

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 August 1, 2011

**For temporary pits, closed-loop systems, and below-grade tanks,** submit to the appropriate NMOCD District Office.  
**For permanent pits and exceptions** submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

12240  
43-21119  
Pit, Closed-Loop System, Below-Grade Tank, or  
Proposed Alternative Method Permit or Closure Plan Application

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

**Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, 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	RCVD OCT 1 '14
Address: 4001 North Butler Avenue, Building 7101 Farmington, NM 87401		OIL CONS. DIV.
Facility or well name: LOGOS 1		DIST. 3
API Number: 30-043-21119	OCD Permit Number: _____	
U/L or Qtr/Qtr <u>F</u> Section <u>5</u> Township <u>22N</u> Range <u>05W</u> County: SANDOVAL		
Center of Proposed Design: Latitude 36.16848° N		Longitude 107.38781° W
		NAD: <input type="checkbox"/> 1927 <input checked="" type="checkbox"/> 1983
Surface Owner: <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input checked="" type="checkbox"/> Tribal Trust or Indian Allotment		

2.	
<input checked="" type="checkbox"/> <b>Pit:</b> Subsection F or G of 19.15.17.11 NMAC	
Temporary: <input checked="" type="checkbox"/> Drilling <input type="checkbox"/> Workover	
<input type="checkbox"/> Permanent <input type="checkbox"/> Emergency <input type="checkbox"/> Cavitation <input type="checkbox"/> P&A	
<input checked="" type="checkbox"/> Lined <input type="checkbox"/> Unlined Liner type: Thickness <u>20</u> mil <input checked="" type="checkbox"/> LLDPE <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____	
<input type="checkbox"/> String-Reinforced	
Liner Seams: <input checked="" type="checkbox"/> Welded <input checked="" type="checkbox"/> Factory <input type="checkbox"/> Other _____ Volume: <u>8,000</u> bbl Dimensions: L <u>130</u> x W <u>60</u> x D <u>10</u>	

3.	
<input type="checkbox"/> <b>Closed-loop System:</b> Subsection H of 19.15.17.11 NMAC	
Type of Operation: <input type="checkbox"/> P&A <input type="checkbox"/> Drilling a new well <input type="checkbox"/> Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)	
<input type="checkbox"/> Drying Pad <input type="checkbox"/> Above Ground Steel Tanks <input type="checkbox"/> Haul-off Bins <input type="checkbox"/> Other _____	
<input type="checkbox"/> Lined <input type="checkbox"/> Unlined Liner type: Thickness _____ mil <input type="checkbox"/> LLDPE <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____	
Liner Seams: <input type="checkbox"/> Welded <input type="checkbox"/> Factory <input type="checkbox"/> Other _____	

4.	
<input type="checkbox"/> <b>Below-grade tank:</b> Subsection I of 19.15.17.11 NMAC	
Volume: _____ bbl Type of fluid: _____	
Tank Construction material: _____	
<input type="checkbox"/> Secondary containment with leak detection <input type="checkbox"/> Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	
<input type="checkbox"/> Visible sidewalls and liner <input type="checkbox"/> Visible sidewalls only <input type="checkbox"/> Other _____	
Liner type: Thickness _____ mil <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____	

5.	
<input type="checkbox"/> <b>Alternative Method:</b>	
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	

6.

**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 \_\_\_\_\_

7.

**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)

8.

**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

9.

**Administrative Approvals 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:**

- ☐ Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval.
- ☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10.

**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. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No
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	<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. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; 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 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 500 feet of a wetland. - 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 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

11.

**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: \_\_\_\_\_

12.

**Closed-loop Systems 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.

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9  
☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - 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: \_\_\_\_\_  
☐ Previously Approved Operating and Maintenance Plan API Number: \_\_\_\_\_ (Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

13.

**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

14.

**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 ☐ Closed-loop System  
☐ 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 (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15.

**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 F 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 I of 19.15.17.13 NMAC  
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16.

**Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)**Instructions:** Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?☐ Yes (If yes, please provide the information below) ☐ No*Required for impacted areas which will not be used for future service and operations:*☐ 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 I of 19.15.17.13 NMAC☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17.

**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 may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 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 between 50 and 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

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 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 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 private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, 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

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 500 feet of a wetland.

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

☐ 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 &amp; Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ No

18.

**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 F of 19.15.17.13 NMAC☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements 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 Subsection F of 19.15.17.13 NMAC☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F 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 I of 19.15.17.13 NMAC☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

19.

**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: \_\_\_\_\_

20.

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

OCD Representative Signature: Jonathan O. Kelly Approval Date: 10/20/2014

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

21.

**Closure Report (required within 60 days of closure completion):** Subsection K of 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: 8/24/12

22.

**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.

23.

**Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**

*Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.*

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

*Required for impacted areas which will not be used for future service and operations:*

- ☐ Site Reclamation (Photo Documentation)  
☐ Soil Backfilling and Cover Installation  
☐ Re-vegetation Application Rates and Seeding Technique

24.

**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)  
☒ 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 36.16848°N Longitude 107.38781°W NAD: ☐ 1927 ☒ 1983

25.

**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): Tamra Sessions Title: Operations Technician

Signature: Tam Sessions Date: 9/30/14

e-mail address: tsessions@logosresourcesllc.com Telephone: 505-330-9333

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

**Lease Name: LOGOS 1  
API NO: 30-043-21119**

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 (B) 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). Well located on Tribal Land.**

- 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. Re-contouring and seeding occurred in Fall 2013 due to rig and construction activity in developing this lease.**

- 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

**Due to confusion at the time this temporary pit was closed, only the Jicarilla Nation and BIA were notified. In the future Logos will comply with OCD ruling 19.15.17.13(E)(2).**

- 6 Liner of temporary pit shall be removed above "mud level" after stabilization. Removal of liner will consist of manually or mechanically cutting liner at mud level and removing all remaining liner. Care will be taken or remove "All" of the liner i.e., edges of liner entrenched or buried. All excessive liver will be disposed of at a licensed disposal facility.

**Liner of temporary pit was removed above "mud level" after stabilization. Removal of the liner consisted of manually cutting liner at mud level and removing all remaining liner. Care was taken to**

remove "ALL" of the liner i.e., edges of liner entrenched or buried. All excessive liner was disposed of at a licensed disposal facility. (San Juan County Landfill).

- 7 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 approximately 3 parts clean soil to 1 part pit contents.

- 8 A five point composite sample will be taken of the pit using sampling tools and all samples rested per Subsection B of 19.15.17.13(B)(1)(b). In the event that the criteria are not met, all contents will be handled per Subparagraph (a) of Paragraph (1) of Subsection B of 19.15.17.13 i.e., Dig and haul

A five composite sample was taken of the pit using sampling tools and all samples tested per Subsection B of 19.15.17.1 3(B)(1)(b). (Sample results attached).

Components	Tests Method	Limit (mg/Kg)	Results (ppm)
Benzene	EPA SW-846 8021B or 8260B	0.2	ND
BTEX	EPA SW-846 8021B or 8260B	50	2.9 40.8
TPH	EPA SW-846 418.1	2500	ND
GRO/DRO	EPA SW-846 8015M	500	40.8 3.9
Chlorides	EPA 300.1	1000	144

10/29/2014 per Tamra

10/20/2014 per Tamra

- 9 Upon completion of solidification and testing, 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 material passed solidification and testing standards. 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 equal 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 upon the abandonment of all the wells on the pad. 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 and Well Number, Unit Letter, 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: LOGO  
Lease Name & Well Number: LOGOS 1  
Unit Letter: F  
Section: 5  
Township: T22N  
Range: R05W  
API #: 30-043-21119  
OBL

- 14 Logos inspected the temporary pit but no physical logs were kept. Logos monitored and closed the pit in coordination and under the supervision of the Jicarilla/BIA. The sampling results of the pit contents were within the required thresholds. In the future Logos will maintain logs in accordance with OCD ruling 19.15.17.12(B)(3).



**WALSH**

ENGINEERING &amp; PRODUCTION CORP.

Petroleum Engineering Consulting  
Lease Management  
Contract Pumping7415 East Main  
Farmington, New Mexico 87402  
(505) 327-4892 • Fax (505) 327-9834

May 21, 2012

## CERTIFIED MAIL

Ms. Merldine Oka  
Jicarilla Apache Nation  
Oil and Gas Administration  
#6 Dulce Rock Road  
Dulce, NM 87528Re: Logos Capital Management, LLC  
Logos #1 and Logos #2

Dear Ms. Oka,

According to NMOCD rules, Logos Capital Management, LLC is notifying you that they intend to bury the drill cuttings in the reserve pit, assuming that they qualify as per Subsection B of 19.15.17.13 (B) (1)(b) NMAC. No action is required on your part. If you have any questions, please don't hesitate to call me.

Sincerely,

Paul C. Thompson, P.E.  
Agent for Logos Capital Management, LLC

RECEIVED

MAY 02 2012

Form 3160-5  
(August 1999)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFarmington Field Office  
Bureau of Land ManagementFORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: November 30, 2000**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE: Other instructions on reverse side**

1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other		8. Well Name and No. Logos #1
2. Name of Operator Logos Capital Management		9. API Well No. 30-043-2119
3a. Address c/o Walsh Engineering 7415 East Main St. Farmington, NM 87402	3b. Phone No. (include area code) (505) 327-4892	10. Field and Pool, or Exploratory Area Basin Dakota
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 1610' FNL & 1710' FWL Sec. 5, T22N, R5W		11. County or Parish, State Sandoval, NM

## 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, A Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

At the request of Mr. Kurt Sandoval with the Jicarilla BIA, the location has been rotated 180 degrees so that the pits will be uphill. The outer corners of the pad will remain the same but the well location moved slightly. Attached is a new plat and location diagram. All other aspects of the APD package will remain the same.

RCVD MAY 22 '12

OIL CONS. DIV.

DIST. 3

14. I hereby certify that the foregoing is true and correct	
Name (Printed/Typed) Paul C. Thompson, P.E.	Title Agent/Engineer
Signature <i>Paul C. Thompson</i>	Date April 27, 2012

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by <i>[Signature]</i>	Title AFM	Date 5/21/12
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operation thereon.	Office FFC	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, makes it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

NMOC  
AV

District I  
1625 N. French Drive, Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

District II  
911 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 30-043-21119		Pool Code 71599	Pool Name BASIN DAKOTA
Property Code 39236	Property Name LOGOS		Well Number 1
DGRID No. 287123	Operator Name LOGOS CAPITAL MANAGEMENT, LLC		Elevation 6907'

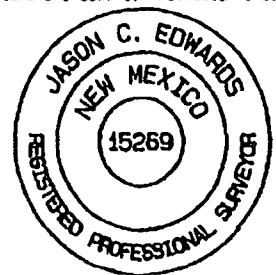
10 Surface Location

UL or lot no.	Section	Township	Range	Lot 1th	Feet from the	North/South line	Feet from the	East/West line	County
F	5	22N	5W		1610	NORTH	1710	WEST	SANDOVAL

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot 1th	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 321.13 Acres - (W/2)					Joint or Infill	Consolidation Code	Order No.		

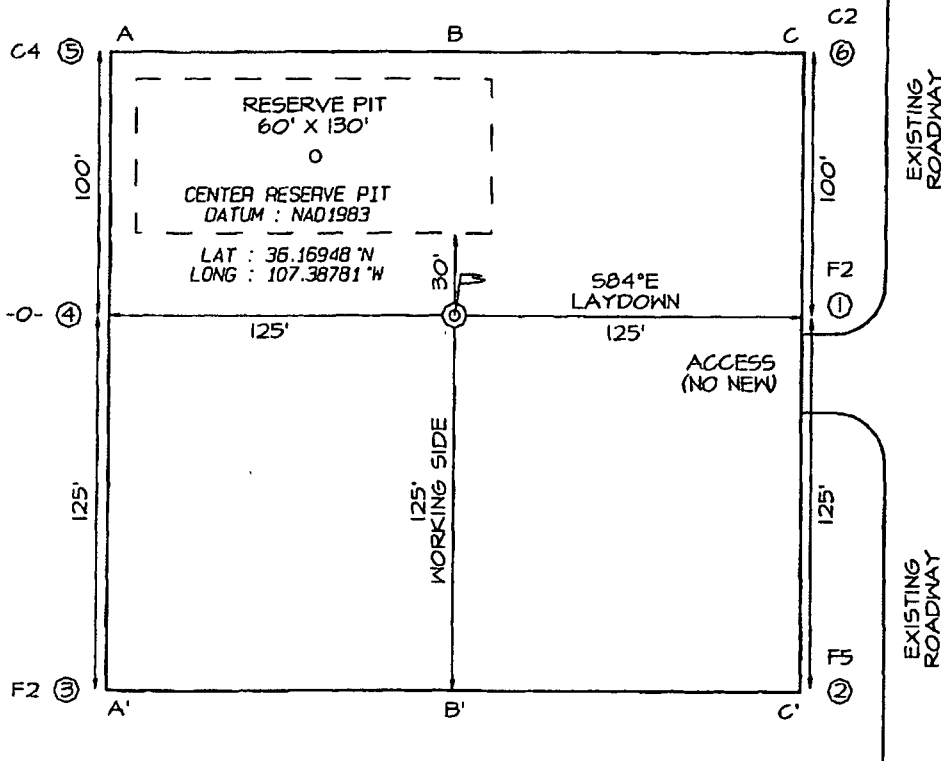
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p>18</p> <p>5280.00'</p> <p>LOT 4</p> <p>LOT 3</p> <p>LOT 2</p> <p>LOT 1</p> <p>1610'</p> <p>1710'</p> <p>1339.80'</p> <p>1320.00'</p> <p>2640.00'</p> <p>LAT: 36.16928°N LONG: 107.38706°W DATUM: NAD1927</p> <p>LAT: 36.16930°N LONG: 107.38766°W DATUM: NAD1983</p> <p>5</p>				<p>17 OPERATOR CERTIFICATION</p> <p>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.</p> <p><u>Paul C. Thompson</u> 5/11/12 Signature Date</p> <p><u>PAUL C. THOMPSON</u> Printed Name</p> <p><u>PAUL C. WALSHENG.NET</u> E-mail Address</p> <p>18 SURVEYOR CERTIFICATION</p> <p>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.</p> <p>Survey Date: JANUARY 11, 2012</p> <p>Signature and Seal of Professional Surveyor</p> <p></p> <p><b>JASON C. EDWARDS</b> Certificate Number 15269</p>	
--	--	--	--	--	--

5277.36'

LOGOS CAPITAL MANAGEMENT, LLC LOGOS #1  
 1610' FNL & 1710' FWL, SECTION 5, T22N, R5W, NMPM  
 SANDOVAL COUNTY, NEW MEXICO ELEVATION: 6907'

LATITUDE: 36.16930° N  
 LONGITUDE: 107.38766° W  
 DATUM: NAD1983



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

A-A'						
6917'						
6907'						
6897'						

B-B'						
6917'						
6907'						
6897'						

C-C'						
6917'						
6907'						
6897'						



## Report Summary

Client: Walsh Eng

Chain of Custody Number: 14232

Samples Received: 08-08-12

Job Number: 07173-0001

Sample Number(s): 62901

Project Name/Location: Logo's #1

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to be "L. J. O.", written over a horizontal line.

Date:

8/16/12

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.



**EPA METHOD 8015 Modified  
Nonhalogenated Volatile Organics  
Total Petroleum Hydrocarbons**

Client:	Walsh Engr	Project #:	07173-0001
Sample ID:	Logo's #1	Date Reported:	08-16-12
Laboratory Number:	62901	Date Sampled:	08-08-12
Chain of Custody No:	14232	Date Received:	08-08-12
Sample Matrix:	Soil	Date Extracted:	08-13-12
Preservative:	Cool	Date Analyzed:	08-15-12
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	3.9	0.1
Total Petroleum Hydrocarbons	3.9	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Logo's #1**



**EPA Method 8015 Modified**  
**Nonhalogenated Volatile Organics**  
**Total Petroleum Hydrocarbons**

**Quality Assurance Report**

Client:	QA/QC	Project #:	N/A
Sample ID:	0815TCAL QA/QC	Date Reported:	08-16-12
Laboratory Number:	62927	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-15-12
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	08-15-12	9.6289E+02	9.6327E+02	0.04%	0 - 15%
Diesel Range C10 - C28	08-15-12	9.9960E+02	1.0000E+03	0.04%	0 - 15%

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	ND	0.2
Diesel Range C10 - C28	ND	0.1
Total Petroleum Hydrocarbons	ND	

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	ND	ND	0.0%	0 - 30%
Diesel Range C10 - C28	5.3	5.2	1.9%	0 - 30%

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	ND	250	220	87.9%	75 - 125%
Diesel Range C10 - C28	5.3	250	298	117%	75 - 125%

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Wastewater, SW-846, USEPA, December 1996.

Comments: QA/QC for Samples 62896-62901, 62927-62928, 62933-62934 and 62937



**EPA METHOD 8021  
AROMATIC VOLATILE ORGANICS**

Client:	Walsh Engr	Project #:	07173-0001
Sample ID:	Logos #1	Date Reported:	08-15-12
Laboratory Number:	62901	Date Sampled:	08-08-12
Chain of Custody:	14232	Date Received:	08-08-12
Sample Matrix:	Soil	Date Analyzed:	08-14-12
Preservative:	Cool	Date Extracted:	08-14-12
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	50

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	10.0
Toluene	ND	10.0
Ethylbenzene	12.1	10.0
p,m-Xylene	28.7	10.0
o-Xylene	ND	10.0
Total BTEX	40.8	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	88.8 %
	1,4-difluorobenzene	98.4 %
	Bromochlorobenzene	94.9 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846 USEPA, December 1996.

Comments: Logo's #1





**EPA METHOD 8021  
AROMATIC VOLATILE ORGANICS**

Client:	N/A	Project #:	N/A
Sample ID:	0814BCAL QA/QC	Date Reported:	08-15-12
Laboratory Number:	62896	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-14-12
Condition:	N/A	Analysis:	BTEX
		Dilution:	50

Calibration and Detection Limits (ug/L)	I-Cal RF	C-Cal RF	%Diff	Blank Conc	Detect. Limit
		Accept. Range 0-15%			
Benzene	7.3179E-06	7.3179E-06	0.000	ND	0.2
Toluene	6.4792E-06	6.4792E-06	0.000	ND	0.2
Ethylbenzene	7.0634E-06	7.0634E-06	0.000	ND	0.2
p,m-Xylene	5.1175E-06	5.1175E-06	0.000	ND	0.2
o-Xylene	7.3712E-06	7.3712E-06	0.000	ND	0.2

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect. Limit
Benzene	ND	ND	0.00	0 - 30%	10
Toluene	ND	ND	0.00	0 - 30%	10
Ethylbenzene	ND	ND	0.00	0 - 30%	10
p,m-Xylene	ND	ND	0.00	0 - 30%	10
o-Xylene	ND	ND	0.00	0 - 30%	10

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	ND	2500	2430	97.2	39 - 150
Toluene	ND	2500	2420	96.8	46 - 148
Ethylbenzene	ND	2500	2450	98.0	32 - 160
p,m-Xylene	ND	5000	4850	97.0	46 - 148
o-Xylene	ND	2500	2420	96.8	46 - 148

ND - Parameter not detected at the stated detection limit.

Dilution: Spike and spiked sample concentration represent a dilution proportional to sample dilution.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.  
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

**Comments: QA/QC for Samples 62864, 62901, 62896-62900 and 62927-62928**



## Chloride

Client:	Walsh Eng	Project #:	07173-0001
Sample ID:	Logos #1	Date Reported:	08-14-12
Lab ID#:	62901	Date Sampled:	08-08-12
Sample Matrix:	Soil	Date Received:	08-08-12
Preservative:	Cool	Date Analyzed:	08-13-12
Condition:	Intact	Chain of Custody:	14232

Parameter	Concentration (mg/Kg)
Total Chloride	144

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.  
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: Logo's #1



## TRACE METAL ANALYSIS

Client:	Walsh Engr	Project #:	07173-0001
Sample ID:	Logos #1	Date Reported:	08-14-12
Laboratory Number:	62901	Date Sampled:	08-08-12
Chain of Custody:	14232	Date Received:	08-08-12
Sample Matrix:	Soil	Date Analyzed:	08-13-12
Preservative:	Cool	Date Digested:	08-13-12
Condition:	Intact	Analysis Needed:	Total RCRA Metals
		Dilution	10

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
-----------	--------------------------	--------------------------

Arsenic	3.25	0.01
Barium	58.0	0.01
Cadmium	0.21	0.01
Chromium	2.27	0.01
Lead	3.90	0.01
Mercury	0.01	0.01
Selenium	0.11	0.01
Silver	ND	0.01

ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils.  
SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emission Spectroscopy, SW-846, USEPA, December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C  
section 261.24, August 24, 1998.

Comments: **Logo's #1**



**TRACE METAL ANALYSIS**  
**Quality Control /**  
**Quality Assurance Report**

Client:	QA/QC	Project #:	QA/QC
Sample ID:	08-13 TM QA/QC	Date Reported:	08-14-12
Laboratory Number:	62901	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Analysis Requested:	Total RCRA Metals	Date Analyzed:	08-13-12
Condition:	N/A	Date Digested:	08-13-12
		Dilution	10

Blank & Duplicate Conc. (mg/Kg)	Instrument Blank (mg/Kg)	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	ND	ND	0.01	3.25	3.16	2.56%	0% - 30%
Barium	ND	ND	0.01	58.0	56.3	2.93%	0% - 30%
Cadmium	ND	ND	0.01	0.21	0.21	0.00%	0% - 30%
Chromium	ND	ND	0.01	2.27	2.21	2.60%	0% - 30%
Lead	ND	ND	0.01	3.93	3.84	2.17%	0% - 30%
Mercury	ND	ND	0.01	0.01	0.01	0.00%	0% - 30%
Selenium	ND	ND	0.01	0.11	0.10	12.6%	0% - 30%
Silver	ND	ND	0.01	ND	ND	0.00%	0% - 30%

Spike Conc. (mg/Kg)	Spike Added	Sample	Spiked sample	Percent recovery	Acceptance range
Arsenic	2.50	3.25	5.57	97.0%	80% - 120%
Barium	5.00	58.0	57.1	90.6%	80% - 120%
Cadmium	2.50	0.21	2.56	94.4%	80% - 120%
Chromium	5.00	2.27	6.76	93.0%	80% - 120%
Lead	5.00	3.93	8.14	91.2%	80% - 120%
Mercury	1.00	0.01	0.96	95.2%	80% - 120%
Selenium	1.00	0.11	1.08	97.6%	80% - 120%
Silver	1.00	ND	1.00	99.5%	80% - 120%

ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils.  
 SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emission Spectroscopy, SW-846, USEPA, December 1996.

Comments: QA/QC for Sample 62901


# CHAIN OF CUSTODY RECORD

14232

Client: <b>Walsh Eng</b> <b>Logo's</b>			Project Name / Location: <b>Logo's #1</b>			ANALYSIS / PARAMETERS													
Email results to: <b>pm@walsheng.net</b> <b>Paul@Walsheng.net</b>			Sample Name: <b>Paul Thompson</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>505-320-3184</b>			Client No.: <b>07173-0001</b>																
Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative														
					HgCl <sub>2</sub>	HCl													
<b>Logo's #1</b>	<b>8/8</b>	<b>8:06 AM</b>	<b>U2901</b>	<b>1</b>				<b>X</b>	<b>X</b>	<b>X</b>					<b>X</b>			<b>Y</b>	<b>Y</b>
Relinquished by: (Signature) <b>Wesley J. L.</b>				Date <b>8/8</b>	Time <b>3:54</b>	Received by: (Signature) <b>Dene Z...</b>				Date <b>8/8/12</b>	Time <b>3:55p</b>								
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.																			



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

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. 30-043-21119										
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								
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		6. Well Number: 1								
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 : 6/08/2012		16. Date Completed (Ready to Produce)			17. Elevations (DF and RKB, RT, GR, etc.)			
18. Total Measured Depth of Well		19. Plug Back Measured Depth		20. Was Directional Survey Made?			21. Type Electric and Other Logs Run			
22. Producing Interval(s), of this completion - Top, Bottom, Name										
<b>23. CASING RECORD (Report all strings set in well)</b>										
CASING SIZE		WEIGHT LB./FT.		DEPTH SET		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED
24. LINER RECORD						25. TUBING RECORD				
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET			
26. Perforation record (interval, size, and number)					27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.					
					DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED			
<b>28. PRODUCTION</b>										
Date First Production		Production Method (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    36.16948			Longitude    107.38781			NAD 1983				
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 			Printed Name Tamra Sessions		Title Operations Technician			Date 9/25/14		
E-mail Address tsessions@logosresourcesllc.com										



**Pit Closure Form:**

Date: 8-24-12

Well Name: LOGOS 1

Footages: 1610' FNL, & 1710' FWL Unit Letter: F

Section: 5, T22-N, R5-W, County: SANDOVAL State: NM

Contractor Closing Pit: WSS

Construction Inspector: David Gonzalez

Inspector Signature: David Gonzalez

Date: 8-24-12

## Tamra Sessions

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**From:** David Gonzales  
**Sent:** Monday, August 6, 2012 1:05 PM  
**To:** Kurt Sandoval (Kurt.Sandoval@bia.gov); Dixon Sandoval (dixonsandoval@jicarillaoga.com)  
**Subject:** Logos Operating, Notices  
**Attachments:** Logos # 1 Workover Notice.docx; Logos # 1 Pit Closure Notice.docx

Gentleman,

Attached are two work notices for the Logos # 1 well. The first notice is for the reserve pit closure and the second notice is for a workover rig. Please let me know if you have any questions.

Thanks,

David Gonzales  
Vice President of Operations  
505-215-8215  
[dgonzales@logosresourcesllc.com](mailto:dgonzales@logosresourcesllc.com)







4001 N. Butler Ave  
Farmington, NM 87401  
Phone: (505) 215-8215  
Fax: (303) 974-1767

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August 6, 2012

By Email (dixonsandoval@jicarillaoga.com, kurt.sandoval@bia.gov)

**Jicarilla Oil & Gas Administration**  
**Attn: Dixon Sandoval & Kurt Sandoval**  
#6 Dulce Rock Road  
Dulce, NM 87528  
(575) 759-3485

Re: Logos # 1 Pit Closure Notice

Gentleman,

Logos Operating, LLC proposes to close the reserve pit located at the Logos #1 new drill. Per our conversation, Logos will have the fluids pulled from the pit and disposed of at an appropriate disposal facility prior to closing the pit.

Please let us know if you have any questions or concerns in relation to our proposed gas line removal plan.

Best Regards,

Logos Resources, LLC

David Gonzales  
Vice President of Operations



## Reclamation Form:

Date: 8-4-13

Well Name: LOGOS 1

Footages: 1610' FNL. 1710' FWL Unit Letter: F

Section: 5, T22-N, R5-W, County: SANDOVAL State: NM

Reclamation Contractor: WSS

Reclamation Start Date: 8-31-12

Reclamation Complete Date: 7-11-13

Road Completion Date: 7-11-13

Seeding Date: 8-4-13

### PIT MARKER STATUS

(When Required) Picture of Marker set needed

Date Marker Placed: 12-4-13

Latitude: 36.16948

Longitude: 107.38781

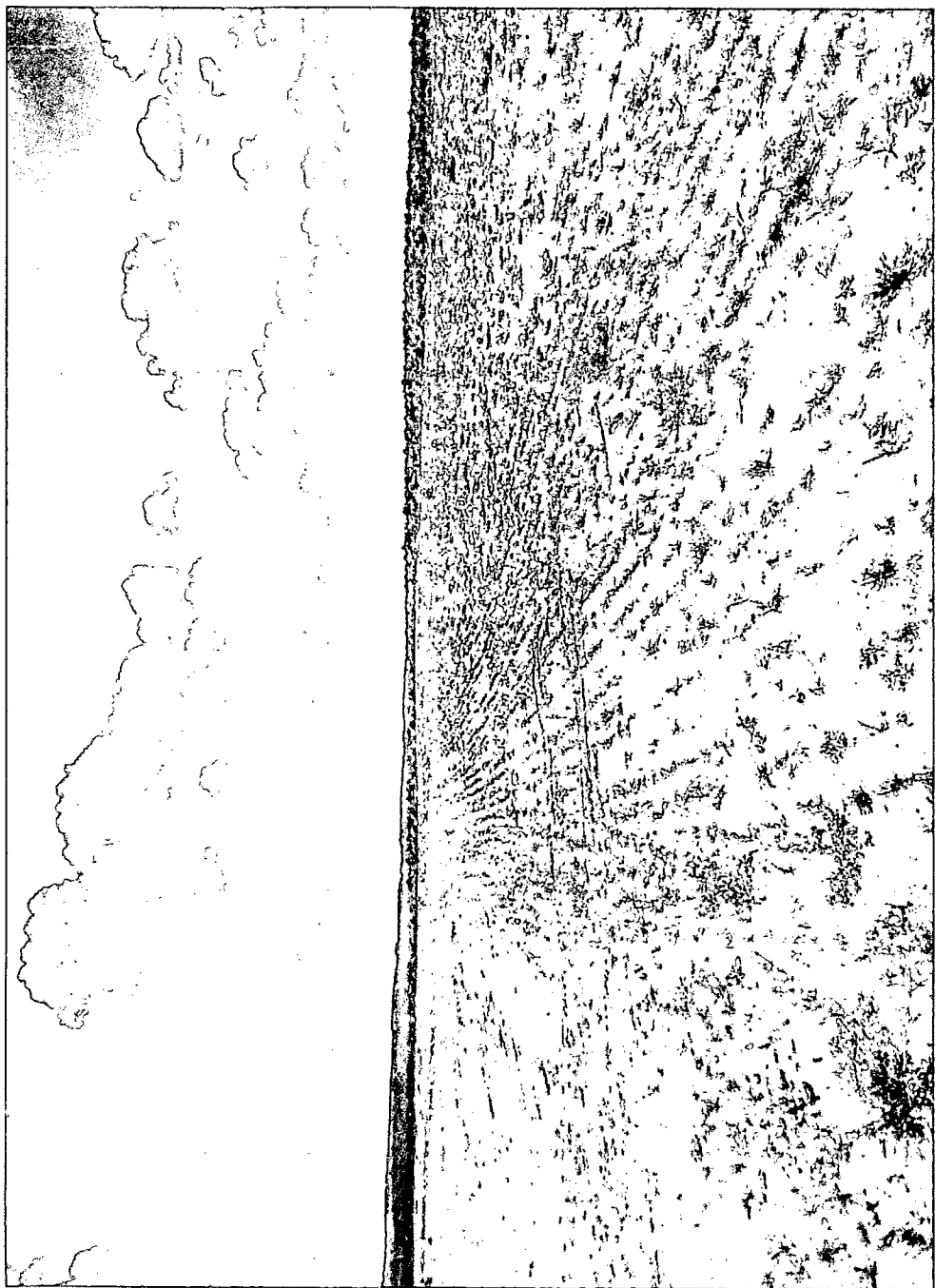
Date Pit Manifold Removed: N/A

Construction Inspector Signature: Wayne [Signature]

Date Inspected: 8-4-13

LOGOS OPERATING, LLC.  
LOGOS #1-JIC. LEASE #424  
API #30-043-21119  
1610' FNL 1710' FWL  
F-SEC. 5-T22N-R5W  
SANDOVAL COUNTY, NM  
OFFICE # 505-436-2627  
AFTER HRS #866-598-6220

LOGOS #1  
JIC. LEASE #424  
API #30-043-21119  
1610' FNL 1710' FWL  
F-SEC. 5-T22N-R5W  
SANDOVAL COUNTY, NM  
OFFICE # 505-436-2627  
AFTER HRS #866-598-6220





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,

A handwritten signature in black ink that reads 'Jamie Goodwin'.

Jamie Goodwin  
Regulatory Technician