

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144  
Revised June 6, 2013

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office.  
For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Below-Grade Tank, or

Proposed Alternative Method Permit or Closure Plan Application

Type of action: ☐ Below grade tank registration  
☐ Permit of a pit or proposed alternative method  
☒ Closure of a pit, below-grade tank, or proposed alternative method  
☐ Modification to an existing permit/or registration  
☐ Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method

RCVD SEP 30 '14  
OIL CONS. DIV.  
DIST. 3

**Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request**

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.  
Operator: LOGOS OPERATING, LLC OGRID #: 289408  
Address: 4001 NORTH BUTLER AVENUE, BUILDING 7101 FARMINGTON NM 87401  
Facility or well name: LOGOS 601H  
API Number: 30-043-21182 OCD Permit Number: 11593  
U/L or Qtr/Qtr D Section 5 Township 22N Range 5W County: SANDOVAL  
Center of Proposed Design: Latitude 36.172969° N Longitude 107.391116° W NAD: ☐ 1927 ☒ 1983  
Surface Owner: ☐ Federal ☐ State ☐ Private ☒ Tribal Trust or Indian Allotment

2.  
☒ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC  
Temporary: ☒ Drilling ☐ Workover  
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management Low Chloride Drilling Fluid ☐ yes ☐ no  
☒ Lined ☐ Unlined Liner type: Thickness 20 mil ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
☐ String-Reinforced  
Liner Seams: ☒ Welded ☒ Factory ☐ Other \_\_\_\_\_ Volume: 8,000 bbl Dimensions: L 150 x W 100 x D 15

3.  
☐ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC  
Volume: \_\_\_\_\_ bbl Type of fluid: \_\_\_\_\_  
Tank Construction material: \_\_\_\_\_  
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off  
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other \_\_\_\_\_  
Liner type: Thickness \_\_\_\_\_ mil ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_

4.  
☐ **Alternative Method:**  
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.  
**Fencing:** Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)  
☐ Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)  
☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet  
☐ Alternate. Please specify 4' HOG WIRE WITH ONE STRAND OF BARBED WIRE ON TOP.

6.

**Netting:** Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)

☐ Screen ☐ Netting ☐ Other \_\_\_\_\_

☐ Monthly inspections (If netting or screening is not physically feasible)

7.

**Signs:** Subsection C of 19.15.17.11 NMAC

☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☐ Signed in compliance with 19.15.16.8 NMAC

8.

**Variances and Exceptions:**

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

***Please check a box if one or more of the following is requested, if not leave blank:***

☐ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

9.

**Siting Criteria (regarding permitting):** 19.15.17.10 NMAC

***Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.***

**General siting**

**Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.**

- ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells

☐ Yes ☐ No

☐ NA

**Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit.**

NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No

☐ NA

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. **(Does not apply to below grade tanks)**

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☐ No

Within the area overlying a subsurface mine. **(Does not apply to below grade tanks)**

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☐ No

Within an unstable area. **(Does not apply to below grade tanks)**

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☐ No

Within a 100-year floodplain. **(Does not apply to below grade tanks)**

- FEMA map

☐ Yes ☐ No

**Below Grade Tanks**

Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

**Temporary Pit using Low Chloride Drilling Fluid** (maximum chloride content 15,000 mg/liter)

Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.)

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application.

NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 100 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

### **Temporary Pit Non-low chloride drilling fluid**

Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

### **Permanent Pit or Multi-Well Fluid Management Pit**

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

10.

#### **Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_ or Permit Number: \_\_\_\_\_

11.

#### **Multi-Well Fluid Management Pit Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ A List of wells with approved application for permit to drill associated with the pit.
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
- ☐ Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_ or Permit Number: \_\_\_\_\_

12.  
**Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13.  
**Proposed Closure:** 19.15.17.13 NMAC

**Instructions:** Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

- Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Multi-well Fluid Management Pit  
☐ Alternative
- Proposed Closure Method: ☐ Waste Excavation and Removal  
☐ Waste Removal (Closed-loop systems only)  
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)  
☐ In-place Burial ☐ On-site Trench Burial  
☐ Alternative Closure Method

14.  
**Waste Excavation and Removal Closure Plan Checklist:** (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

15.  
**Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC

**Instructions:** Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.

- |   |   |
|---|---|
| Ground water is less than 25 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells   | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Ground water is between 25-50 feet below the bottom of the buried waste<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells   | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Ground water is more than 100 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells  | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).<br>- Topographic map; Visual inspection (certification) of the proposed site                        | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image  | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application.<br>- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Written confirmation or verification from the municipality; Written approval obtained from the municipality   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 300 feet of a wetland.<br>US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |

adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☐ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☐ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ No

16.

**On-Site Closure Plan Checklist:** (19.15.17.13 NMAC) *Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC
- ☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.11 NMAC
- ☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
- ☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

17.

**Operator Application Certification:**

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): \_\_\_\_\_ Title: \_\_\_\_\_

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

e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

18.

**OCD Approval:** ☐ Permit Application (including closure plan) ☒ ~~Closure Plan (only)~~ ☐ OCD Conditions (see attachment)

OCD Representative Signature: Jonathan D. Kelly Approval Date: 10/16/2014

Title: Compliance Officer OCD Permit Number: \_\_\_\_\_

19.

**Closure Report (required within 60 days of closure completion):** 19.15.17.13 NMAC

*Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.*

☒ Closure Completion Date: 06/30/14

20.

**Closure Method:**

- ☐ Waste Excavation and Removal ☒ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)
- ☐ If different from approved plan, please explain.

21.

**Closure Report Attachment Checklist:** *Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.*

- ☒ Proof of Closure Notice (surface owner and division)
- ☐ Proof of Deed Notice (required for on-site closure for private land only)
- ☒ Plot Plan (for on-site closures and temporary pits)
- ☐ Confirmation Sampling Analytical Results (if applicable)
- ☒ Waste Material Sampling Analytical Results (required for on-site closure)
- ☒ Disposal Facility Name and Permit Number
- ☒ Soil Backfilling and Cover Installation
- ☒ Re-vegetation Application Rates and Seeding Technique
- ☒ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude 36.172969° N Longitude 107.391116° W NAD: ☐ 1927 ☒ 1983

**Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): Jamie Goodwin

Title: Regulatory Tech.

Signature: Jamie GoodwinDate: 9/29/14

e-mail address: JGoodwin@logosoperating.com Telephone: 505-330-9333

**Logos Operating, LLC  
San Juan Basin  
Closure Report**

**Lease Name: LOGOS 601H  
API NO: 30-043-21182**

In accordance with Rule 19.15.17.12 NMAC the following information describes the closure requirements of temporary pits on Logos Operating, LLC (Logos) locations. This is Logos' standard procedure for all temporary pits. A Separate plan will be submitted for any temporary pit that does not conform to this plan.

All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of the pit closure. Closure report will be filed on C-144 and incorporated the following:

- Detail on Capping and Covering, where applicable **(See report)**
- Plot Plan (Pit diagram) **(Included as an attachment)**
- Inspection reports **(Included as an attachment)**
- Sampling Results **(Included as an attachment)**
- C-105 **(Included as an attachment)**
- Copy of Deed Notice will be filed with County Clerk **(Not required on Federal, State or Tribal land as stated by FAQ dated October 30, 2008)**

**General Plan**

- 1 All free standing liquids will be removed at the start of the pit closure process from the pit and disposed of in a division-approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves.

**All recovered liquids were disposed of at Basin Disposal (permit #NM-01-005) and any sludge or soil required to be removed to facilitate closure was hauled to Envirotech Land Farm (Permit #NM-01-011) and JFJ Landfarm % IEI (Permit #NM-01-0010B).**

- 2 The preferred method of closure for all temporary pits will be on-site burial, assuming that all criteria listed in sub-section (D) of 19.15.17.13 are met.

**The pit was closed using onsite burial.**

- 3 The surface owner shall be notified of Logos proposed closure plan using a means that provides proof of notice i.e., certified mail, return receipt requested.

**The closure process notification to the landowner was sent via certified mail. (See attached)**

- 4 Within 6 months of the Rig Off status occurring Logos will ensure that temporary pits are closed, re-contoured, and reseeded.

**The closure plan requirements were met due to rig move off date as noted on C-105. (See attached).**

- 5 Notice of Closure will be given to the Aztec Division office between 72 hours and one week of closure via email, or verbally, The notification of closure will include the following:
  - i. Operator's name
  - ii. Location by Unit Letter, Section, Township, and Range. Well name and API Number

**Notification is attached.**

- 6 Pit contents shall be mixed with non-waste containing, earthen material in order to achieve the solidification process. The solidification process will be accomplished using a combination of natural drying and mechanically mixing. Pit contents will be mixed with non-waste, earthen material to a consistency that is deemed a safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents.

**Logos mixed the pit contents with non-waste containing, earthen material in order to achieve the solidification process. The solidification process was accomplished by using a combination of natural drying and mechanically mixing. Pit contents were mixed with non-waste, earthen material to a consistency that is deemed as safe and stable. The mixing ratio consisted of not more than 3 parts**

clean soil to 1 part pit contents. Excess fill was hauled from Logos 12 pit to Logos 601H pit: ~561yds; Logos 10 pit to Logos 601H pit ~937yds; Logos 8 pit to Logos 601H pit ~80yds. Total:1578yds.

- 7 A five point composite sample will be taken of the pit using sampling tools and all samples tested per 19.15.17.13(D)(5). In the event that the criteria are not met, all contents will be handled per 9.15.17.13(D)(7) i.e., Dig and haul.

**A five point composite sample was taken of the pit using sampling tools and all samples tested per 19.15.17.13(D)(5). (Sample results attached).**

Components	Tests Method	Limit (mg/Kg)	Results (ppm)
Benzene	EPA SW-846 8021B or 8015M	10	SEE
BTEX	EPA SW-846 8021B or 8260B	50	ATTACHED
TPH	EPA SW-846 418.1	2500	
GRO/DRO	EPA SW-846 8015M	1000	
Chlorides	EPA 300.0	40000	

- 8 Upon completion of solidification and testing, Logos will fold the outer edges of the trench liner to overlap the waste material in the pit area, then install a geomembrane cover over the waste material in the pit to prevent collections of infiltration water after the soil cover is in place; geomembrane a 20-mil, string reinforced, LLDPE liner, or equivalent complying with EPA SW-846 method 9090A requirements.

**The pit material passed solidification and testing standards. Logos folded the outer edges of the trench liner to overlap the waste material in the pit area, then installed a geomembrane cover over the waste material and folded liner as per 19.15.17.13(8)(a)(b).**

- 9 The pit area will be backfilled with compacted, non-waste containing, earthen material. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.

**The pit area was then backfilled with compacted, non-waste containing, earthen material. More than four feet of cover was achieved and the cover included one foot of suitable material to establish vegetation at the site.**

- 10 Re-contouring of location will match fit, shape, line, form and texture of the surrounding area. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be placed in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.

**The pit area was re-contoured to match fit, shape, line, form and texture of the surrounding area. Reshaping included drainage control, to prevent ponding and erosion. Natural drainages were unimpeded and water bars and/or silt traps were placed in areas where needed to prevent erosion on a large scale. Final re-contour has a uniform appearance with smooth surface, fitting the natural landscape. (Logos Operating, LLC (289408) is filling this closure report on behalf of the new operator. Due to a possibility of further activity on well pad WPX will continue closure process).**

- 11 Notification will be sent to OCD when the reclaimed area is seeded.

**Provision 11 was accomplished in accordance with NMOCD 19.15.17.13(5)(d) Notification will be sent to the OCD when re-vegetation is established. . (Logos Operating, LLC (289408) is filling this closure report on behalf of the new operator. Due to a possibility of further activity on well pad WPX will continue closure process).**

- 12 Logos shall seed the distributed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixed will be used on federal lands. Vegetative cover will be established that will reflect a life-form ratio of plus or minus fifty percent (50%) of pre-disturbance levels and will equal seventy (70%) of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover thorough twp



successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.

**Provision 12 was accomplished in accordance with NMOCD 19.15.17.13(5)(d) Notification will be sent to the OCD when re-vegetation is established. . (Logos Operating, LLC (289408) is filling this closure report on behalf of the new operator. Due to a possibility of further activity on well pad WPX will continue closure process).**

- 13 The temporary pit will be located with a steel marker, no less than four inches in diameter, cemented in a hole three feet deep in the center of the onsite burial. The marker will be flush with the ground to allow access of the active well pad and for safety concerns. The marker will include a threaded collar to be used for future abandonment. The top of the marker will contain a welded steel 12" square plate that indicates the onsite burial of the temporary pit. The plate will be easily removable and a four foot tall riser will be threaded into the top of the collar marker and welded around the base with the operator's information at the time of all wells on the pad are abandoned. The operator's information will include the following: Operator Name, Lease Name, Well Name and number, Unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location.

**Provision 13 was accomplished by installing a steel marker in the temporary pit, no less than four inches in diameter, cemented in a hole three feet deep in the center of the onsite burial. The marker is flush with the ground to allow access of the active well pad and for safety concerns. The top of the marker contains a welded steel 12" square plate that indicates the onsite burial of the temporary pit. The plate contains the following: Operator's name, Lease Name, Well Name and number, Unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location.**

**The plate will be easily removable and a four foot tall riser will be threaded into the top of the collar marker and welded around the base with the following operator's information at the time of all wells on the pad are abandoned. The riser will also indicate that the marker is for an onsite burial location.**

**Operator Name: LOGOS  
Lease Name & Well Number: Logos 601H  
Unit Letter: D  
Section: 5  
Township: T22N  
Range: R5W  
API#: 30-043-21182  
OBL**

- 14 Logos inspected and documented daily and weekly reports on the above Temporary Pit. Logos inspected any liner breeches, fluid seeps or spills, HC's on top of temporary pit, free of miscellaneous solid waste or debris, discharge line integrity, fence integrity, any dead wildlife or livestock and inspection of the freeboard. Logos will provide maintained documentation of inspections upon request.

**Inspection Start Date: 1/11/14**

**Inspection End Date: 6/11/14**

**NOTE: During start and end dates of temporary pit inspections no issues found.**

## Jamie Goodwin

---

**From:** Tamra Sessions  
**Sent:** Thursday, December 26, 2013 12:10 PM  
**To:** Merldine Oka (merldineoka@jicarillaoga.com)  
**Cc:** Isaac Julian (iajulian@yahoo.com); Kurt Sandoval (kurt.sandoval@bia.gov); Mike, Deedra  
**Subject:** SURFACE OWNER NOTIFICATION 12/26/13 - Temporary Pit  
**Attachments:** Jicarilla Pit Noitce.docx

Please see our attached notice that we intend to have a temporary pit on our upcoming new drill, Logos 601H.  
Logos 601H, UL D Section 5, T22N, R05W

Tamra Sessions  
Logos Resources, LLC  
Operations Technician  
tsessions@logosresourcesllc.com  
505-330-9333



4001 N. Butler Ave  
Farmington, NM 87401  
Phone: (505) 436-2627  
Fax: (505) 832-3095

---

Date: December 26, 2013

To: Jicarilla Apache Nation

Re: Surface Owner Notification for On-Site Burial

---

Ms. Merldine Oka  
Jicarilla Apache Nation  
Oil and Gas Administration  
#6 Dulce Rock Road  
Dulce, NM 87528

Re: Logos 601H, UL D Section 5, T22N, R05W

Dear Ms. Oka,

According to NMOCD rules, Logos Operating, LLC is notifying you that there will be a temporary pit on the subject well and that they intend to bury the drill cuttings in the reserve pit, assuming that they qualify as per Subsection D of 19.15.17.13 NMAC. No action is required on your part. If you have any questions, please do not hesitate to call me.

Regards,

*Tamra Sessions*

Tamra Sessions  
Operations Technician

DISTRICT I  
1626 N. French Dr., Hobbs, N.M. 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II  
811 S. First St., Artesia, N.M. 88210  
Phone: (575) 748-1283 Fax: (575) 748-8720

DISTRICT III  
1000 Rio Brazos Rd., Aztec, N.M. 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3469 Fax: (505) 476-3468

State of New Mexico  
Energy, Minerals & Natural Resources Department

# OIL CONSERVATION DIVISION

1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
Property Code	Property Name	Well Number
	LOGOS	601H
OGUID No.	Operator Name	Elevation
289408	LOGOS OPERATING, LLC	6891

### 10 Surface Location

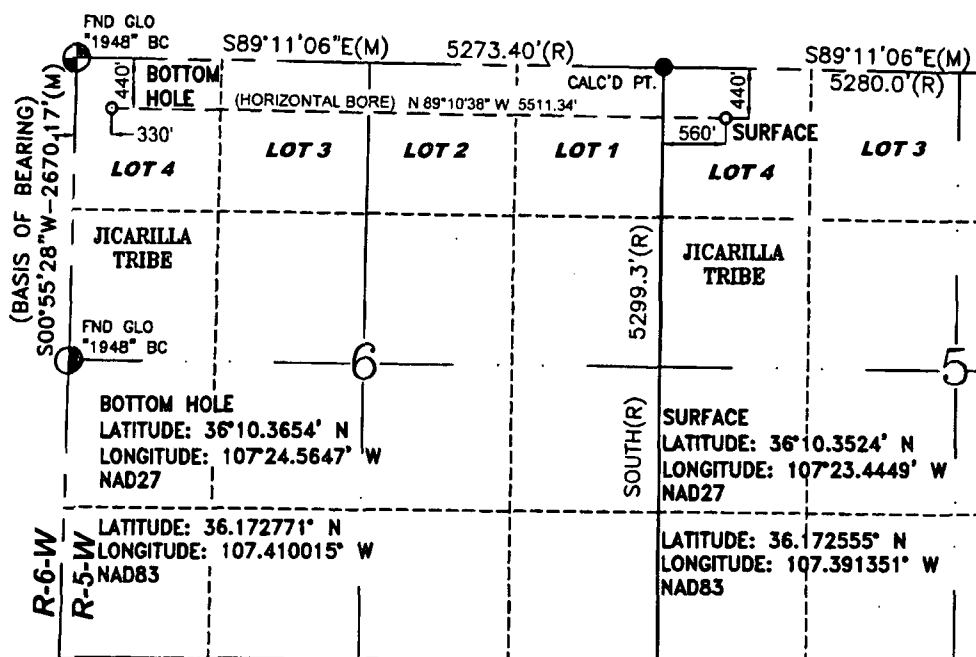
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	5	22-N	5-W		440	NORTH	560	WEST	SANDOVAL

### 11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	6	22-N	5-W		440	NORTH	330	WEST	SANDOVAL
Dedicated Acres			Joint or Infill		Consolidation Code		Order No.		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16



### 17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unless mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or a working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature \_\_\_\_\_ Date \_\_\_\_\_  
Printed Name \_\_\_\_\_  
E-mail Address \_\_\_\_\_

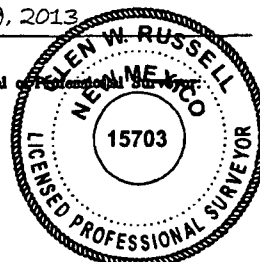
### 18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

OCTOBER 9, 2013

Date of Survey

Signature and Seal of Professional Surveyor



GLEN W. RUSSELL

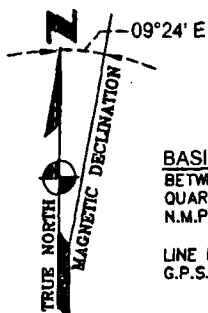
Certificate Number

15703

### BASIS OF BEARING:

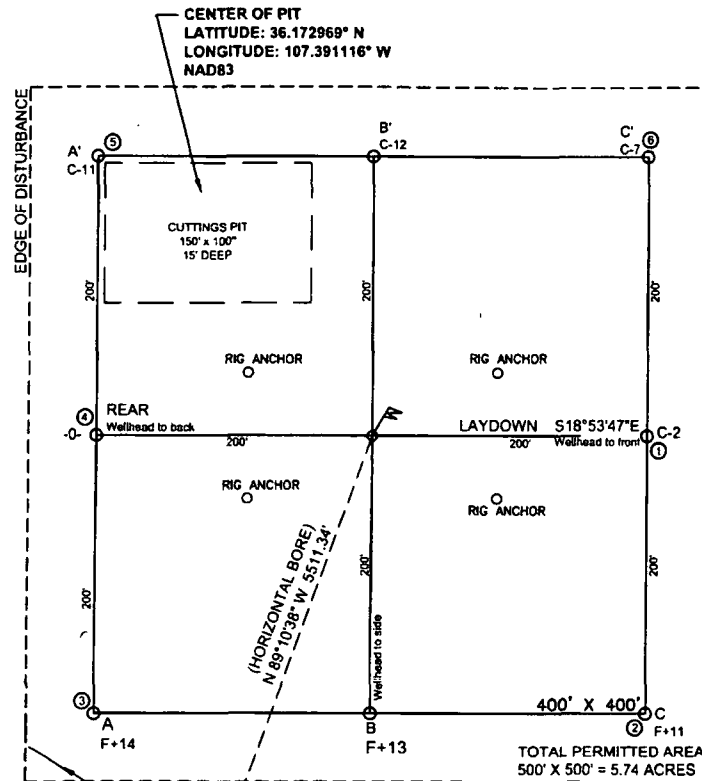
BETWEEN FOUND MONUMENTS AT THE NORTHWEST CORNER AND THE WEST QUARTER CORNER OF SECTION 6, TOWNSHIP 22 NORTH, RANGE 5 WEST, N.M.P.M. SANDOVAL COUNTY, NEW MEXICO.

LINE BEARS: S 00°55'28" W A DISTANCE OF 2670.17 FEET AS MEASURED BY G.P.S. LOCAL GRID NAD83.



# LOGOS OPERATING, LLC

LOGOS #601H, 440' FNL & 560' FWL  
SECTION 5, T-22-N, R-5-W, NMPM, SANDOVAL COUNTY, NM  
GROUND ELEVATION: 6891', DATE: SEPTEMBER 6, 2013

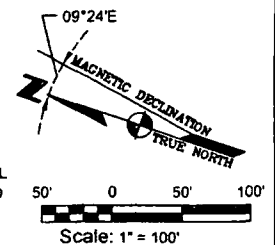


LATITUDE: 36°10.3524' N  
LONGITUDE: 107°23.4449' W  
NAD27

LATITUDE: 36.172555° N  
LONGITUDE: 107.391351° W  
NAD83

## NOTES:

1. VECTOR SURVEYS IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.
2. RESERVE PIT DIKE: TO BE 8" ABOVE DEEP SIDE (OVERFLOW - 3' WIDE AND 1' ABOVE SHALLOW SIDE).



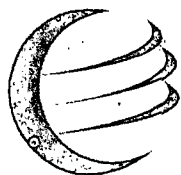
Summary of Analytical Results  
 Logos Operating, LLC  
 Logos #601H  
 Drill Pit Closure Sampling Report  
 Rio Arriba County, New Mexico  
 Project Number 12035-0048

Sample Description	Sample Number	Date	TPH USEPA Method 418.1 (ppm)	TPH USEPA Method 8015 (ppm)	Benzene USEPA Method 8021 (ppm)	BTEX USEPA Method 8021 (ppm)	Organic Vapor (ppm)	Chlorides USEPA Method 300.0 (ppm)
NMOCD/RCRA Standards	NA	NA	2500	1000	10	50	100	40000
Drill Pit	1	4/7/2014	180	164	ND	ND	0.7	172

NS = Not Sampled

ND = Non-Detect at Stated Method's Detection Limit

\* Values in **BOLD** above regulatory standards



# envirotech

Analytical Laboratory

## Analytical Report

### Report Summary

Client: Logos Operating, LLC  
Chain Of Custody Number: 16826  
Samples Received: 4/7/2014 5:00:00PM  
Job Number: 12035-0048  
Work Order: P404017  
Project Name/Location: Logos #601 H

Entire Report Reviewed By:

Date: 4/15/14

Tim Cain, Laboratory Manager

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



# envirotech

Analytical Laboratory

Logos Operating, LLC  
PO Box 18  
Flora Vista NM, 87415

Project Name: Logos #601 H  
Project Number: 12035-0048  
Project Manager: Sheena Leon

Reported:  
15-Apr-14 14:28

## Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Drill Pit	P404017-01A	Solid	04/07/14	04/07/14	Glass Jar, 4 oz.

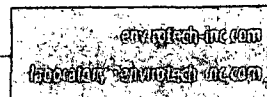
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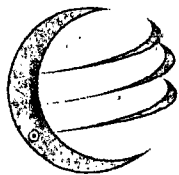
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Logos Operating, LLC  
PO Box 18  
Flora Vista NM, 87415

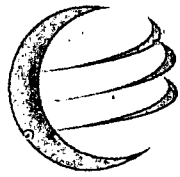
Project Name: Logos #601 H  
Project Number: 12035-0048  
Project Manager: Sheena Leon

Reported:  
15-Apr-14 14:28

## Drill Pit P404017-01 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1415009	04/08/14	04/10/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1415009	04/08/14	04/10/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1415009	04/08/14	04/10/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1415009	04/08/14	04/10/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1415009	04/08/14	04/10/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1415009	04/08/14	04/10/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1415009	04/08/14	04/10/14	EPA 8021B	
Surrogate: Bromochlorobenzene		104 %		80-120		1415009	04/08/14	04/10/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		103 %		80-120		1415009	04/08/14	04/10/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1		1415009	04/08/14	04/10/14	EPA 8015D	
Diesel Range Organics (C10-C28)	164	30.0	mg/kg	1		1415010	04/08/14	04/10/14	EPA 8015D	
Cation/Anion Analysis										
Chloride	172	9.98	mg/kg	1		1415022	04/09/14	04/09/14	EPA 300.0	

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Analytical Laboratory

Logos Operating, LLC  
PO Box 18  
Flora Vista NM, 87415

Project Name: Logos #601 H  
Project Number: 12035-0048  
Project Manager: Sheena Leon

Reported:  
15-Apr-14 14:28

## Volatile Organics by EPA 8021 - Quality Control

### Envirotech Analytical Laboratory

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

#### Batch 1415009 - Purge and Trap EPA 5030A

##### Blank (1415009-BLK1)

Prepared: 08-Apr-14 Analyzed: 10-Apr-14

Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.05	"							
o-Xylene	ND	0.05	"							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: 1,3-Dichlorobenzene	49.1		ug/L	50.0		98.3	80-120			
Surrogate: Bromochlorobenzene	51.9		"	50.0		104	80-120			

##### Duplicate (1415009-DUP1)

Source: P404020-01

Prepared: 08-Apr-14 Analyzed: 10-Apr-14

Benzene	ND	0.05	mg/kg	ND				30		
Toluene	0.40	0.05	"	0.18				77.7	30	D1
Ethylbenzene	0.60	0.05	"	0.42				35.4	30	D1
p,m-Xylene	1.67	0.05	"	1.03				48.0	30	D1
o-Xylene	0.60	0.05	"	0.33				57.8	30	D1
Surrogate: 1,3-Dichlorobenzene	67.7		ug/L	50.0		135	80-120			Surr1
Surrogate: Bromochlorobenzene	76.1		"	50.0		152	80-120			Surr1

##### Matrix Spike (1415009-MS1)

Source: P404020-01

Prepared: 08-Apr-14 Analyzed: 10-Apr-14

Benzene	46.0		ug/L	50.0	ND	91.9	39-150			
Toluene	55.9		"	50.0	3.56	105	46-148			
Ethylbenzene	62.3		"	50.0	8.34	108	32-160			
p,m-Xylene	126		"	100	20.5	105	46-148			
o-Xylene	60.1		"	50.0	6.66	107	46-148			
Surrogate: 1,3-Dichlorobenzene	60.1		"	50.0		120	80-120			
Surrogate: Bromochlorobenzene	71.2		"	50.0		142	80-120			Surr1

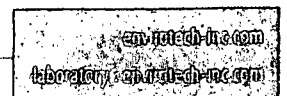
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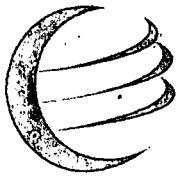
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Analytical Laboratory

Logos Operating, LLC  
PO Box 18  
Flora Vista NM, 87415

Project Name: Logos #601 H  
Project Number: 12035-0048  
Project Manager: Sheena Leon

Reported:  
15-Apr-14 14:28

## Nonhalogenated Organics by 8015 - Quality Control

### Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 1415009 - Purge and Trap EPA 5030A

##### Blank (1415009-BLK1)

Prepared: 08-Apr-14 Analyzed: 10-Apr-14

Gasoline Range Organics (C6-C10) ND 4.99 mg/kg

##### Duplicate (1415009-DUP1)

Source: P404020-01

Prepared: 08-Apr-14 Analyzed: 10-Apr-14

Gasoline Range Organics (C6-C10) 48.1 5.00 mg/kg 34.8 32.2 30 D1

##### Matrix Spike (1415009-MS1)

Source: P404020-01

Prepared: 08-Apr-14 Analyzed: 10-Apr-14

Gasoline Range Organics (C6-C10) 1.32 mg/L 0.450 0.70 138 75-125 SPK1

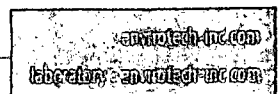
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Logos Operating, LLC  
PO Box 18  
Flora Vista NM, 87415

Project Name: Logos #601 H  
Project Number: 12035-0048  
Project Manager: Sheena Leon

Reported:  
15-Apr-14 14:28

## Nonhalogenated Organics by 8015 - Quality Control

### Envirotech Analytical Laboratory

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

#### Batch 1415010 - DRO Extraction EPA 3550C

##### Blank (1415010-BLK1)

Prepared: 08-Apr-14 Analyzed: 10-Apr-14

Diesel Range Organics (C10-C28) ND 29.9 mg/kg

##### Duplicate (1415010-DUP1)

Source: P404020-01

Prepared: 08-Apr-14 Analyzed: 10-Apr-14

Diesel Range Organics (C10-C28) 2040 30.0 mg/kg 2060 1.12 30

##### Matrix Spike (1415010-MS1)

Source: P404020-01

Prepared: 08-Apr-14 Analyzed: 10-Apr-14

Diesel Range Organics (C10-C28) 2000 31.5 mg/kg 263 2060 NR 75-125 SPK1

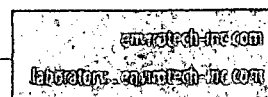
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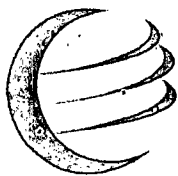
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Analytical Laboratory

Logos Operating, LLC  
PO Box 18  
Flora Vista NM, 87415

Project Name: Logos #601 H  
Project Number: 12035-0048  
Project Manager: Sheena Leon

Reported:  
15-Apr-14 14:28

## Cation/Anion Analysis - Quality Control

### Envirotech Analytical Laboratory

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

#### Batch 1415022 - Anion Extraction EPA 300.0

##### Blank (1415022-BLK1)

Prepared & Analyzed: 09-Apr-14

Chloride	ND	9.94	mg/kg
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##### LCS (1415022-BS1)

Prepared & Analyzed: 09-Apr-14

Chloride	486	9.96	mg/kg	498	97.5	90-110
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##### Matrix Spike (1415022-MS1)

Source: P404017-01

Prepared & Analyzed: 09-Apr-14

Chloride	662	9.97	mg/kg	498	172	98.3	80-120
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##### Matrix Spike Dup (1415022-MSD1)

Source: P404017-01

Prepared & Analyzed: 09-Apr-14

Chloride	666	9.94	mg/kg	497	172	99.3	80-120	0.539	20
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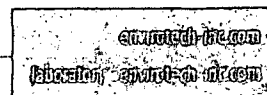
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# envirotech

Analytical Laboratory

Logos Operating, LLC  
PO Box 18  
Flora Vista NM, 87415

Project Name: Logos #601 H  
Project Number: 12035-0048  
Project Manager: Sheena Leon

Reported:  
15-Apr-14 14:28

## Notes and Definitions

Surr1 Surrogate recovery was above acceptable limits.

SPK1 The spike recovery for this QC sample is outside of control limits.

D1 Duplicates or Matrix Spike Duplicates Relative Percent Difference exceeds control limits.

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

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**EPA METHOD 418.1  
TOTAL PETROLEUM  
HYDROCARBONS**

Client:	Logos Operating	Project #:	12035-0048
Sample No.:	1	Date Reported:	5/12/2014
Sample ID:	Drill Pit	Date Sampled:	4/7/2014
Sample Matrix:	Soil	Date Analyzed:	4/7/2014
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

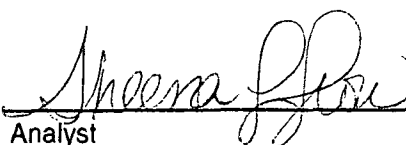
Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	180 <i>TPH</i>	5.0

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Logos #601H**

Instrument calibrated to 200 ppm standard and zeroed before each sample.

  
\_\_\_\_\_  
Analyst

\_\_\_\_\_  
Sheena Leon  
Printed

  
\_\_\_\_\_  
Review

\_\_\_\_\_  
Toni McKnight, EIT  
Printed

# CHAIN OF CUSTODY RECORD

16826

Client: <u>Logos Operating</u>			Project Name / Location: <u>Logos #101 H</u>			ANALYSIS / PARAMETERS													
Email results to: <u>S. Leon</u>			Sampler Name: <u>S. Leon</u>			TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE			Sample Cool	Sample Intact
Client Phone No.:			Client No.: <u>12035-0048</u>																
Sample No. / Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative														
					HNO <sub>3</sub>	HCl	CCl <sub>4</sub>												
<u>Drill Pit</u>	<u>4/7/14</u>	<u>14:30</u>	<u>P404017-01</u>	<u>1-4oz glass</u>			<u>X</u>	<u>X</u>	<u>X</u>									<u>X</u>	<u>✓</u>
Relinquished by: (Signature) <u>[Signature]</u>					Date	Time	Received by: (Signature) <u>[Signature]</u>					Date	Time						
Relinquished by: (Signature)					<u>4/7/14</u>	<u>17:00</u>	Received by: (Signature)					<u>4/7/14</u>	<u>17:00</u>						
Sample Matrix																			
Soil <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Aqueous <input type="checkbox"/> Other <input type="checkbox"/>																			
<input type="checkbox"/> Sample(s) dropped off after hours to secure drop off area.																			





Submit To Appropriate District Office Two Copies <u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 811 S. First St., Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505		<b>State of New Mexico</b> <b>Energy, Minerals and Natural Resources</b>  <b>Oil Conservation Division</b> <b>1220 South St. Francis Dr.</b> <b>Santa Fe, NM 87505</b>				<b>Form C-105</b> Revised August 1, 2011				
<b>WELL COMPLETION OR RECOMPLETION REPORT AND LOG</b>										
4. Reason for filing:  <input type="checkbox"/> <b>COMPLETION REPORT</b> (Fill in boxes #1 through #31 for State and Fee wells only)  <input checked="" type="checkbox"/> <b>C-144 CLOSURE ATTACHMENT</b> (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)						5. Lease Name or Unit Agreement Name LOGOS  6. Well Number: 601H				
7. Type of Completion: <input checked="" type="checkbox"/> NEW WELL <input type="checkbox"/> WORKOVER <input type="checkbox"/> DEEPENING <input type="checkbox"/> PLUGBACK <input type="checkbox"/> DIFFERENT RESERVOIR <input type="checkbox"/> OTHER										
8. Name of Operator LOGOS OPERATING, LLC						9. OGRID 289408				
10. Address of Operator 4001 North Butler Avenue, Building 7101 Farmington, NM 87401						11. Pool name or Wildcat				
12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:										
BH:										
13. Date Spudded	14. Date T.D. Reached	15. Date Rig Released 01/29/14			16. Date Completed (Ready to Produce)			17. Elevations (DF and RKB, RT, GR, etc.)		
18. Total Measured Depth of Well		19. Plug Back Measured Depth			20. Was Directional Survey Made?			21. Type Electric and Other Logs Run		
22. Producing Interval(s), of this completion - Top, Bottom, Name										
<b>23. CASING RECORD (Report all strings set in well)</b>										
CASING SIZE		WEIGHT LB./FT.		DEPTH SET		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED
24. LINER RECORD						25. TUBING RECORD				
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN		SIZE	DEPTH SET	PACKER SET		
26. Perforation record (interval, size, and number)						27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.				
						DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED		
<b>28. PRODUCTION</b>										
Date First Production		Production Method ( <i>Flowing, gas lift, pumping - Size and type pump</i> )				Well Status ( <i>Prod. or Shut-in</i> )				
Date of Test	Hours Tested	Choke Size	Prod'n For Test Period	Oil - Bbl	Gas - MCF	Water - Bbl.	Gas - Oil Ratio			
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - ( <i>Corr.</i> )				
29. Disposition of Gas ( <i>Sold, used for fuel, vented, etc.</i> )								30. Test Witnessed By		
31. List Attachments										
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit. ( <b>ATTACHED</b> )										
33. If an on-site burial was used at the well, report the exact location of the on-site burial:										
Latitude 36.172969N      Longitude 107.391116W      NAD 1927 1983X										
I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief										
Signature <i>Jamie Goodwin</i>			Printed Name Jamie Goodwin		Title Regulatory Tech			Date <i>9/29/14</i>		
E-mail Address JGoodwin@logosoperating.com										



**Pit Closure Form:**

Date: 6/30/14

Well Name: LOGOS 601H

Footages: 440' FNL & 560' FWL Unit Letter: D

Section: 5, T-22N, R-5W, County: SANDAVOL State: NM

Contractor Closing Pit: ACE

Construction Inspector: Wayne R

Inspector Signature: \_\_\_\_\_

Date: 6-30-14

## Jamie Goodwin

---

**From:** Tamra Sessions  
**Sent:** Thursday, June 19, 2014 8:31 AM  
**To:** Mike, Deedra; Marlana Reval (marlena.reval@bia.gov); Kurt Sandoval (kurt.sandoval@bia.gov)  
**Subject:** FW: Logos 601H\_Jicarilla Pit Closure 72hr notice  
**Attachments:** Jicarilla Pit Closure 72hr Noitce scan.pdf

Please see attached copy of pit closure notice.

**From:** Tamra Sessions  
**Sent:** Thursday, June 19, 2014 8:20 AM  
**To:** Jonathan Kelly (jonathan.kelly@state.nm.us)  
**Cc:** brandon.powell@state.nm.us; Wayne Ritter (writer@logosresourcesllc.com); CascindraWillie@jicarillaoga.com; Bryce Hammond (brycehammond@jicarillaoga.com)  
**Subject:** Logos 601H\_Jicarilla Pit Closure 72hr notice

LOGOS #601H  
Jicarilla Lease 424  
API #30-043-21182  
UL D, Section 05, T22N, R05W

Logos Operating is giving 72hr notice of plans to start temporary pit closure operations on Monday, June 23, 2014. Bureau of Indian Affairs Jicarilla Agency is being notified via certified mail.

Tamra Sessions  
Logos Resources, LLC  
Operations Technician  
[tsessions@logosresourcesllc.com](mailto:tsessions@logosresourcesllc.com)  
(o) 505-436-3790  
(c) 505-330-9333



4001 N. Butler Ave  
Farmington, NM 87401  
Phone: (505) 436-2627  
Fax: (505) 832-3095

Date: June 19, 2014

To: Bureau of Indian Affairs Jicarilla Agency

Re: Surface Owner Notification for Temporary Pit Closure

Bureau of Indian Affairs  
Jicarilla Agency  
P.O. Box 167  
Dulce, NM 87528

Re: Logos #601H  
API #30-043-21182  
UL D, Section 05, T22N, R05W

Dear Mr. Kurt Sandoval,

According to NMOCD rules, Logos Operating, LLC is notifying you that temporary pit closure operations will begin on June 23, 2014 on the Logos #601H. Drill cuttings will be buried in the reserve pit, as they qualify as per Subsection D of 19.15.17.13 NMAC. No action is required on your part. If you have any questions, please do not hesitate to contact me.

Regards,

A handwritten signature in cursive script that reads "Tamra Sessions".

Tamra Sessions  
Operations Technician  
[tsessions@logosresourcesllc.com](mailto:tsessions@logosresourcesllc.com)  
505-330-9333

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<p><input checked="" type="checkbox"/> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p><input type="checkbox"/> Print your name and address on the reverse so that we can return the card to you.</p> <p><input checked="" type="checkbox"/> Attach this card to the back of the mailpiece, or on the front if space permits.</p>	<p>A. Signature  <div style="display: flex; justify-content: space-between;"> <span>X <i>Henry Hernandez</i></span> <span><input type="checkbox"/> Agent <input type="checkbox"/> Addressee</span> </div> </p> <p>B. Received by (Printed Name)  <i>Henry Hernandez</i> </p> <p>C. Date of Delivery  <i>10-23-14</i> </p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes  If YES, enter delivery address below: <input type="checkbox"/> No </p>
<p>1. Article Addressed to:</p> <p style="margin-left: 40px;"><i>BIA-Sugar Hill Agency</i></p> <p style="margin-left: 40px;"><i>P.O. Box 167</i></p> <p style="margin-left: 40px;"><i>Dulce, NM 87401</i></p> <p style="text-align: right; margin-right: 20px;"><i>601H Pit Clusman</i></p>	<p>3. Service Type</p> <div style="display: flex; justify-content: space-between;"> <span><input checked="" type="checkbox"/> Certified Mail®</span> <span><input type="checkbox"/> Priority Mail Express™</span> </div> <div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> Registered</span> <span><input checked="" type="checkbox"/> Return Receipt for Merchandise</span> </div> <div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> Insured Mail</span> <span><input type="checkbox"/> Collect on Delivery</span> </div> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>2. Article Number (Transfer from service label)</p>	<p style="text-align: center; font-size: 1.2em;">7014 0510 0000 7264 9224</p>
<p>PS Form 3811, July 2013 <span style="float: right;">Domestic Return Receipt</span></p>	

7014 0510 0000 7264 9224

**U.S. Postal Service™**

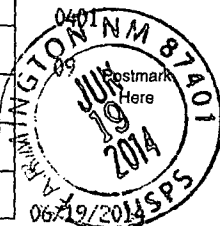
**CERTIFIED MAIL™ RECEIPT**

(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

**OFFICIAL USE**  
DULCE NM 87528

Postage	\$ 0.49
Certified Fee	\$3.30
Return Receipt Fee (Endorsement Required)	\$2.70
Restricted Delivery Fee (Endorsement Required)	\$0.00
<b>Total Postage &amp; Fees</b>	<b>\$ 6.49</b>



Sent To *BIA-Sugar Hill Agency*

Street, Apt. No.,  
or PO Box No. *P.O. Box 167*

City, State, ZIP+4 *Dulce, NM 87528*

PS Form 3800, August 2005 See Reverse for Instructions



IN REPLY REFER TO:  
Energy & Minerals Management

UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF INDIAN AFFAIRS  
JICARILLA AGENCY  
P.O. BOX 167  
DULCE, NEW MEXICO 87528



JUN 24 2014

Ms. Tamra Sessions  
Logos Resources, LLC  
4001 North Butler Boulevard, Building 7101  
Farmington, New Mexico 87401

Dear Ms. Sessions:

This is in response to your request, dated **June 19, 2014**, for Permission to Perform Work (PTPW) on the following location, which is on Tribal Surface:

**Lease No. 424, Logos #601H:**

Located in Section 5, Township 22 North, Range 5 West, N.M.P.M. Sandoval County, New Mexico (API No. 30-043-21182).

**Scope of Work:**

Notice of temporary pit closure operations beginning June 23, 2014. Drill cuttings will be buried in the reserve pit.

The Bureau of Indian Affairs, Jicarilla Agency, hereby grant Logos Resources, LLC and its contractors' permission to perform work on the above indicated location. Please submit an affidavit of completion and/or final report when completed.

If you should have any questions or concerns, please contact Mr. Kurt Sandoval, Realty Officer, at (575) 759-3936.

Sincerely,

Superintendent

cc: Jicarilla Oil and Gas Administration



## Reclamation Form:

Date: 8/19/14

Well Name: LOGOS 601H

Footages: 440' FNL & 560' FWL Unit Letter: D

Section: 5, T-22N, R-5W, County: SANDAVOL State: NM

Reclamation Contractor: Ritter

Reclamation Start Date: 6/11/14

Reclamation Complete Date: 7/15/14

Road Completion Date: 7/15/14

Seeding Date: 8/19/14

### PIT MARKER STATUS

(When Required) Picture of Marker set needed

Date Marker Placed: 8/25/14

Latitude: 36.172969 N

Longitude: 107.391116 W

Date Pit Manifold Removed: N/A

Construction Inspector Signature: Wagner

Date Inspected: 8-19-14

**LOGOS OPERATING, LLC.**  
**LOGOS #601H—JIC. LEASE #424**

**API #30—043—21182**

**SH: 440' FNL 560' FWL**

**D—SEC. 5—T22N—R5W**

**BH: 440' FNL 330' FWL**

**D—SEC. 6—T22N—R5W**

**SANDOVAL COUNTY, NM**

**OFFICE # 505—436—2627**

**AFTER HRS # 866—598—6220**

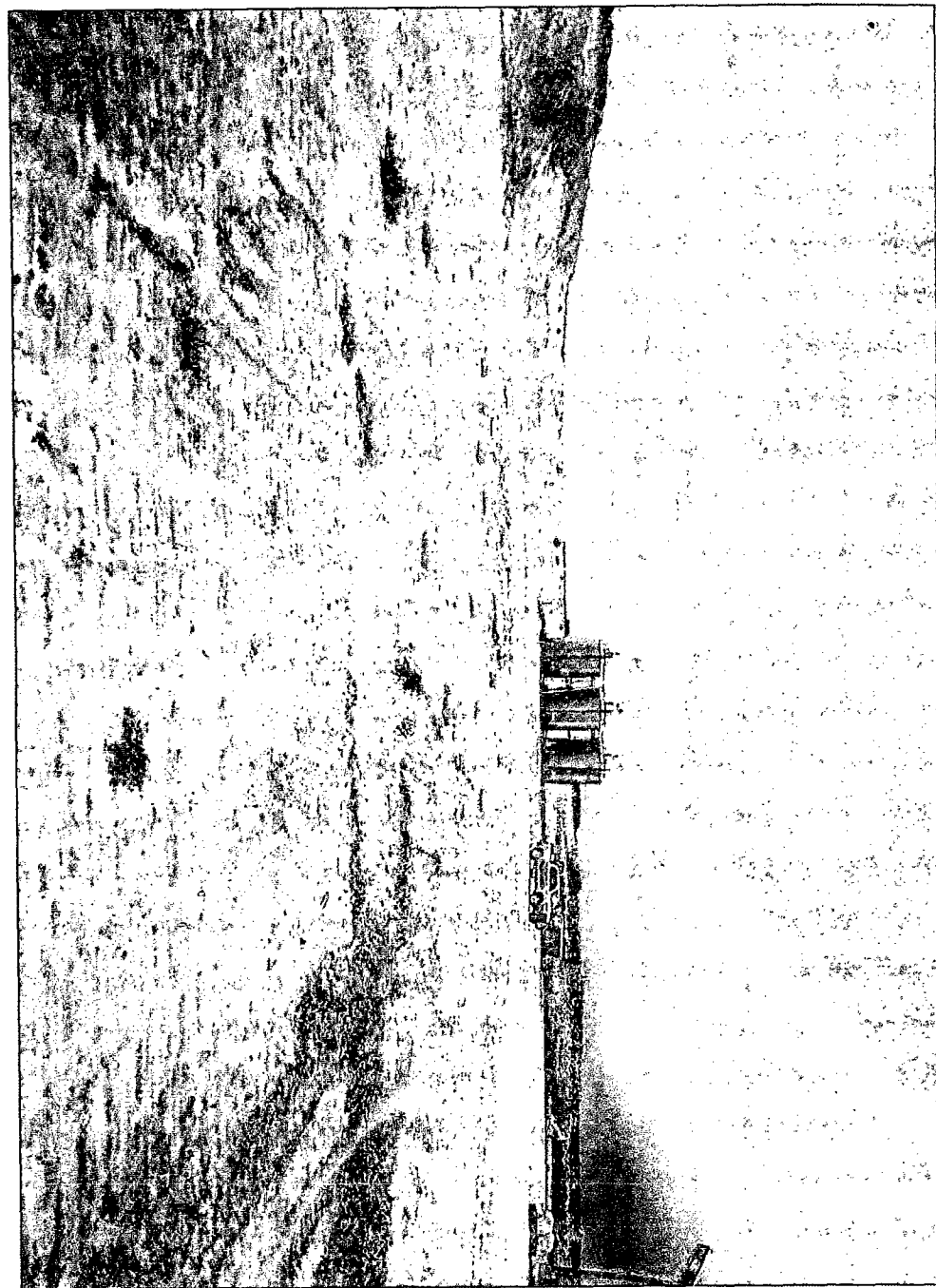
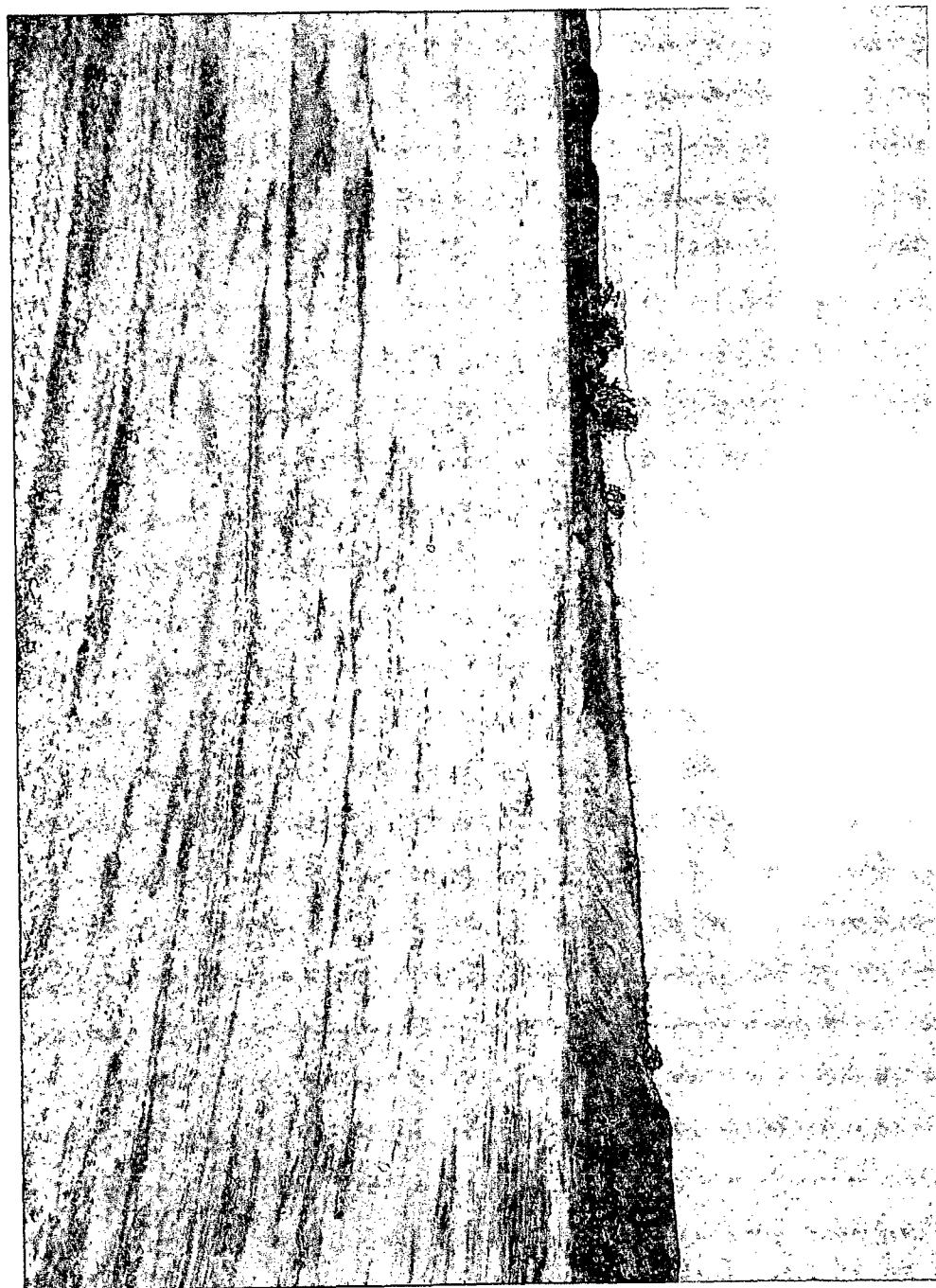
LOGOS-OPER

LOGOS-LEASE

D-SEC-5-T22N

R5W-OBL





# Temporary Pit Weekly Inspection Form

WELL NAME:	LOGOS 601H			API NO:	30-043-21182		
LEGAL:	Section:	5	Township:	22N	Range:	5W	
Drilling RD Date:	1-29-14						

Inspector's Name	RAMSEY HATALIE	RAMSEY HATALIE	RAMSEY HATALIE	RAMSEY HATALIE	RAMSEY HATALIE	RAMSEY HATALIE	RAMSEY HATALIE	RAMSEY HATALIE	RAMSEY HATALIE	RAMSEY HATALIE	RAMSEY HATALIE	
WEEK #	1	2	3	4	5	6	7	8	9	10	11	12
DATE	01/07/14	02/25/14	03/03/14	03/24/14	04/05/14	04/12/14	04/22/14	04/28/14	05/13/14	05/19/14	06/11/14	
Well sign on location (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Any liner breeches (Y/N)	N	N	N	N	N	N	N	N	N	N	N	
Any fluid seeps/spills (Y/N)	N	N	N	N	N	N	N	N	N	N	N	
HC's on top of temp. pit (Y/N)	N	N	N	N	N	N	N	N	N	N	N	
Temp pit free of misc. Solid												
Waste/Debris(Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Discharge Line Integrity Good (Y/N)	N	N	N	N	N	N	N	N	N	N	Y	
Fence Integrity Good (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Any Dead Wildlife/ Stock (Y/N)	N	N	N	N	N	N	N	N	N	N	N	
Freeboard to be 2' or > Est. (ft)	Y (16')	Y (18')	Y (15')	Y (10')	Y (12')	Y (15')	Y (15')	Y (13')	Y (15')	Y (13')	Y	
Was the OCD contacted (Y/N)	N	N	N	N	N	N	N	N	N	N	N	
Pictures taken (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Comments:	16' CLEARANCE	18' CLEARANCE	15' CLEARANCE	10' CLEARANCE/ CREW HAD HAULED SOME DIRT ON THE NW SIDE OF PIT	12' CLEARANCE/ THERE WAS SOME DIRT ADDED ON THE NW SIDE	15' CLEARANCE/ THERE HAS BEEN SOME MUD DUMPED IN FROM ANOTHER LOCATION	15' CLEARANCE/ CREW DUMPED SOME MUD ON NW SIDE OF PIT. GETTING READY FOR BACK FILL	13' CLEARANCE/ CREW DUMPED SOME MUD ALONG SIDE OF PIT	15' CLEARANCE	13' CLEARANCE	NO FLUID IN PIT/BEING BACKFILLED/ 11' 2" TO MUD ON SOUTHSIDE/1 4' 4" FROM SURFACE TO MUD ON EASTSIDE/N & E SIDE LINER COVERED	



4001 N. Butler Ave  
Farmington, NM 87401  
Phone: (505) 436-2627  
Fax: (505) 832-3095

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Date: September 30, 2014

To: NMOCD

Re: Pit Closure Filings for WPX

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Dear NMOCD,

Logos Operating, LLC (289408) is filing this pit closure report on behalf of the new operator, WPX Energy Production, LLC (120782), as part of a transition service agreement between Logos and WPX.

Regards,

  
Jamie Goodwin  
Regulatory Technician