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

12228
43-21160

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 12
API Number: 30-043-21160 OCD Permit Number: 11409
U/L or Qtr/Qtr J Section 6 Township 22N Range 5W County: SANDOVAL
Center of Proposed Design: Latitude 36.16568° N Longitude 107.40033° 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 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. ☐ Yes ☐ No ☐ NA
- ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells

Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit . ☐ Yes ☐ No ☐ NA
NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

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)** ☐ Yes ☐ No
- Written confirmation or verification from the municipality; Written approval obtained from the municipality

Within the area overlying a subsurface mine. **(Does not apply to below grade tanks)** ☐ Yes ☐ No
- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

Within an unstable area. **(Does not apply to below grade tanks)** ☐ Yes ☐ No
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

Within a 100-year floodplain. **(Does not apply to below grade tanks)** ☐ Yes ☐ No
- FEMA map

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). ☐ Yes ☐ No
- Topographic map; Visual inspection (certification) of the proposed site

Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;. ☐ Yes ☐ No
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

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.) ☐ Yes ☐ No
- Topographic map; Visual inspection (certification) of the proposed site

Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application. ☐ Yes ☐ No
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

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. ☐ Yes ☐ No
NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

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_2S, 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. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is between 25-50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ 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). - 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 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. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ 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
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. - 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:** 10/28/2014

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: 04/11/14**

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 36.16568° N _____ Longitude 107.40033° W _____ NAD: ☐ 1927 ☒ 1983

22.

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 Goodwin Date: 9/29/14

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

Logos Operating, LLC
San Juan Basin
Closure Report

Lease Name: LOGOS 12
API NO: 30-043-21160

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.

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	80000	

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 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.

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 12
Unit Letter: J
Section: 6
Township: T22N
Range: R5W
API#: 30-043-21160
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: 11/13/13
Inspection End Date: 4/21/14
NOTE: During start and end dates of temporary pit inspections no issues found.

LOGOS RESOURCES LLC

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

OIL CONSERVATION DIVISION
1220 South St. Francis Drive
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

1 API Number	2 Pool Code	3 Pool Name
		WILDCAT DAKOTA

4 Property Code	5 Property Name	6 Well Number
311963	LOGOS	12

7 OGRID No.	8 Operator Name	9 Elevation
289408	LOGOS RESOURCES, LLC	6924'

10 Surface Location

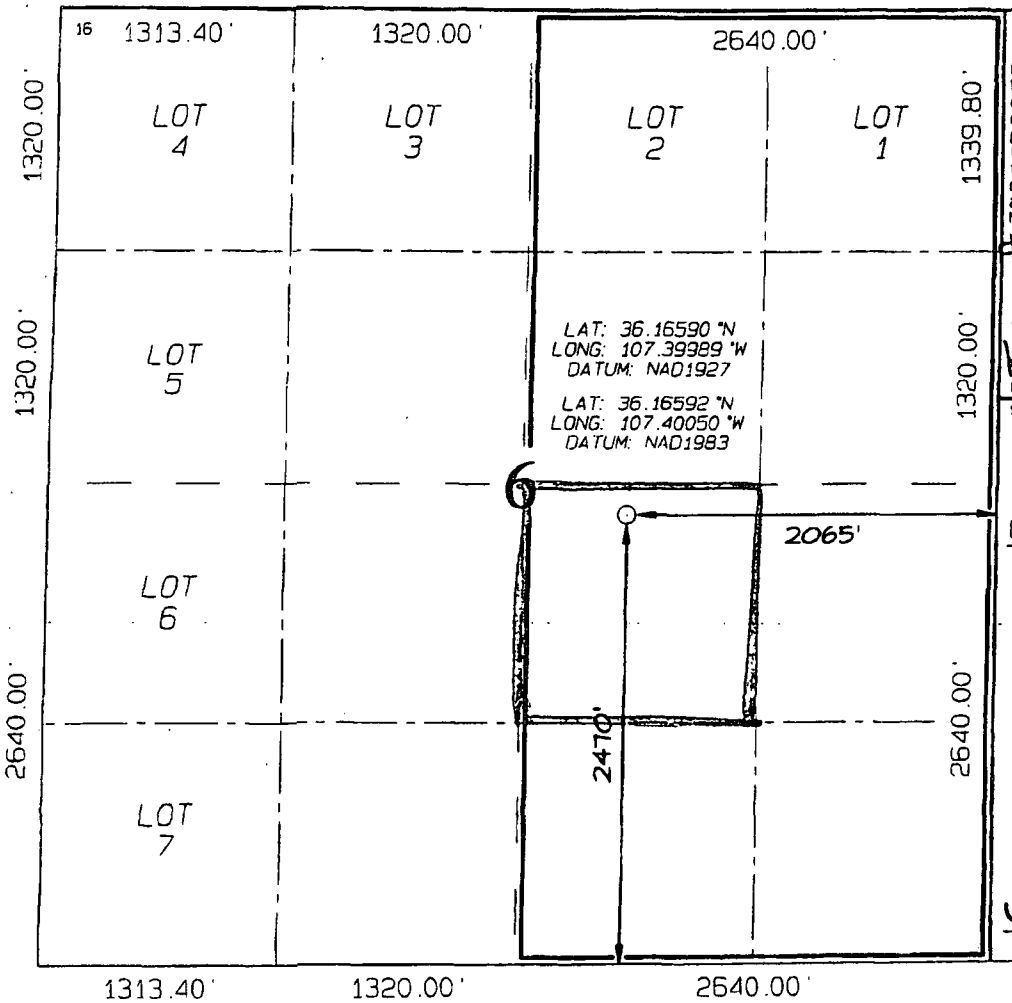
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	6	22N	5W		2470	SOUTH	2065	EAST	SANDOVAL

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

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
40 acres NW/4 SE/4			

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



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 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: 5/24/13

Kristy Graham
Printed Name

Kgraham@logosresourcesllc.com
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.

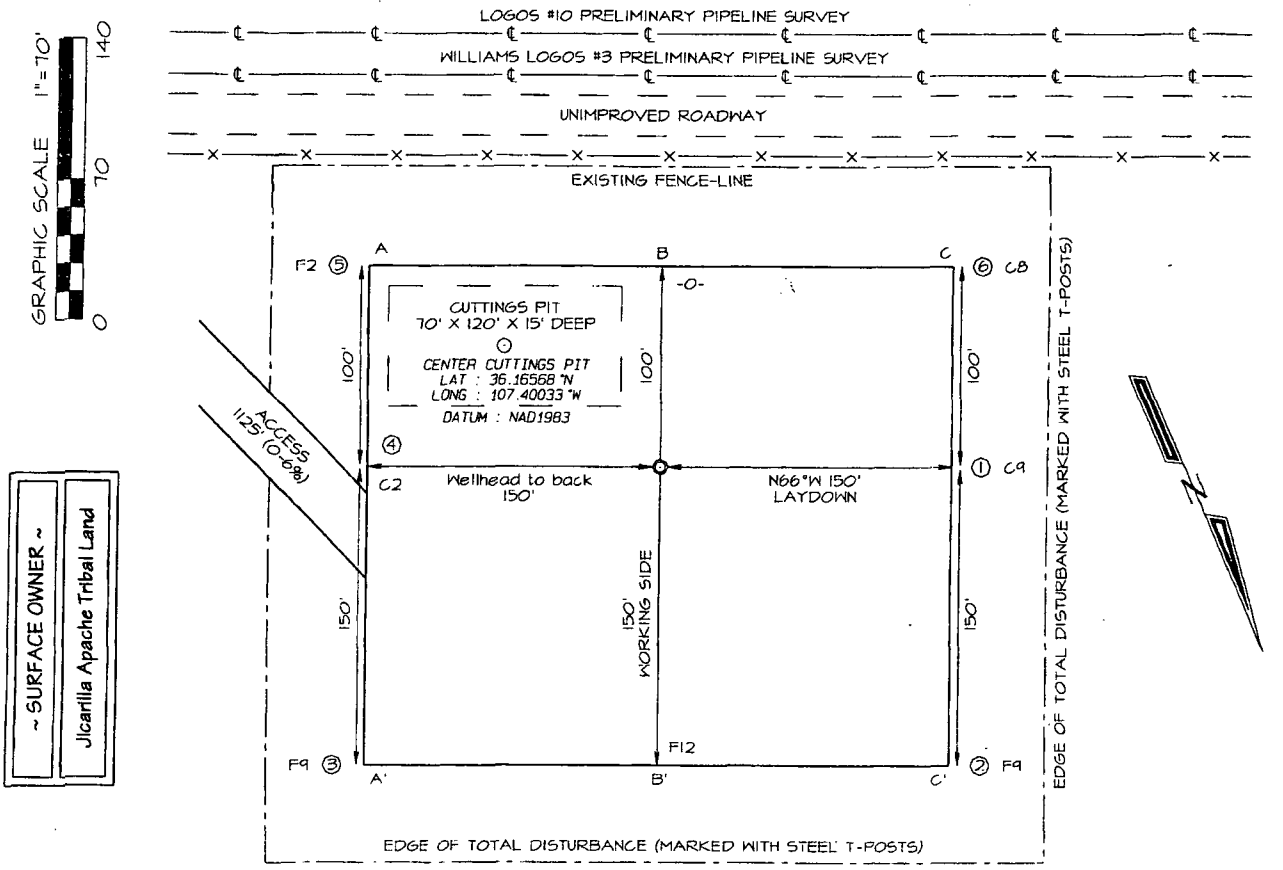
Date of Survey: MARCH 25, 2013

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

LOGOS RESOURCES, LLC LOGOS #12
2470' FSL & 2065' FEL, SECTION 6, T22N, R5W, NMPM
SANDOVAL COUNTY, NEW MEXICO ELEVATION: 6924'
LAT: 36.16592°N LONG: 107.40050°W DATUM: NAD1983



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

Steel T-Posts have been set to define Edge of Disturbance limits which are 50' offset from the edge of the staked wellpad.

Table 1, Summary of Analytical Results
Logos Operating, LLC
Logos #12
Drill Pit Closure and Backfill Material Sampling Report
Sandoval County, New Mexico
Project Number 12035-0042

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	80000
Drill Pit Composite	1	1/17/2014	554	90.2	ND	0.28	896
NMOCD/RCRA Standards	NA	NA	NA	NA	NA	NA	600
Backfill Material Composite	2	1/23/2014	NS	NS	NS	NS	45.8

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: 16526
Samples Received: 1/17/2014 4:30:00PM
Job Number: 12035-0042
Work Order: P401049
Project Name/Location: Logos #12

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.

envirotech
Analytical Laboratory

Logos Operating, LLC	Project Name:	Logos #12	
PO Box 18	Project Number:	12035-0042	**Reported:**
Flora Vista NM, 87415	Project Manager:	Tiffany McIntosh	23-Jan-14 10:37

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Drill Pit Composite	P401049-01A	Sludge	01/17/14	01/17/14	Glass Jar, 4 oz.

envirotech
Analytical Laboratory

Logos Operating, LLC	Project Name:	Logos #12	
PO Box 18	Project Number:	12035-0042	**Reported:**
Flora Vista NM, 87415	Project Manager:	Tiffany McIntosh	23-Jan-14 10:37

Drill Pit Composite

P401049-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1404001	01/20/14	01/22/14	EPA 8021B	
Toluene	**0.10**	0.05	mg/kg	1	1404001	01/20/14	01/22/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1404001	01/20/14	01/22/14	EPA 8021B	
p,m-Xylene	**0.18**	0.05	mg/kg	1	1404001	01/20/14	01/22/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1404001	01/20/14	01/22/14	EPA 8021B	
Total Xylenes	**0.18**	0.05	mg/kg	1	1404001	01/20/14	01/22/14	EPA 8021B	
Total BTEX	**0.28**	0.05	mg/kg	1	1404001	01/20/14	01/22/14	EPA 8021B	
Surrogate: Bromochlorobenzene		*103 %*		*80-120*	*1404001*	*01/20/14*	*01/22/14*	*EPA 8021B*	
Surrogate: 1,3-Dichlorobenzene		*103 %*		*80-120*	*1404001*	*01/20/14*	*01/22/14*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**12.2**	5.00	mg/kg	1	1404001	01/20/14	01/22/14	EPA 8015D	
Diesel Range Organics (C10-C28)	**78.0**	30.0	mg/kg	1	1404002	01/20/14	01/20/14	EPA 8015D	
Total Petroleum Hydrocarbons by 418.1									
Total Petroleum Hydrocarbons	**554**	19.9	mg/kg	1	1404003	01/20/14	01/20/14	EPA 418.1	
Cation/Anion Analysis									
Chloride	**896**	9.99	mg/kg	1	1404016	01/22/14	01/22/14	EPA 300.0	

Logos Operating, LLC	Project Name:	Logos #12	
PO Box 18	Project Number:	12035-0042	**Reported:**
Flora Vista NM, 87415	Project Manager:	Tiffany McIntosh	23-Jan-14 10:37

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*			

Logos Operating, LLC	Project Name:	Logos #12	
PO Box 18	Project Number:	12035-0042	**Reported:**
Flora Vista NM, 87415	Project Manager:	Tiffany McIntosh	23-Jan-14 10:37

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
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			

Logos Operating, LLC	Project Name:	Logos #12	
PO Box 18	Project Number:	12035-0042	**Reported:**
Flora Vista NM, 87415	Project Manager:	Tiffany McIntosh	23-Jan-14 10:37

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
Batch 1404002 - DRO Extraction EPA 3550C										
Blank (1404002-BLK1)				Prepared & Analyzed: 20-Jan-14						
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
Duplicate (1404002-DUP1)		**Source: P401044-01**		Prepared & Analyzed: 20-Jan-14						
Diesel Range Organics (C10-C28)	126	29.9	mg/kg		202			46.2	30	D1
Matrix Spike (1404002-MS1)		**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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Analytical Laboratory

Logos Operating, LLC	Project Name:	Logos #12	
PO Box 18	Project Number:	12035-0042	**Reported:**
Flora Vista NM, 87415	Project Manager:	Tiffany McIntosh	23-Jan-14 10:37

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			

Logos Operating, LLC	Project Name:	Logos #12	
PO Box 18	Project Number:	12035-0042	**Reported:**
Flora Vista NM, 87415	Project Manager:	Tiffany McIntosh	23-Jan-14 10:37

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 1404016 - Anion Extraction EPA 300.0										
Blank (1404016-BLK1)				Prepared & Analyzed: 22-Jan-14						
Chloride	ND	9.92	mg/kg							
LCS (1404016-BS1)				Prepared & Analyzed: 22-Jan-14						
Chloride	529	9.97	mg/kg	499		106	90-110			
Matrix Spike (1404016-MS1)	**Source: P401058-01**			Prepared & Analyzed: 22-Jan-14						
Chloride	503	9.98	mg/kg	499	12.2	98.4	80-120			
Matrix Spike Dup (1404016-MSD1)	**Source: P401058-01**			Prepared & Analyzed: 22-Jan-14						
Chloride	501	9.89	mg/kg	495	12.2	98.8	80-120	0.506	20	

Logos Operating, LLC	Project Name:	Logos #12	
PO Box 18	Project Number:	12035-0042	**Reported:**
Flora Vista NM, 87415	Project Manager:	Tiffany McIntosh	23-Jan-14 10:37

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

CHAIN OF CUSTODY RECORD

16526

Client: Logos Operating	Project Name / Location: Logos #12
Email results to: T. McIntosh	Sampler Name: T. McIntosh
Client Phone No.: 505-330-9333	Client No.: 12035-0042

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative			ANALYSIS / PARAMETERS															
					HNO_3	HCl	cool	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
Drill Pit Composite	1/17/14	1400	P401049-01	1-4-oz jar			X	X	X							X	X				Y	Y

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Tiffany McIntosh	1/17/14	1630		1/17/14	1630
Relinquished by: (Signature)			Received by: (Signature)		

Sample Matrix

Soil ☐ Solid ☐ Sludge ☑ Aqueous ☐ Other ☐ _____

☐ Sample(s) dropped off after hours to secure drop off area.

13.1°C

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Analytical Laboratory

5795 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 • laboratory@envirotech-inc

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Logos Operating, LLC
Chain Of Custody Number: 16557
Samples Received: 1/23/2014 3:10:00PM
Job Number: 12035-0042
Work Order: P401070
Project Name/Location: Logos #12

Entire Report Reviewed By: _____ Date: 1/27/14

Tim Cain, Laboratory Manager

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

envirotech
Analytical Laboratory

Logos Operating, LLC	Project Name:	Logos #12	
PO Box 18	Project Number:	12035-0042	**Reported:**
Flora Vista NM, 87415	Project Manager:	Tiffany McIntosh	27-Jan-14 08:40

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Backfill Material Composite	P401070-01A	Soil	01/23/14	01/23/14	Glass Jar, 4 oz.

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Analytical Laboratory

Logos Operating, LLC	Project Name:	Logos #12	
PO Box 18	Project Number:	12035-0042	**Reported:**
Flora Vista NM, 87415	Project Manager:	Tiffany McIntosh	27-Jan-14 08:40

Backfill Material Composite

P401070-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Cation/Anion Analysis									
Chloride	**45.8**	9.96	mg/kg	1	1404028	01/24/14	01/24/14	EPA 300.0	

Logos Operating, LLC	Project Name:	Logos #12	
PO Box 18	Project Number:	12035-0042	**Reported:**
Flora Vista NM, 87415	Project Manager:	Tiffany McIntosh	27-Jan-14 08:40

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 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	

envirotech
Analytical Laboratory

Logos Operating, LLC	Project Name:	Logos #12	
PO Box 18	Project Number:	12035-0042	**Reported:**
Flora Vista NM, 87415	Project Manager:	Tiffany McIntosh	27-Jan-14 08:40

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

CHAIN OF CUSTODY RECORD

16557

Client:	Project Name / Location:
Logos Operating	Logos #12
Email results to:	Sampler Name:
T. McIntosh	T. McIntosh
Client Phone No.:	Client No.:
505-320-2857	12035-0042

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative HNO_3	Preservative HCl	Preservative cool	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
backfill material composite	1/23/14	1022	P401070-01	1-4oz jar			X										X				Y	Y

ANALYSIS / PARAMETERS

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Tiffany McIntosh	1/23/14	1510		1/23/14	1510
Relinquished by: (Signature)			Received by: (Signature)		

Sample Matrix

Soil ☑ Solid ☐ Sludge ☐ Aqueous ☐ Other ☐ _____

☐ Sample(s) dropped off after hours to secure drop off area.

8.9

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Analytical Laboratory

5795 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 • laboratory@envirotech-Inc

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

State of New Mexico
Energy, Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-105
Revised August 1, 2011

1. WELL API NO.
30-043-21160

2. Type of Lease
☐ STATE ☐ FEE ☒ FED/INDIAN

3. State Oil & Gas Lease No.
JICARILLA APACHE LEASE #242

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

4. Reason for filing:

☐ **COMPLETION REPORT** (Fill in boxes #1 through #31 for State and Fee wells only)

☒ **C-144 CLOSURE ATTACHMENT** (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: 12

7. Type of Completion:
☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ 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	16. Date Completed (Ready to Produce)	17. Elevations (DF and RKB, RT, GR, etc.)
		11/24/13		

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

23. **CASING RECORD** (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED

24. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

25. TUBING RECORD

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

28. **PRODUCTION**

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 36.16568N Longitude 107.40033W 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 Jamie Goodwin Printed Name Jamie Goodwin Title Regulatory Tech. Date 9/29/14

E-mail Address JGoodwin@logosoperating.com

30

LOGOS RESOURCES LLC

Pit Closure Form:

Date: 4-11-14

Well Name: LOGOS 12

Footages: 2470' FSL & 2065' FEL Unit Letter: J

Section: 6, T-22N, R-5W, County: SAN JUAN State: NM

Contractor Closing Pit: JD Ritter

Construction Inspector: _____

Inspector Signature: _____

Date: 4-11-14

Tamra Sessions

From: Tamra Sessions
Sent: Thursday, February 20, 2014 8:06 AM
To: Jonathan Kelly (jonathan.kelly@state.nm.us)
Cc: brandon.powell@state.nm.us; Wayne Ritter
Subject: Logos 12_Jicarilla Pit Closure 72hr notice

LOGOS #12
Jicarilla Lease 424
API #30-043-21160
UL J, Section 06, T22N, R05W

Logos Operating is giving 72hr notice of plans to start temporary pit closure operations on Monday, February 24, 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

LOGOS RESOURCES LLC

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

Date: February 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 #12
API #30-043-21160
UL J, Section 06, T22N, R05W

Dear Mr. Kurt Sandoval,

According to NMOCD rules, Logos Operating, LLC is notifying you that temporary pit closure operations will begin on February 24, 2014 on the Logos #12. 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,

Tom Sessions

Tamra Sessions
Operations Technician
tsessions@logosresourcesllc.com
505-330-9333

7013 2250 0001 2785 5248

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0401
10
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FARMINGTON, NM FEB 19 2014 USPS
02/19/2014

Pit LA 12

Sent To BIA Jicarilla Agency
Street, Apt. No.; or PO Box No. PO BOX 167
City, State, ZIP+4 Dulce, NM 87528

PS Form 3800, August 2006 See Reverse for Instructions

LOGOS RESOURCES LLC

Reclamation Form:

Date: 4-15-14

Well Name: LOGOS 12

Footages: 2470' FSL & 2065' FEL Unit Letter: J

Section: 6, T-22N, R-5W County: SANDAVAL State: NM

Reclamation Contractor: JD Ritter

Reclamation Start Date: 2-24-14

Reclamation Complete Date: 4-15-14

Road Completion Date: 4-15-14

Seeding Date: Fall 2014

PIT MARKER STATUS

(When Required) Picture of Marker set needed

Date Marker Placed: 8-7-14

Latitude: 36.16568

Longitude: 107.40033

Date Pit Manifold Removed: N/A

Construction Inspector Signature:

Date Inspected: 4-15-14


LOGOS OPERATING, LLC.
LOGOS #12—JIC. LEASE #424
API #30—043—21160
2470' FSL 2065' FEL
J—SEC. 6—T22N—R5W
SANDOVAL COUNTY, NM
OFFICE # 505—436—2627
AFTER HRS #866—598—6220

Temporary Pit Weekly Inspection Form

WELL NAME:	*LOGOD 12*		**API NO:**	*30-043-21160*	
LEGALS:	**Section:**	*6*	**Township:** *22N*	**Range:**	*5W*
Drilling RD Date:	**11/24/2013**				

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	12/02/13	12/09/13	12/16/13	12/23/13	12/30/13	01/06/14	01/07/14	01/14/14	01/25/14	02/15/14	03/03/14	03/24/14
Well sign on location (Y/N)	Y	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	N
Any fluid seeps/spills (Y/N)	N	N	N	N	N	N	N	N	N	N	N	N
HC's on top of temp. pit (Y/N)	N	N	N	Y	Y	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	N	Y	Y	N	N	N
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)	Y (5')	Y (4')	Y (5')	Y (4')	Y (5')	Y (10')	Y (12')	Y (10')	Y (10')	Y (8')	Y (10')	Y (8')
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:	5' CLEARANCE	4' CLEARANCE	5' CLEARANCE	4' CLEARANCE/FROM BLOWDOWN TANK TO PIT	5' CLEARANCE/LITTLE FROM THE FLOW BACK TANK	10' CLEARANCE	12' CLEARANCE	10' CLEARANCE	10' CLEARANCE	8' CLEARANCE	10' CLEARANCE	8' CLEARANCE

Temporary Pit Weekly Inspection Form

WELL NAME:	*LOGOS 12*		**API NO:**	*30-043-51160*	
LEGALS:	**Section:**	*6*	**Township:** *22N*	**Range:**	*5W*
Drilling RD Date:	**11/24/2013**				

Inspector's Name	Ramsey Hatalie	Ramsey Hatalie	Ramsey Hatalie									
WEEK #	13	14	15	16	17	18	19	20	21	22	23	24
DATE	04/05/14	04/12/14	04/21/14									
Well sign on location (Y/N)	Y	Y	Y									
Any liner breeches (Y/N)	N	N	N									
Any fluid seeps/spills (Y/N)	N	N	N									
HC's on top of temp. pit (Y/N)	N	N	N									
Temp pit free of misc. Solid Waste/Debris(Y/N)	N	N	N									
Discharge Line Integrity Good (Y/N)	N	N	N									
Fence Integrity Good (Y/N)	N	N	N									
Any Dead Wildlife/ Stock (Y/N)	N	N	N									
Freeboard to be 2' or > Est. (ft)	N	N	N									
Was the OCD contacted (Y/N)	N	N	N									
Pictures taken (Y/N)	Y	Y	Y									
Comments:	CREW @ LOCATION WORKING ON BACK FILL ING THE PIT	COMPLETION CREW FINISHED BACK FILLING PIT	COMPLETION									

LOGOS RESOURCES LLC

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

Jamie Goodwin
Regulatory Technician