

District I  
105 N. French Dr., Hobbs, NM 88240  
District II  
871 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  
12229 ☐ Permit of a pit or proposed alternative method  
43-21155 ☒ 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 7  
API Number: 30-043-21155 OCD Permit Number:  
U/L or Qtr/Qtr E Section 5 Township 22N Range 5W County: SANDOVAL  
Center of Proposed Design: Latitude 36.16927 ° N Longitude 107.39284 ° 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 130 x W 60 x D 10

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

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	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> 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.*

<input type="checkbox"/> Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
<input type="checkbox"/> Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC
<input type="checkbox"/> Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.11 NMAC
<input type="checkbox"/> 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
<input type="checkbox"/> Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
<input type="checkbox"/> Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC
<input type="checkbox"/> Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC
<input type="checkbox"/> Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
<input type="checkbox"/> Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
<input type="checkbox"/> Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
<input type="checkbox"/> 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: 10/30/2014

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: 4/22/14

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.*

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

On-site Closure Location: Latitude 36.36.16927° N Longitude 107.39284° 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: 9/29/14e-mail address: JGoodwin@logosoperating.comTelephone: 505-330-9333

Logos Operating, LLC  
San Juan Basin  
Closure Report

Lease Name: LOGOS 7  
API NO: 30-043-21155

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 % IEL (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). Pit closure extension to 4/22/14 was requested of the BIA per letter dated 1/13/14 and approved. Pit closure extension to 5/22/14 was requested of the BIA per letter dated 4/11/14 and approved.

- 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 8 pit to Logos 7 pit: ~260yds.

- 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.**

- 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.**

- 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 two 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.**



- 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 7  
Unit Letter: E  
Section: 5  
Township: 22N  
Range: 05W  
API#: 30-043-21155  
OBL

- 14 Logos inspected and documented daily and weekly reports on the above Temporary Pit. Logos inspected any liner breaches, 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: 9/25/13

Inspection End Date: 4/22/14

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

## Tamra Sessions

---

**From:** Tamra Sessions  
**Sent:** Monday, July 29, 2013 12:09 PM  
**To:** Merldine Oka (merldineoka@jicarillaoga.com)  
**Cc:** Isaac Julian (iajulian@yahoo.com); Kurt Sandoval (kurt.sandoval@bia.gov)  
**Subject:** SURFACE OWNER NOTIFICATION 07/29/13 - Temporary Pit  
**Attachments:** Jicarilla Pit Noitce.docx

Please see our attached notice for temporary pits on the following new drill locations:

Logos 7  
Logos 8  
Logos 9  
Logos 10  
Logos 11  
Logos 12

Tamra Sessions  
Logos Resources, LLC  
Operations Technician  
505-330-9333



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

---

Date: July 29, 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 #7, Logos #8, Logos #9, Logos #10, Logos #11, and Logos #12

Dear Ms. Oka,

According to NMOCD rules, Logos Operating, LLC is notifying you that there will be temporary pits on the subject wells 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  
1625 N. French Drive, Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

District II  
811 S. First Street, Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV  
1220 S. St. Francis Drive, Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised August 1, 2011

Submit one copy to  
Appropriate District Office

OIL CONSERVATION DIVISION  
1220 South St. Francis Drive  
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number		*Pool Code	*Pool Name WILDCAT DAKOTA
*Property Code	*Property Name LOGOS		*Well Number 7
*GRID No. 289408	*Operator Name LOGOS RESOURCES, LLC		*Elevation 6880'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	5	22N	5W		1645	NORTH	180	WEST	SANDOVAL

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres 321.13 Acres - (W/2)	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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

5277.36'

1339.80'

1320.00'

180'

LOT 4

LOT 3

LOT 2

LOT 1

5280.00'

1335.18'

1320.00'

2640.00'

LAT: 36.16926°N  
LONG: 107.39224°W  
DATUM: NAD1927

LAT: 36.16927°N  
LONG: 107.39284°W  
DATUM: NAD1983

5

<sup>17</sup> 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 unleased 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 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 \_\_\_\_\_

<sup>18</sup> 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.

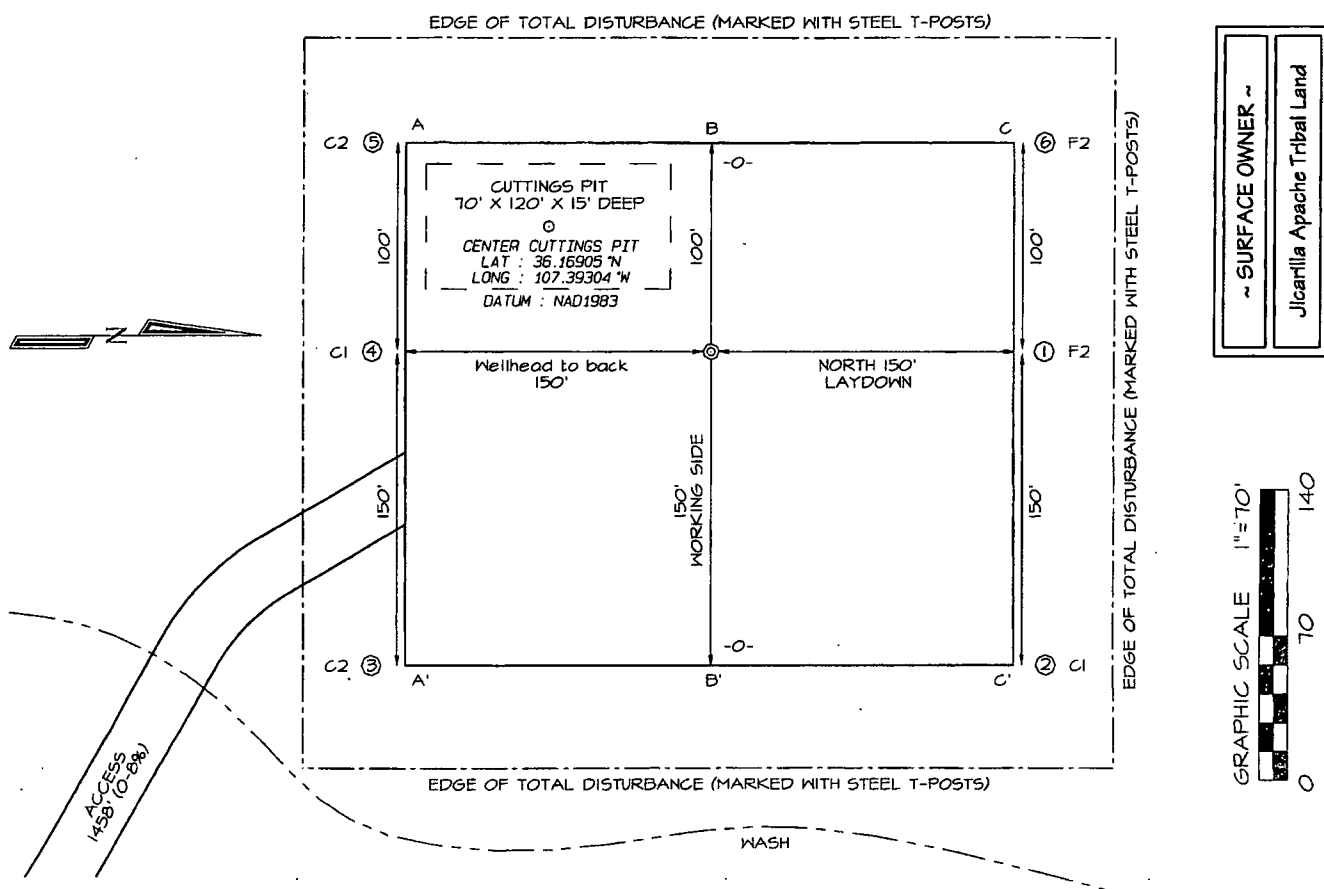
Date of Survey: MARCH 26, 2013

Signature and Seal of Professional Surveyor

JASON C. EDWARDS  
NEW MEXICO  
REGISTERED PROFESSIONAL SURVEYOR  
15269

JASON C. EDWARDS  
Certificate Number 15269

**LOGOS RESOURCES, LLC LOGOS #7**  
**1645' FNL & 180' FWL, SECTION 5, T22N, R5W, NMPM**  
**SANDOVAL COUNTY, NEW MEXICO ELEVATION: 6880'**  
**LAT: 36.16927°N LONG: 107.39284°W DATUM: NAD1983**



AREA OF WELLPAD = 350' X 400' = 3.21 Acres

Summary of Analytical Results  
 Logos Operating, LLC  
 Logos #7  
 Drill Pit Closure and Backfill Material Sampling Report  
 Sandoval County, New Mexico  
 Project Number 12035-0037

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)	Chlorides USEPA Method 300.0 (ppm)
NMOCD/RCRA Standards	NA	NA	2500	1000	10	50	40000
Drill Pit Composite	1	1/17/2014	99.7	202	ND	ND	343
NMOCD/RCRA Standards	NA	NA	NA	NA	NA	NA	600
Backfill Material Composite	2	1/23/2014	NS	NS	NS	NS	ND

NS = Not Sampled

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

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

## Analytical Report

### Report Summary

Client: Logos Operating, LLC  
Chain Of Custody Number: 16521  
Samples Received: 1/17/2014 4:30:00PM  
Job Number: 12035-0037  
Work Order: P401044  
Project Name/Location: Logos #7

Entire Report Reviewed By:



Date: 1/23/14

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.

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

Project Name: Logos #7  
Project Number: 12035-0037  
Project Manager: Tiffany McIntosh

**Reported:**  
23-Jan-14 09:51

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Drill Pit Composite	P401044-01A	Sludge	01/17/14	01/17/14	Glass Jar, 4 oz.

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

 Project Name: Logos #7  
 Project Number: 12035-0037  
 Project Manager: Tiffany McIntosh

 Reported:  
 23-Jan-14 09:51

**Drill Pit Composite**  
**P401044-01 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Volatile Organics by EPA 8021</b>										
Benzene	ND	0.05	mg/kg	1		1404001	01/20/14	01/20/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1404001	01/20/14	01/20/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1404001	01/20/14	01/20/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1404001	01/20/14	01/20/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1404001	01/20/14	01/20/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1404001	01/20/14	01/20/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1404001	01/20/14	01/20/14	EPA 8021B	
Surrogate: Bromochlorobenzene		97.0 %		80-120		1404001	01/20/14	01/20/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		95.2 %		80-120		1404001	01/20/14	01/20/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1		1404001	01/20/14	01/20/14	EPA 8015D	
Diesel Range Organics (C10-C28)	202	30.0	mg/kg	1		1404002	01/20/14	01/20/14	EPA 8015D	
<b>Total Petroleum Hydrocarbons by 418.1</b>										
Total Petroleum Hydrocarbons	99.7	19.9	mg/kg	1		1404003	01/20/14	01/20/14	EPA 418.1	
<b>Cation/Anion Analysis</b>										
Chloride	343	9.83	mg/kg	1		1404016	01/22/14	01/22/14	EPA 300.0	

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

Project Name: Logos #7  
Project Number: 12035-0037  
Project Manager: Tiffany McIntosh

Reported:  
23-Jan-14 09:51

## 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 1404001 - Purge and Trap EPA 5030A

##### Blank (1404001-BLK1)

Prepared: 20-Jan-14 Analyzed: 21-Jan-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	45.7		ug/L	50.0		91.5	80-120			
Surrogate: Bromochlorobenzene	46.7		"	50.0		93.5	80-120			

##### Duplicate (1404001-DUP1)

Source: P401044-01

Prepared & Analyzed: 20-Jan-14

Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
p,m-Xylene	ND	0.05	"		ND				30	
o-Xylene	ND	0.05	"		ND				30	
Surrogate: 1,3-Dichlorobenzene	46.6		ug/L	50.0		93.3	80-120			
Surrogate: Bromochlorobenzene	47.8		"	50.0		95.6	80-120			

##### Matrix Spike (1404001-MS1)

Source: P401044-01

Prepared & Analyzed: 20-Jan-14

Benzene	50.3		ug/L	50.0	ND	101	39-150			
Toluene	50.1		"	50.0	ND	100	46-148			
Ethylbenzene	50.3		"	50.0	ND	101	32-160			
p,m-Xylene	100		"	100	ND	100	46-148			
o-Xylene	49.7		"	50.0	ND	99.3	46-148			
Surrogate: 1,3-Dichlorobenzene	50.8		"	50.0		102	80-120			
Surrogate: Bromochlorobenzene	50.1		"	50.0		100	80-120			

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

Project Name: Logos #7  
Project Number: 12035-0037  
Project Manager: Tiffany McIntosh

Reported:  
23-Jan-14 09:51

## 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 1404001 - Purge and Trap EPA 5030A

##### Blank (1404001-BLK1)

Prepared: 20-Jan-14 Analyzed: 21-Jan-14

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

##### Duplicate (1404001-DUP1)

Source: P401044-01

Prepared & Analyzed: 20-Jan-14

Gasoline Range Organics (C6-C10) ND 5.00 mg/kg ND 30

##### Matrix Spike (1404001-MS1)

Source: P401044-01

Prepared & Analyzed: 20-Jan-14

Gasoline Range Organics (C6-C10) 0.49 mg/L 0.450 0.02 106 75-125

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

Project Name: Logos #7  
Project Number: 12035-0037  
Project Manager: Tiffany McIntosh

**Reported:**  
23-Jan-14 09:51

## 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
<b>Batch 1404002 - DRO Extraction EPA 3550C</b>										
<b>Blank (1404002-BLK1)</b>				Prepared & Analyzed: 20-Jan-14						
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
<b>Duplicate (1404002-DUP1)</b>				Source: P401044-01 Prepared & Analyzed: 20-Jan-14						
Diesel Range Organics (C10-C28)	126	29.9	mg/kg		202			46.2	30	D1
<b>Matrix Spike (1404002-MS1)</b>				Source: P401044-01 Prepared & Analyzed: 20-Jan-14						
Diesel Range Organics (C10-C28)	370	31.6	mg/kg	263	202	63.7	75-125			SPK1

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

Project Name: Logos #7  
Project Number: 12035-0037  
Project Manager: Tiffany McIntosh

Reported:  
23-Jan-14 09:51

## Total Petroleum Hydrocarbons by 418.1 - Quality Control

### Envirotech Analytical Laboratory

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

#### Batch 1404003 - 418 Freon Extraction

##### Blank (1404003-BLK1)

Prepared & Analyzed: 20-Jan-14

Total Petroleum Hydrocarbons ND 20.0 mg/kg

##### Duplicate (1404003-DUP1)

Source: P401044-01

Prepared & Analyzed: 20-Jan-14

Total Petroleum Hydrocarbons 84.0 20.0 mg/kg 99.7 17.1 30

##### Matrix Spike (1404003-MS1)

Source: P401044-01

Prepared & Analyzed: 20-Jan-14

Total Petroleum Hydrocarbons 627 mg/L 500 25.0 120 80-120

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

Project Name: Logos #7  
Project Number: 12035-0037  
Project Manager: Tiffany McIntosh

Reported:  
23-Jan-14 09:51

## Cation/Anion Analysis - Quality Control

### Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD Limit	Notes
<b>Batch 1404016 - Anion Extraction EPA 300.0</b>								
<b>Blank (1404016-BLK1)</b>								
Prepared & Analyzed: 22-Jan-14								
Chloride	ND	9.92	mg/kg					
<b>LCS (1404016-BS1)</b>								
Prepared & Analyzed: 22-Jan-14								
Chloride	529	9.97	mg/kg	499	106	90-110		
<b>Matrix Spike (1404016-MS1)</b>								
Source: P401058-01 Prepared & Analyzed: 22-Jan-14								
Chloride	503	9.98	mg/kg	499	12.2	98.4	80-120	
<b>Matrix Spike Dup (1404016-MSD1)</b>								
Source: P401058-01 Prepared & Analyzed: 22-Jan-14								
Chloride	501	9.89	mg/kg	495	12.2	98.8	80-120	0.506 20

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

Project Name: Logos #7  
Project Number: 12035-0037  
Project Manager: Tiffany McIntosh

**Reported:**  
23-Jan-14 09:51

### Notes and Definitions

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

D1 Duplicates or Matrix Spike Duplicates Relative Percent Difference exceeds 30%.

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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# CHAIN OF CUSTODY RECORD

16521

Client: <b>Logos # Operating</b>			Project Name / Location: <b>Logos # 7</b>			ANALYSIS / PARAMETERS															
Email results to: <b>T. McIntosh</b>			Sampler Name: <b>T. McIntosh</b>			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.: <b>505-330-9333</b>			Client No.: <b>12035-0037</b>																		
Sample No./ Identification	Sample Date	Sample Time	Lab. No.	No./Volume of Containers	Preservative			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
					HNO <sub>3</sub>	HCl	CO <sub>2</sub>														
Drill pit composite	1/17/14	10:55	P401044-a	1-4oz jar			X	X	X							X	X			Y	Y
Relinquished by: (Signature) <i>Tiffany McIntosh</i>					Date	Time	Received by: (Signature) <i>[Signature]</i>										Date	Time			
Relinquished by: (Signature) <i>[Signature]</i>							Received by: (Signature)														
Sample Matrix																					
Soil <input type="checkbox"/> Solid <input type="checkbox"/> Sludge <input checked="" type="checkbox"/> Aqueous <input type="checkbox"/> Other <input type="checkbox"/>																					
<input type="checkbox"/> Sample(s) dropped off after hours to secure drop off area.																					



14.5°C





## Analytical Report

### Report Summary

Client: Logos Operating, LLC  
Chain Of Custody Number: 16554  
Samples Received: 1/23/2014 3:10:00PM  
Job Number: 12035-0037  
Work Order: P401067  
Project Name/Location: Logos #7

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Date: 1/27/14

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.



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

Project Name: Logos #7  
Project Number: 12035-0037  
Project Manager: Tiffany McIntosh

Reported:  
27-Jan-14 08:22

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Backfill Material Composite	P401067-01A	Soil	01/23/14	01/23/14	Glass Jar, 4 oz.

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5796 US Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com  
laboratory@envirotech-inc.com



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

Project Name: Logos #7  
Project Number: 12035-0037  
Project Manager: Tiffany McIntosh

Reported:  
27-Jan-14 08:22

**Backfill Material Composite**  
**P401067-01 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Cation/Anion Analysis										
Chloride	ND	9.94		mg/kg	1	1404028	01/24/14	01/24/14	EPA 300.0	

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5796 US Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com  
laboratory@envirotech-inc.com



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

Project Name: Logos #7  
Project Number: 12035-0037  
Project Manager: Tiffany McIntosh

Reported:  
27-Jan-14 08:22

**Cation/Anion Analysis - 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 1404028 - Anion Extraction EPA 300.0**

**Blank (1404028-BLK1)**

Prepared & Analyzed: 24-Jan-14

Chloride ND 9.94 mg/kg

**LCS (1404028-BS1)**

Prepared & Analyzed: 24-Jan-14

Chloride 498 9.97 mg/kg 499 99.9 90-110

**Matrix Spike (1404028-MS1)**

Source: P401067-01

Prepared & Analyzed: 24-Jan-14

Chloride 545 9.95 mg/kg 498 ND 110 80-120

**Matrix Spike Dup (1404028-MSD1)**

Source: P401067-01

Prepared & Analyzed: 24-Jan-14

Chloride 553 9.96 mg/kg 498 ND 111 80-120 1.48 20

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5796 US Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com  
laboratory@envirotech-inc.com



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

Project Name: Logos #7  
Project Number: 12035-0037  
Project Manager: Tiffany McIntosh

**Reported:**  
27-Jan-14 08:22

#### Notes and Definitions

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

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envirotech-inc.com  
laboratory@envirotech-inc.com

# CHAIN OF CUSTODY RECORD

16554

30

Client: <b>Logos Operating</b>			Project Name / Location: <b>Logos #7</b>			ANALYSIS / PARAMETERS													
Email results to: <b>T. McIntosh</b>			Sampler Name: <b>T. McIntosh</b>			TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	PCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE			Sample Cool	Sample Intact
Client Phone No.: <b>505-320-2857</b>			Client No.: <b>12035-0037</b>																
Sample No. / Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative														
					HNO <sub>3</sub>	HCl	COOL												
backfill material <sup>composite</sup> <sub>posite</sub>	1/23/14	9:27	P401067-01	1-4oz jar			X									X			Y
Relinquished by: (Signature) <i>Tiffany McIntosh</i>					Date	Time	Received by: (Signature) <i>[Signature]</i>										Date	Time	
					1/23/14	1510											1/23/14	1510	
Relinquished by: (Signature)							Received by: (Signature)												
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.																			



**envirotech**  
Analytical Laboratory

11.3°C

Submit To Appropriate District Office Two Copies District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Rd., Aztec, NM 87410 District IV 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  1. WELL API NO. 30-043-21155 2. Type of Lease <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/> FED/INDIAN 3. State Oil & Gas Lease No. JICARILLA APACHE LEASE #424
--	---	---

<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: 7				
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		15. Date Rig Released 10/10/13		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
<b>24. LINER RECORD</b>						<b>25. TUBING RECORD</b>				
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 (Flowing, gas lift, pumping - Size and type pump)				Well Status (Prod. or Shut-in)				
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 - (Corr.)				
29. Disposition of Gas (Sold, used for fuel, vented, etc.)							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. SEE ATTACHED										
33. If an on-site burial was used at the well, report the exact location of the on-site burial:										
Latitude 3636.16927N    Longitude 107.39284W    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 9/29/14			
E-mail Address JGoodwin@logosoperating.com										



**Pit Closure Form:**

Date: 4/22/14

Well Name: LOGOS 7

Footages: 1645' FNL & 180' FWL Unit Letter: E

Section: 5, T-22N, R- 05W, County: SANDOVAL State: NM

Contractor Closing Pit: WSS

Construction Inspector: Wayne Ritter

Inspector Signature: Wayne Ritter

Date: 4-22-14



## Tamra Sessions

---

**From:** Tamra Sessions  
**Sent:** Monday, January 13, 2014 4:26 PM  
**To:** Kurt Sandoval (kurt.sandoval@bia.gov)  
**Cc:** Mike, Deedra; Marlena Reval (marlena.reval@bia.gov); Wayne Ritter  
**Subject:** Jicarilla Pit Closure Extension\_Logos 7\_01-13-14  
**Attachments:** Jicarilla Pit closure ext letter scan.pdf

Please see attached letter, with location and date information, requesting pit closure extension for the Logos 7.

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



4001 N. Butler Blvd. Bldg 7101  
Farmington, NM 87401  
Phone: (505) 436-2626  
Fax: (505) 832-3095

---

January 13, 2014

BIA Jicarilla Agency  
P.O. Box 167  
Dulce, NM 87528


**RE: Pit Closure Extension - Logos #7 well - Jicarilla Lease 424  
UL E, Section 5, T22N, R05W; API 30-043-21155**

Dear Mr. Kurt Sandoval,

Logos Operating is requesting a pit closure extension of 90 days. Due to unusual seasonal rains/snow and now due to freezing conditions and ice in the pit, we will not meet the original timeline and would like to request an extension.

The completion date was 10/24/13 and the required 90 day closure date is 01/22/14. The 90 day pit closure extension will end on 4/22/14.

Very truly yours,

  
Tamra Sessions  
Operations Technician  
Logos Resources, LLC



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



JAN 21 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 **January 13, 2014**, for permission to perform work on the following location, which is on Tribal Surface:

**Lease No. 424, Logos #7:**

Located in Section 5, Township 22 North, Range 5 West, N.M.P.M. Sandoval County, New Mexico (API No. 30-043-21155).

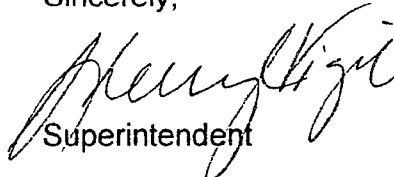
**Scope of Work:**

Pit closure extension of 90-days (ending on April 22, 2014), due to inclement weather conditions.

The Bureau of Indian Affairs, Jicarilla Agency, hereby grant Logos Resources, LLC and its contractor's permission to perform work of 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, Acting Realty Officer, at (575) 759-3936.

Sincerely,

  
Superintendent

cc: Jicarilla Oil and Gas Administration

## Tamra Sessions

---

**From:** Tamra Sessions  
**Sent:** Thursday, March 27, 2014 8:10 AM  
**To:** Jonathan Kelly (jonathan.kelly@state.nm.us)  
**Cc:** brandon.powell@state.nm.us  
**Subject:** Logos 7\_Jicarilla Pit Closure 72hr notice

LOGOS #7  
Jicarilla Lease 424  
API #30-043-21155  
UL E, Section 05, T22N, R05W

Logos Operating is giving 72hr notice of plans to start temporary pit closure operations on Monday, March 31, 2014.  
Bureau of Indian Affairs Jicarilla Agency is being notified via certified mail.

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: March 27, 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 #7  
API #30-043-21155  
UL E, 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 March 31, 2014 on the Logos #7. 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 black ink, appearing to read 'Tamra Sessions', written in a cursive style.

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

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<input type="checkbox"/> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. <input type="checkbox"/> Print your name and address on the reverse so that we can return the card to you. <input checked="" type="checkbox"/> Attach this card to the back of the mailpiece, or on the front if space permits.		A. Signature <i>Kenny Harrison</i> <div style="float: right;"> <input type="checkbox"/> Agent  <input type="checkbox"/> Addressee           </div>	
1. Article Addressed to: <b>BIA Tucson Agency</b> <b>P.O. Box 167</b> <b>Dulce, NM 87528</b>		B. Received by (Printed Name) <b>Kenny Harrison</b>	C. Date of Delivery <b>3-28-14</b>
2. Article Number (Transfer from service lab) <b>7013 2250 0001 2785 5378</b>		D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
		3. Service Type <input type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.	
		4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes	

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

**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**

Postage	\$ 0.49	0401  0401
Certified Fee	\$3.30	
Return Receipt Fee (Endorsement Required)	\$2.70	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.49	

Sent To **BIA Tucson Agency**  
 Street, Apt. No., or PO Box No. **P.O. Box 167**  
 City, State, ZIP+4 **Dulce, NM 87528**

PS Form 3800, August 2006 See Reverse for Instructions

## Tamra Sessions

---

**From:** Tamra Sessions  
**Sent:** Friday, April 11, 2014 1:24 PM  
**To:** Kurt Sandoval (kurt.sandoval@bia.gov)  
**Cc:** Mike, Deedra; Marlana Reval (marlena.reval@bia.gov); Wayne Ritter  
**Subject:** Jicarilla Pit Closure Extension 2nd\_Logos 7\_04/11/14  
**Attachments:** Jicarilla Pit closure ext letter 2nd scan.pdf

Please see attached letter, with location and date information, requesting a 2<sup>nd</sup> pit closure extension for the Logos 7.

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



4001 N. Butler Blvd. Bldg 7101  
Farmington, NM 87401  
Phone: (505) 436-2626  
Fax: (505) 832-3095

April 11, 2014

BIA Jicarilla Agency  
P.O. Box 167  
Dulce, NM 87528

**RE: Pit Closure Extension - Logos #7 well - Jicarilla Lease 424  
UL E, Section 5, T22N, R05W; API 30-043-21155**

Dear Mr. Kurt Sandoval,

Logos Operating is requesting a second pit closure extension of an additional 30 days. Logos has been working diligently to close all pits on the Lease 424, but due to prior unusual seasonal rains/snow, freezing conditions and ice in the pit, it has taken longer than expected to close the pits.

The completion date was 10/24/13 and the required 90 day closure date is 01/22/14. The BLM 90 day pit closure extension will end on 4/22/14 and the 2<sup>nd</sup> extension date is 5/22/14.

Regards,

A handwritten signature in black ink, appearing to read 'Tamra Sessions', is written over a horizontal line.

Tamra Sessions  
Operations Technician  
Logos Resources, LLC





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



APR 14 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 **April 11, 2014**, for permission to perform work on the following location, which is on Tribal Surface:

**Lease No. 424, Logos #7:**

Located in Section 5, Township 22 North, Range 5 West, N.M.P.M. Sandoval County, New Mexico (API No. 30-043-21155).

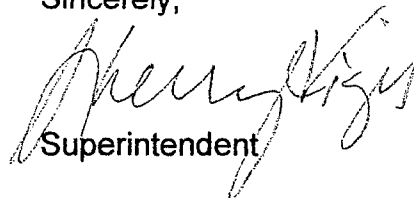
**Scope of Work:**

Additional (2<sup>nd</sup>) 30-day extension of pit closure operations, ending on May 22, 2014, due to inclement weather conditions.

The Bureau of Indian Affairs, Jicarilla Agency, hereby grant Logos Resources, LLC and its contractor's permission to perform work of 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, Acting Realty Officer, at (575) 759-3936.

Sincerely,

  
Superintendent

cc: Jicarilla Oil and Gas Administration



## Reclamation Form:

Date: 8/28/14

Well Name: LOGOS 7

Footages: 1645' FNL & 180' FWL Unit Letter: E

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

Reclamation Contractor: ACE

Reclamation Start Date: 5/6/14

Reclamation Complete Date: 7/10/14

Road Completion Date: 7/10/14

Seeding Date: Fall 2014

### PIT MARKER STATUS

(When Required) Picture of Marker set needed

Date Marker Placed: 8/7/2014

Latitude: 36.16905N

Longitude: 107.39304W

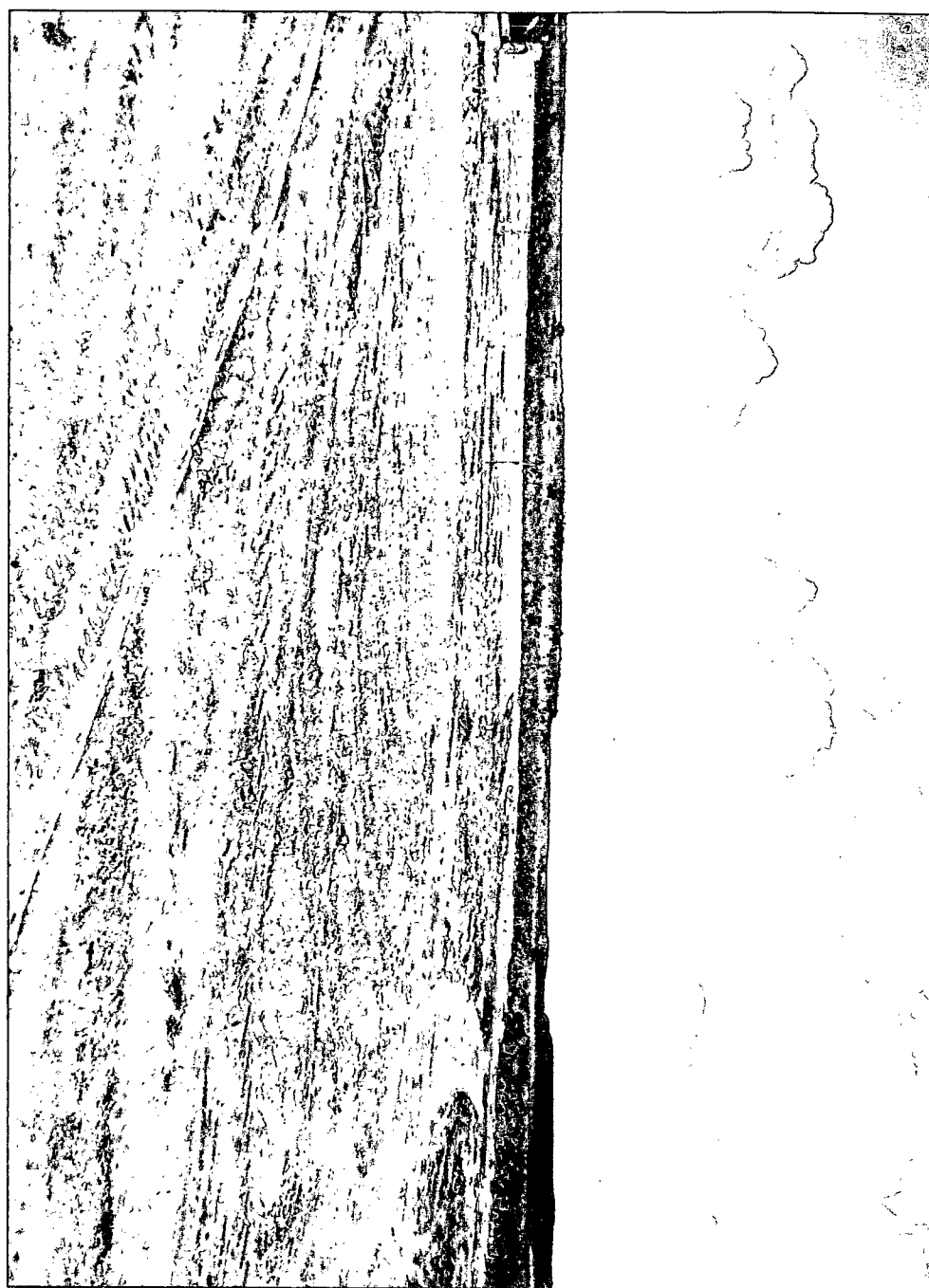
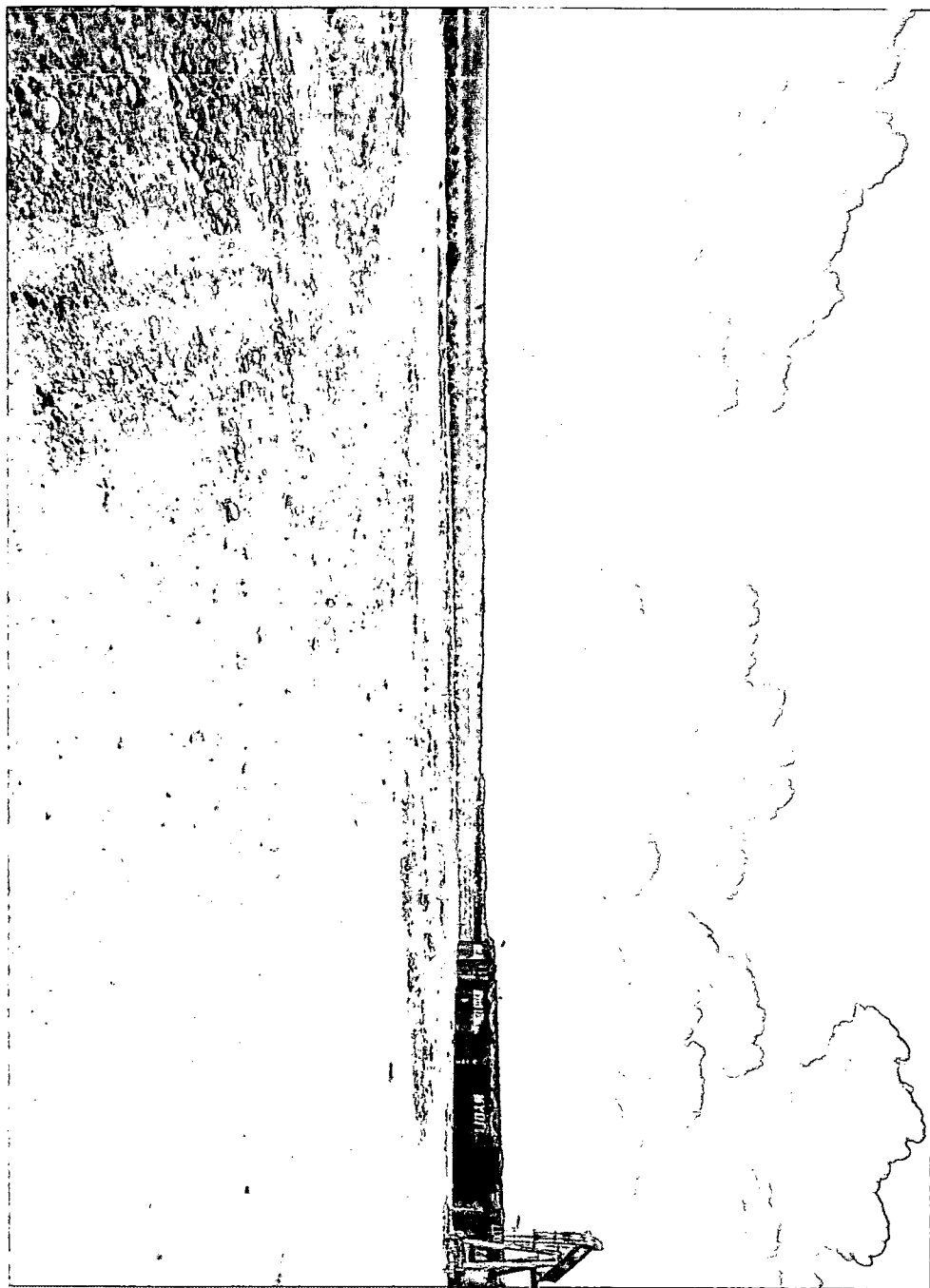
Date Pit Manifold Removed: N/A

Construction Inspector Signature: Wagner

Date Inspected: 9-28-14

LOGOS #7  
LOGOS #7  
E-SEC. 5-T22N  
R5W, OBL

**LOGOS OPERATING, LLC.**  
**LOGOS #7—JIC. LEASE #424**  
**API #30—043—21155**  
**1645' FNL 180' FWL**  
**E—SEC. 5—T22N, R5W**  
**SANDOVAL COUNTY, NM**  
**OFFICE # 505—436—2627**  
**AFTER HRS #866—598—6220**



# Temporary Pit Weekly Inspection Form

<b>WELL NAME:</b>	LOGOS 7		<b>API NO:</b>	30-043-21155	
<b>LEGAL:</b>	<b>Section:</b>	5	<b>Township:</b>	22N	<b>Range:</b> 5W
<b>Drilling RD Date:</b>	10/10/2013				

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	Ramsey Hatalie
WEEK #	1	2	3	4	5	6	7	8	9	10	11	12
DATE	10/14/13	10/21/13	10/28/13	11/04/13	11/11/13	11/18/13	11/28/13	12/02/13	12/09/13	12/16/13	12/23/13	12/30/13
Well sign on location (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Any liner breaches (Y/N)	N	N	N	N	N	N	N	N	N	N	N	N
Any fluid seeps/spills (Y/N)	Y	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	N
Temp pit free of misc. Solid												
Waste/Debris(Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Discharge Line												
Integrity Good (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fence Integrity Good (Y/N)	Y	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	N
Freeboard to be 2' or > Est. (ft)	N	N	N	N	Y (8')	Y (5')	Y (6')	Y (8')	Y (8')	Y (8')	Y (8')	Y (6')
Was the OCD contacted (Y/N)	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	Y
Comments:	Empty out from casing - fluid/mud	N/A	Back flush from the well in the pit	Fluid in pit from back flush from well head	6" Fluid in Pit/8' Clearance/ Southside Where blow down tank has stain dirt around edge of liner.	5' Clearance	6' Clearance	8' Clearance	8' Clearance	8' Clearance	8' Clearance	6' Clearance

# Temporary Pit Weekly Inspection Form

<b>WELL NAME:</b>	LOGOS 7			<b>API NO:</b>	30-039-21155		
<b>LEGAL:</b>	<b>Section:</b>	5	<b>Township:</b>	22N	<b>Range:</b>	5W	
<b>Drilling RD Date:</b>	10/10/2013						

Inspector's Name	Ramsey Hatalie	Ramsey Hatalie	Ramsey Hatalie	Ramsey Hatalie	Ramsey Hatalie	Ramsey Hatalie	Ramsey Hatalie	Ramsey Hatalie	Ramsey Hatalie	Ramsey Hatalie		
WEEK #	13	14	15	16	17	18	19	20	21	22	23	24
DATE	01/07/14	01/06/14	01/14/14	01/25/14	02/15/14	03/03/14	03/24/14	04/05/14	04/12/14	04/22/14		
Well sign on location (Y/N)	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		
Any fluid seeps/spills (Y/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		
Temp pit free of misc. Solid Waste/Debris(Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	N	N		
Discharge Line Integrity Good (Y/N)	Y	Y	Y	Y	N	N	N	N	N	N		
Fence Integrity Good (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	N		
Any Dead Wildlife/ Stock (Y/N)	N	N	N	N	N	N	N	N	N	N		
Freeboard to be 2' or > Est. (ft)	Y (11')	Y (9')	Y (9')	Y (9')	Y (11')	Y (11')	Y (12')	Y (10')	N	N		
Was the OCD contacted (Y/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		
Comments:	11' Clearance	9' Clearance	9' Clearance	9' Clearance	11' Clearance	11' Clearance	12' Clearance	10' Clearance/Crew @ location backfilling pit	Crew in process of backfilling pit	Completion crew backfilled earth pit		



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

Date: September 30, 2014

To: NMOCD

Re: Pit Closure Filings for WPX

---

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



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

Date: October 21, 2014

To: NMOCD

Re: Closure Permit #12229  
Logos 7  
API 30-043-21155

**OIL CONS. DIV DIST. 3**

**OCT 23 2014**

Dear NMOCD,

Logos Operating, LLC (289408) has reviewed their information regarding your email request dated 10/20/14 for general issues encountered on our submitted closure report.

- No copy of Pit Closure Extension was sent to the NMOCD for approval.
  - Please find attached updated closure report with explanation.
  - Please find attached Notification to BIA.

Regards,

A handwritten signature in black ink that reads "Jamie Goodwin". The signature is written in a cursive, flowing style.

Jamie Goodwin  
Regulatory Technician



Logos Operating, LLC  
San Juan Basin  
Closure Report

OCT 23 2014

Lease Name: LOGOS 7  
API NO: 30-043-21155

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 not met due to rig move off date as noted on C-105. Due to confusion at the time Logos only contacted the BIA and Navajo Nation with a pit closure extension request. (See attached).**

**Pit closure extension to 4/22/14 was requested of the BIA dated 1/13/14 and approved.**

**Pit closure extension to 5/22/14 was requested of the BIA \ dated 4/11/14 and approved.**

**In the future Logos will comply with OCD Ruling 19.15.17.13 (E)(2).**

- 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 8 pit to Logos 7 pit: ~260yds.

- 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.**

- 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.**

- 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 two 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.**

- 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 7  
Unit Letter: E  
Section: 5  
Township: 22N  
Range: 05W  
API#: 30-043-21155  
OBL

- 14 Logos inspected and documented daily and weekly reports on the above Temporary Pit. Logos inspected any liner breaches, 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: 9/25/13**

**Inspection End Date: 4/22/14**

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



4001 N. Butler Blvd. Bldg 7101  
Farmington, NM 87401  
Phone: (505) 436-2626  
Fax: (505) 832-3095

January 13, 2014

BIA Jicarilla Agency  
P.O. Box 167  
Dulce, NM 87528

**RE: Pit Closure Extension - Logos #7 well - Jicarilla Lease 424  
UL E, Section 5, T22N, R05W; API 30-043-21155**

**OIL CONS. DIV DIST. 3**


**OCT 23 2014**

Dear Mr. Kurt Sandoval,

Logos Operating is requesting a pit closure extension of 90 days. Due to unusual seasonal rains/snow and now due to freezing conditions and ice in the pit, we will not meet the original timeline and would like to request an extension.

The completion date was 10/24/13 and the required 90 day closure date is 01/22/14. The 90 day pit closure extension will end on 4/22/14.

Very truly yours,

  
Tamra Sessions  
Operations Technician  
Logos Resources, LLC



4001 N. Butler Blvd. Bldg 7101  
Farmington, NM 87401  
Phone: (505) 436-2626  
Fax: (505) 832-3095

April 11, 2014

BIA Jicarilla Agency  
P.O. Box 167  
Dulce, NM 87528

**RE: Pit Closure Extension - Logos #7 well - Jicarilla Lease 424  
UL E, Section 5, T22N, R05W; API 30-043-21155**

**OIL CONS. DIV DIST. 3**

**OCT 23 2014**

Dear Mr. Kurt Sandoval,

Logos Operating is requesting a second pit closure extension of an additional 30 days. Logos has been working diligently to close all pits on the Lease 424, but due to prior unusual seasonal rains/snow, freezing conditions and ice in the pit, it has taken longer than expected to close the pits.

The completion date was 10/24/13 and the required 90 day closure date is 01/22/14. The BLM 90 day pit closure extension will end on 4/22/14 and the 2<sup>nd</sup> extension date is 5/22/14.

Regards,

A handwritten signature in black ink that reads 'Tamra Sessions'.

Tamra Sessions  
Operations Technician  
Logos Resources, LLC