3805		64'	14'	896
57- 1477		20'	14'	280
58- 1477		85	14'	1190
59- 1477		85'	14'	1190
60- 1471		85'	14'	1190
61- 1471		85'	14'	1190
62- 1471		30	14'	420
63- 1481		54'	14'	756
64- 1481		85'	14'	1190
65- 1481		64	14'	896

14,056

5,642

Quality Control Monitor: \_\_\_\_\_

Dated: \_\_\_\_\_

19,698



### GCL PANEL DEPLOYMENT LOG

Roll Number	Lot Number	Length	Width	Total SF
66- 3792		99'	14'	1386
67- 3792		45	14'	630
68- 3792		27	14'	378
69- 3792		9'	14'	126
70- 8638		8'	14'	112
71- 8638		18'	14'	252
72- 8638		30'	14'	420
73- 8638		38'	14	532
74- 5359		53'	14'	742
75- 9107		53'	14'	742
76- 3798		53'	14'	742
77- 3798		52'	14'	742
78- 8640		53'	14'	742
79- 8640		49'	14'	686
80- 8640		23	14'	322
81- 5392		8'	14'	112
82- 5392		8'	14'	112
83- 5392		23'	14'	322
84- 3798		36'	14'	504
85- 8640		42'	14'	588

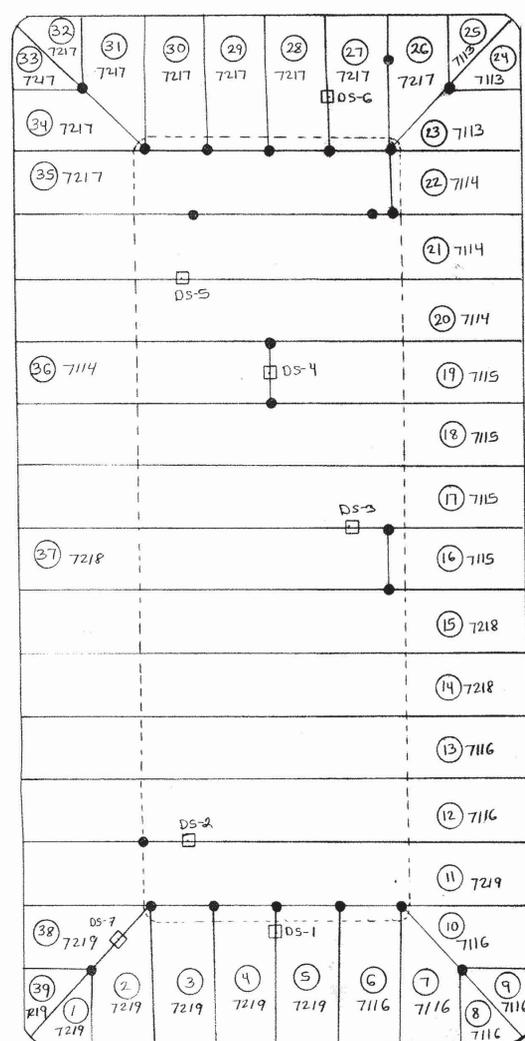
Quality Control Monitor: \_\_\_\_\_

Dated: \_\_\_\_\_

10,192



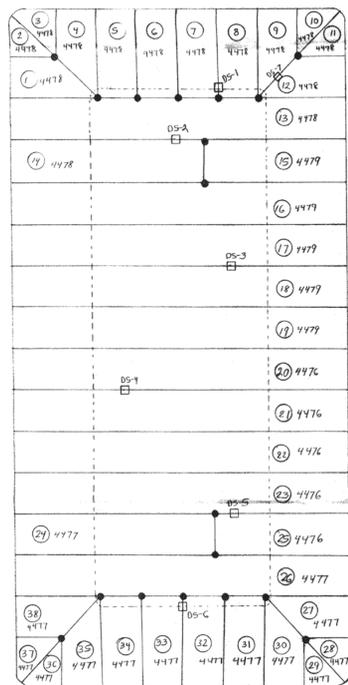
# SMITH GULCH



- ◻ = DESTRUCTIVES
- ⊙ = PANEL NUMBERS
- ◌ = ROLL NUMBERS
- = PATCHES

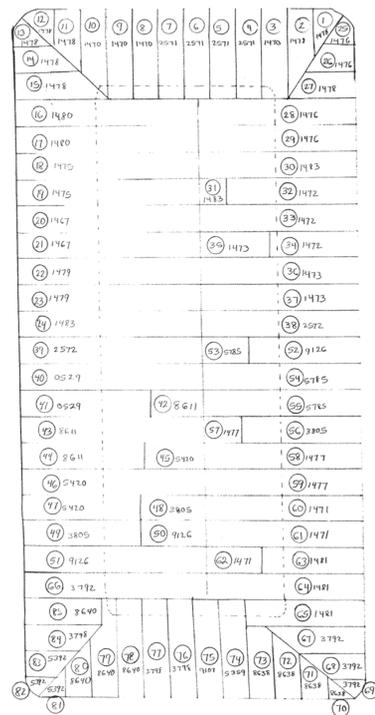
<b>LANGE</b>		APPROVED BY:	DRAWN BY: Victor
SCALE: 1" = 30'	DATE: 06-08-73	REVISOR:	DRAWING NUMBER
<b>60 MIL MICROSPIKE</b>		3-3	

# SMITH GULCH



- = DESTRUCTIVES
- ⊙ = PANEL NUMBERS
- = ROLL NUMBERS
- = PATCHES

# SMITH GULCH



⊙ = PANEL NUMBERS  
 0-1-2-3-4-5-6-7-8-9 = ROLL NUMBERS