District 1 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.
Pit, 0 $12241$ Proposed AltType of action:Perm $13-21120$ ClosClosModClosClosbelow-grade tank, or propInstructions: Please submit one appliePlease be advised that approval of this request doesenvironment. Nor does approval relieve the operator	<u>Closed-Loop System, Below-Grade 7</u> <u>ernative Method Permit or Closure F</u> nit of a pit, closed-loop system, below-grade tank, o ure of a pit, closed-loop system, below-grade tank, o ification to an existing permit ure plan only submitted for an existing permitted or osed alternative method cation (Form C-144) per individual pit, closed-loop system not relieve the operator of liability should operations result in r of its responsibility to comply with any other applicable go	<u>Sank, or</u> <u>Ian Application</u> r proposed alternative method or proposed alternative method non-permitted pit, closed-loop system, <i>m, below-grade tank or alternative request</i> pollution of surface water, ground water or the vernmental authority's rules, regulations or ordinances.
1.         Operator: Logos Operating, LLC         Address: 4001 North Butler Avenue, Building 7         Facility or well name: LOGOS 2         API Number: 30-043-21120         U/L or Qtr/Qtr       I Section         Center of Proposed Design: Latitude 36.16454         Surface Owner:       Federal         State       Private	OGRID #: '101 Farmington, NM 87401 OCD Permit Number: 6 Township22N Range05W ° N Longitude 107.39610° V I Tribal Trust or Indian Allotment	289408       RCVD OCT 1 '14 OIL CONS. DIV.         DIL CONS. DIV.       DIST. 3         County: SANDOVAL       NAD: □1927 ⊠ 1983
<ul> <li>2.</li> <li>Pit: Subsection F or G of 19.15.17.11 NM Temporary:  Drilling  Workover</li> <li>Permanent  Emergency  Cavitation </li> <li>Lined Unlined Liner type: Thickness</li> <li>String-Reinforced</li> <li>Liner Seams:  Welded Factory Othe</li> </ul>	IAC ] P&A 20mil ⊠ LLDPE □ HDPE □ PVC □ rVolume:8,000bb	Other Dimensions: L130_ x W60 x D10
3.         Closed-loop System:       Subsection H of 19.         Type of Operation:       P&A         Drilling a new intent)         Drying Pad       Above Ground Steel Tanks         Lined       Unlined Liner type: Thickness_         Liner Seams:       Welded       Factory	15.17.11 NMAC         well       Workover or Drilling (Applies to activities whites white whites white whites whites whites whites whites whites whites whites white whites white whites whites white whites white	ch require prior approval of a permit or notice of Other
Below-grade tank: Subsection I of 19.15. Volume:bbl Type o Tank Construction material: Secondary containment with leak detection Visible sidewalls and liner Visible side Liner type: Thicknessn	17.11 NMAC         f fluid:	erflow shut-off
5. Alternative Method: Submittal of an exception request is required.	Exceptions must be submitted to the Santa Fe Environme	ntal Bureau office for consideration of approval.

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<ul> <li>Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)</li> <li>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)</li> <li>Four foot height, four strands of barbed wire evenly spaced between one and four feet</li> <li>Alternate. Please specify4' hog wire with one strand of barbed wire on top</li> </ul>					
<ul> <li><u>Netting</u>: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)</li> <li>Screen Netting Other</li> <li>Monthly inspections (If netting or screening is not physically feasible)</li> </ul>					
<ul> <li>8.</li> <li>Subsection C of 19.15.17.11 NMAC</li> <li>12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers</li> <li>Signed in compliance with 19.15.16.8 NMAC</li> </ul>					
<ul> <li><u>Administrative Approvals and Exceptions:</u> Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.</li> <li><i>Please check a box if one or more of the following is requested, if not leave blank:</i> <ul> <li>Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau consideration of approval.</li> <li>Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.</li> </ul> </li> </ul>	office for				
<sup>10.</sup> <u>Siting Criteria (regarding permitting)</u> : 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of accept material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appro office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dry above-grade tanks associated with a closed-loop system.	ptable source priate district pproval. ing pads or				
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	🗋 Yes 🗌 No				
<ul> <li>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).</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No				
<ul> <li>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</li> <li>(Applies to temporary, emergency, or cavitation pits and below-grade tanks)</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	☐ Yes ☐ No ☐ 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)					
<ul> <li>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.</li> <li>NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No				
<ul> <li>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.</li> <li>Written confirmation or verification from the municipality; Written approval obtained from the municipality</li> </ul>	🗌 Yes 🗌 No				
<ul> <li>Within 500 feet of a wetland.</li> <li>US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗋 Yes 🗌 No				
<ul> <li>Within the area overlying a subsurface mine.</li> <li>Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division</li> </ul>	🗌 Yes 🗌 No				
<ul> <li>Within an unstable area.</li> <li>Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</li> </ul>	🗌 Yes 🗌 No				
Within a 100-year floodplain. - FEMA map	🗌 Yes 🗌 No				

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
<ul> <li>Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC</li> <li>Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC</li> <li>Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC</li> <li>Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC</li> </ul>
<ul> <li>Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC</li> <li>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</li> </ul>
Previously Approved Design (attach copy of design) API Number: or Permit Number:
12.
<b>Closed-loop Systems Permit Application Attachment Checklist:</b> 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.
<ul> <li>Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9</li> <li>Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC</li> <li>Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC</li> </ul>
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)
<ul> <li>Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC</li> <li>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.</li> <li>Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC</li> <li>Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC</li> <li>Climatological Factors Assessment</li> </ul>
<ul> <li>Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>Quality Control/Quality Assurance Construction and Installation Plan</li> <li>Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC</li> </ul>
<ul> <li>Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan</li> <li>Emergency Response Plan</li> <li>Oil Field Waste Stream Characterization</li> </ul>
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
<sup>14.</sup> <u>Proposed Closure</u> : 19.15.17.13 NMAC <i>Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.</i>
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)
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.
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)
<ul> <li>Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC</li> <li>Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC</li> <li>Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC</li> </ul>

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground	Steel Tanks or Haul-off Bins Only: (19.15.17.13.1	D NMAC)
Instructions: Please indentify the facility or facilities for the disposal of liquids, facilities are required.	drilling fluids and drill cuttings. Use attachment if i	more than two
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 of Yes (If yes, please provide the information below) INO	ccur on or in areas that will not be used for future ser	vice and operations?
Required for impacted areas which will not be used for future service and operatio         Soil Backfill and Cover Design Specifications based upon the appropriate         Re-vegetation Plan - based upon the appropriate requirements of Subsection         Site Reclamation Plan - based upon the appropriate requirements of Subsection	ns: requirements of Subsection H of 19.15.17.13 NMA I of 19.15.17.13 NMAC ion G of 19.15.17.13 NMAC	с
<sup>17.</sup> Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the provided below. Requests regarding changes to certain siting criteria may requir considered an exception which must be submitted to the Santa Fe Environmenta demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC	closure plan. Recommendations of acceptable sour e administrative approval from the appropriate dist Bureau office for consideration of approval. Just for guidance.	rce material are rict office or may be ifications and/or
Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS;	a 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	a 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	a obtained from nearby wells	□ Yes □ No □ NA
<ul> <li>Within 300 feet of a continuously flowing watercourse, or 200 feet of any other sig lake (measured from the ordinary high-water mark).</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	nificant watercourse or lakebed, sinkhole, or playa	🔲 Yes 🗌 No
Within 300 feet from a permanent residence, school, hospital, institution, or church - Visual inspection (certification) of the proposed site; Aerial photo; Satellite	in existence at the time of initial application.	🗋 Yes 🗌 No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less watering purposes, or within 1000 horizontal feet of any other fresh water well or s - NM Office of the State Engineer - iWATERS database; Visual inspection (	s than five households use for domestic or stock pring, in existence at the time of initial application. certification) of the proposed site	🗋 Yes 🗌 No
<ul> <li>Within incorporated municipal boundaries or within a defined municipal fresh wate adopted pursuant to NMSA 1978, Section 3-27-3, as amended.</li> <li>Written confirmation or verification from the municipality; Written approv</li> </ul>	er well field covered under a municipal ordinance al obtained from the municipality	🗌 Yes 🗌 No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visua	al 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
<ul> <li>Within an unstable area.</li> <li>Engineering measures incorporated into the design; NM Bureau of Geolog Society; Topographic map</li> </ul>	y & Mineral Resources; USGS; NM Geological	🗌 Yes 🗌 No
Within a 100-year floodplain. - FEMA map		🗋 Yes 🗌 No
<ul> <li>18.</li> <li>On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the by a check mark in the box, that the documents are attached.</li> <li>Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of Construction/Design Plan of Burial Trench (if applicable) based upon the apropriate of a drying p Protocols and Procedures - based upon the appropriate requirements of 19.15</li> <li>Construction/Design Plan of Temporary Pit (for in-place burial of a drying p Protocols and Procedures - based upon the appropriate requirements of 19.15</li> <li>Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of the propriate requirements of the protocols and Procedures - based upon the appropriate requirements of the protocols and Procedures - based upon the appropriate requirements of the protocols and Procedures - based upon the appropriate requirements of the protocols and Procedures - based upon the appropriate requirements of the protocols and Procedures - based upon the appropriate requirements of the protocols and Procedures - based upon the appropriate requirements of the protocols and Procedures - based upon the appropriate requirements of the protocols and Procedures - based upon the appropriate requirements of the protocols and Procedures - based upon the appropriate requirements of the protocols and Procedures - based upon the appropriate requirements of the protocols and Procedures - based upon the appropriate requirements of the protocols and Procedures - based upon the appropriate requirements of the protocols and Procedures - based upon the appropriate requirements of the protocols and Procedures - based upon the appropriate requirements of the protocols approprise requirements of the protocols approprise requirements of</li></ul>	e following items must be attached to the closure plauirements of 19.15.17.10 NMAC Subsection F of 19.15.17.13 NMAC opropriate requirements of 19.15.17.11 NMAC ad) - based upon the appropriate requirements of 19. 5.17.13 NMAC uirements of Subsection F of 19.15.17.13 NMAC Subsection F of 19.15.17.13 NMAC	an. Please indicate, 15.17.11 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

<u>Operator Application Certification</u> :
I needy 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:
OCD Approval: Dermit Application (including closure plan) Closure Plan (onty) Closure Plan (onty)
OCD Representative Signature: Colly Approval Date: 1/2/2014
Title Con Sicher There
<sup>21.</sup> <u>Closure Report (required within 60 days of closure completion)</u> : 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:10/26/12
<ul> <li>22.</li> <li>Closure Method:</li> <li>Waste Excavation and Removal On-Site Closure Method</li> <li>Alternative Closure Method</li> <li>Waste Removal (Closed-loop systems only)</li> <li>If different from approved plan, please explain.</li> </ul>
<sup>23.</sup> <u>Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:</u> 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 <i>will not</i> 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
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.
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: Tanfessin 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 2 API NO: 30-043-21120

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, recontoured, 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).

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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). \*The original sampling results could not be located. The five point composite sampling was redone on 8/21/14. (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	ND
TPH	EPA SW-846 418.1	2500	236
GRO/DRO	EPA SW-846 8015M	500	360
Chlorides	EPA 300.1	1000	54.5

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 2 Unit Letter: I Section: 6 Township: T22N Range: R05W API #: 30-043-21120 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).





ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting Lease Management Contract Pumping

7415 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 87528

Re: 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. Thomas -

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

Complete items 1, 2, and 3. Al Item 4 if Restricted Delivery is Print your name and address of	so complete desired. on the reverse	A. Signature X	Agent     Addressee
<ul> <li>so that we can return the card</li> <li>Attach this card to the back of or on the front if space permit:</li> </ul>	to you. the mailpiece, s.	B. Received by ( Printed Nar	ne) C. Date of Delivery
 1. Article Addressed to: MS. Meridine O Jilarilla Apachu	Ka Nation inistration	D. Is delivery address different If YES, enter delivery add	it from item 1? □ Yes ress below: □ No
# 4 Dulce Kock Dulce, NM 875	Road	3. Service Type Certified Mail Ex Registered ER Insured Mail C.	press Mail turn Receipt for Merchandise O.D.
2. Article Number (Transfer from service label)	7011 1570	0001 0596 416	

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District I 1625 N. French Drive, Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-07\_\_

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 Mexic

Energy, Minerals & Natural Resources Jepartment

Form C-102 Revised August 1, 2011

Submit one copy to Appropriate District Office

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OIL CONSERVATION DIVISION

1220 South St. Francis Drive Santa Fe, NM 87505

AMENDED REPORT

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	٨,	PI Number	r	Pool Code Pool Name									
				/ 1333 DASIN DAKUTA									
'F	roperty	Code									2 2		
	OGRID N	NO .	······································									levation	
28	3712	3			LOGOS CAPITAL MANAGEMENT, LLC 6901'						6901'		
l			•		<del></del>	<sup>10</sup> Surface	Locatio	n	- *				
ULO	r lot no.	Section	Township	Range	Lot Ida	Feet from the	North/Sou	th line	Fe	et from the	East/We	st line	County
	I	6	55N	5W		1930	SOU	TH		730	EA	ST	SANDOVAL
			11	Botton	n Hole	Location I	f Differ	rent	Fron	n Surfac	е		
Մես	- lot no.	· Section	Township	Range	Lot Idn	Feet from the	North/Sou	th line	Fe	et from the	East/We	st line	County
32 Dedic	ated Acres					<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidatio	n Code'	15 Dorte	r No			
		320.	85 Acres	s – (E,	/2)	N							
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16	1313.4	40'	132	0.00'		264	0.00.			17 OPER	ATOR	CERTI	FICATION
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										<u>Jan C</u> Signature	1 ho		<u>2/2/12</u> Date
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## **Analytical Report**

#### **Report Summary**

Client: Logos Operating, LLC Chain Of Custody Number: 17355 Samples Received: 8/22/2014 8:50:00AM Job Number: 12035-0064 Work Order: P408094 Project Name/Location: Logos #2

Date: 8/26/14

Entire Report Reviewed By:

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.

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





Logos Operating, LLC	Project Name:	Logos #2	
PO Box 18	Project Number:	12035-0064	Reported:
Flora Vista NM, 87415	Project Manager:	Sheena Leon	26-Aug-14 11:56

### **Analyical Report for Samples**

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Drill Pit	P408094-01A	Soil	08/21/14	08/22/14	Glass Jar, 4 oz.

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Cenvirotech Analytical Laboratory

Logos Operating, LLC PO Box 18 Flora Vista NM, 87415	Projec Projec Projec	t Name: t Number: t Manager:	Logo 1203 Shee	os #2 5-0064 na Leon				Reported: 26-Aug-14 11	:56
		D	orill Pit						
		P4080	94-01 (So	olid)					
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1434038	08/22/14	08/25/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1434038	08/22/14	08/25/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1434038	08/22/14	08/25/14	EPA 8021B	
p,m-Xyiene	ND	0.10	mg/kg	1	1434038	08/22/14	08/25/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1434038	08/22/14	08/25/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1434038	08/22/14	08/25/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1434038	08/22/14	08/25/14	EPA 8021B	
Surrogate: Bromochlorobenzene		96.1 %	50	-150	1434038	08/22/14	08/25/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		97.0 %	50-150		1434038	08/22/14	08/25/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1434038	08/22/14	08/25/14	EPA 8015D	
Diesel Range Organics (C10-C28)	360	34.9	mg/kg	1	1434031	08/22/14	08/22/14	EPA 8015D	
Surrogate: Benzo[a]pyrene	and a state of the second system of the second system of second	2.97 %	50	-200	1434031	08/22/14	08/22/14	EPA 8015D	Surr2
Total Petroleum Hydrocarbons by 418.1				_					
Total Petroleum Hydrocarbons	236	35.0	mg/kg	1	1435005	08/25/14	08/25/14	EPA 418.1	
Cation/Anion Analysis	·								`
Chloride	54.5	9.84	mg/kg	1	1434037	08/22/14	08/22/14	EPA 300,0	

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Logos Operating, LLC	Project Name:	Logos #2	· · · · · · · · · · · · · · · · · · ·
PO Box 18	Project Number:	12035-0064	Reported:
Flora Vista NM, 87415	Project Manager:	Sheena Leon	26-Aug-14 11:56

#### Volatile Organics by EPA 8021 - Quality Control

#### **Envirotech Analytical Laboratory**

Analute	Remit	Reporting	Ilnite	Spike	Source	WREC	%REC	רוסט	RPD Limit	Notes
(*************************************				Level		78REC			Limit	NOICE
Batch 1434038 - Purge and Trap EPA 5030A										
Blank (1434038-BLK1)				Prepared: 2	22-Aug-14	Analyzed:	25-Aug-14			
Benzene	ND	0.05	mg/kg			an a			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
Tohene	ND	0.05	•							
Ethylbenzene	ND	0.05	n							
p,m-Xylene	ND	0.10								
o-Xylene	ND	0.05								
Total Xyienes	ND	0.05								
Total BTEX	ND	0.05	-							
Surrogate: 1,3-Dichlorobenzene	52.3		ug/L	50.0		105	50-150			
Surrogate: Bromochlorobenzene	53.2			50.0		106	50-150			
Duplicate (1434038-DUP1)	Soi	rce: P408093-	-01	Prepared: 2	22-Aug-14	Analyzed:	25-Aug-14			
Benzene	ND	0.05	mg/kg		ND				30	
Tolucae	ND	0.05			ND				30	
Ethyibenzene	ND	0.05			ND				30	
p.m-Xylene	ND	0.10	•		ND				30	
o-Xylene	ND	0.05	5		ND				30	
Surrogate: 1,3-Dichlorobenzene	49.9		ug/L	50.0		<del>99</del> .7	50-150			
Surrogate: Bromochlorobenzene	50.6		•	50.0		101	50-150			
Matrix Spike (1434038-MS1)	Sot	urce: P408093-	01	Prepared: 2	22-Aug-14	Analyzed:	25-Aug-14			
Benzene	50.2		ug/L	50.0	ND	100	39-150			
Tolucue	52.5		٠	50.0	ND	105	46-148			
Ethylbenzene	50.2		•	50.0	ND	100	32-160			
p,m-Xylene	102		•	100	ND	102	46-148			
o-Xylene	52.0			50.0	ND	104	46-148			
Surrogate: 1,3-Dichlorobenzene	49.0			50.0		98.1	50-150			
Surrogate: Bromochlorobenzene	51.6			50.0		103	50-150			

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Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301	Ph (970) 259-0615	Fr (800) 362-1879	and the second sec



Logos Operating, LLC	Project Name:	Logos #2	
PO Box 18	Project Number:	12035-0064	Reported:
Flora Vista NM, 87415	Project Manager:	Sheena Leon	26-Aug-14 11:56

#### Nonhalogenated Organics by 8015 - Quality Control

#### **Envirotech Analytical Laboratory**

		Reporting		Spike	Source		%REC		RPD	1
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1434031 - DRO Extraction EPA 3550M										
Blank (1434031-BLK1)				Prepared: 2	21-Aug-14	Analyzed:	22-Aug-14			
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg						······································	
Surrogate: Benzo[a]pyrene	19.6		"	20.0		98.1	50-200			
LCS (1434031-BS1)				Prepared:	21-Aug-14	Analyzed:	22-Aug-14			
Diesel Range Organics (C10-C28)	491	25.0	mg/kg	499		98.3	38-132			
Surrogale: Benzo[a]pyrene	19.8		*	20.0		99.2	50-200			
Matrix Spike (1434031-MS1)	Sou	rce: P408090-	01	Prepared: 21-Aug-14 Analyzed: 22-Aug-14						
Diesel Range Organics (C10-C28)	606	30.0	mg/kg	500	ND	121	38-132			
Surrogate: Benzo[a]pyrene	23.9		#	20.0	······································	120	50-200			
Matrix Spike Dup (1434031-MSD1)	Sou	rce: P408090-	01	Prepared: 2	21-Aug-14	Analyzed:	22-Aug-14			
Diesel Range Organics (C10-C28)	584	30.0	mg/kg	499	ND	117	38-132	3.81	20	
Surrogate: Benzo[a]pyrene	22.6			20.0		113	50-200			

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

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



Logos Operating, LLC	Project Name:	Logos #2	
PO Box 18	Project Number:	12035-0064	Reported:
Flora Vista NM, 87415	Project Manager:	Sheena Leon	26-Aug-14 11:56

### 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 1434038 - Purge and Trap EPA 5030A										<u> </u>
Blank (1434038-BLK1)				Prepared: 2	22-Aug-14	Analyzed:	25-Aug-14			
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	*******						
Duplicate (1434038-DUP1)	Sou	rce: P408093-	-01	Prepared: 2	22-Aug-14	Analyzed:	25-Aug-14			
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg		ND				30	
Matrix Spike (1434038-MS1)	Sou	rce: P408093-	01	Prepared: 2	22-Aug-14	Analyzed:	25-Aug-14			
Gasoline Range Organics (C6-C10)	0.50		mg/L	0.450	0.05	100	75-125			

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Three Springs - 65 Mercado Street, Suite 115, Durango, (O 81301	Ph (970) 259-0615	Fr (800) 362-1879	leborary invioled-licem



Logos Operating, LLC	Project Name:	Logos #2	
PO Box 18	Project Number:	12035-0064	Reported:
Flora Vista NM, 87415	Project Manager:	Sheena Leon	26-Aug-14 11:56

#### 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 1435005 - 418 Freon Extraction										
Blank (1435005-BLK1)				Prepared &	Analyzed:	25-Aug-14	•			
Total Petroleum Hydrocarbons	ND	34.9	mg/kg	· • · · · · · · · · · · · · · · · · · ·						an an ann an Anna an A
Duplicate (1435005-DUP1)	Sou	rce: P408099-	-01	Prepared &	Analyzed:	25-Aug-14				
Total Petroleum Hydrocarbons	59.9	35.0	mg/kg		52.0			14.2	30	
Matrix Spike (1435005-MS1)	Sou	rce: P408099-	-01	Prepared &	Analyzed:	25-Aug-14				
Total Petroleum Hydrocarbons	1880	34.9	mg/kg	2020	52,0	90.3	80-120			

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	Cation/Anion An Envirotech An	alysis - Quality Control alytical Laboratory	
Flora Vista NM, 87415	Project Manager:	Sheena Leon	26-Aug-14 11:56
PO Box 18	Project Number:	12035-0064	Reported:
Logos Operating, LLC	Project Name:	Logos #2	

Analyte	Result	Reporting Limit	Unitz	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1434037 - Anion Extraction EPA 300.0										
Blank (1434037-BLK1)				Prepared &	Analyzed:	22-Aug-14				
Chloride	ND	9.95	mg/kg					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
LCS (1434037-BS1)				Prepared &	: Analyzed:	22-Aug-14				
Chloride	483	9.97	mg/kg	498		97.0	90-110			
Matrix Spike (1434037-MS1)	Sour	ce: P408090-	01	Prepared &	Analyzed	22-Aug-14				
Chloride	489	9.93	mg/kg	497	ND	98.6	80-120			
Matrix Spike Dap (1434037-MSD1)	Sour	ce: P408090-	01	Prepared &	Analyzed	22-Aug-14				
Chloride	492	9.99	mg/kg	499	ND	98.4	80-120	0,418	20	

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Logos Operating, LLC	Project Name:	Logos #2	
PO Box 18	Project Number:	12035-0064	Reported:
Flora Vista NM, 87415	Project Manager:	Sheena Leon	26-Aug-14 11:56

#### **Notes and Definitions**

Surr2	Surrogate recovery was below acceptable limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

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# CHAIN OF CUSTODY RECORD

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17355

Email results fet:       Suppler Name       Sumpler Name       Suppler Name	Client:	ratin	Pro In	pject Name / Locatin	on: = 2	<u> </u>								A	NALY	rsis	/ PAF	RAME	ETER	S				
Client Phone No.:       Client No.:       12035 - 00004       The servative reg of the servati reg of the servative reg of the servative reg	Email results to: S. L.U	N	1) Sa	mpler Name	Du	N				8015)	1 8021)	8260)	Ś				-1							
Sample No/ Identification       Sample Date       Sample Time       Lab No.       No. No. No. Uma of Containers       Preservative Hold       No.	Client Phone No.: J		Cli	ent No.: 1202	35-	000	4			<b>Nethod</b>	(Method	Method	8 Metal	/ Anion		with H/F	ble 910	418.1)	RIDE				e Cool	le intact
Drùi fitt       Si 40       14050940       1-402.grss gay       X X Y       X X Y         Image: Signalure       Image: Signalure       Image: Signalure       Image: Signalure       Image: Signalure         Relinquished by: (Signalure)       Image: Signalure       Image: Signalure       Image: Signalure       Image: Signalure       Image: Signalure         Sample Matrix       Solit@       Studge Image: Signalure       Image: Signalure </td <td>Sample No./ Identification</td> <td>Sample Date</td> <td>Sample Time</td> <td>Lab No.</td> <td>No./ of Co</td> <td>Volume ntainers</td> <td>Pr KNO3</td> <td>eservati нсı</td> <td>ve (CC</td> <td>TPH (N</td> <td>втех</td> <td>voc (</td> <td>RCRA</td> <td>Cation</td> <td>RCI</td> <td>TCLP</td> <td>со та</td> <td>трн (</td> <td>CHLO</td> <td></td> <td></td> <td></td> <td>Sampl</td> <td>Sampl</td>	Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./ of Co	Volume ntainers	Pr KNO3	eservati нсı	ve (CC	TPH (N	втех	voc (	RCRA	Cation	RCI	TCLP	со та	трн (	CHLO				Sampl	Sampl
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Submit To Appropria Two Copies <u>District 1</u> 1625 N. French Dr.,	ate District Hobbs, NM	Office 1 88240		Ene	ergy,	State of Ne Minerals and	w N d Na	/lexic itural	co Re	esources		1. WELL	API	 NO.	R	Fc evised A	orm C-105 ugust 1, 2011
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	ON REPO	<b>RT</b> (Fill in i	ooxes #1	throug	7h #31	for State and Fee	well	s only)				6 Wall Num	2				
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LOGOS OPERAT	ING LLC				_							289408	or W	ildeat			
4001 North Butler	Avenue, E	Building 710	I Farmin	igton, l	NM 87	401						TT: T OUT nume	01 11	nucat			
12 Location	Init Ltr	Section	[ T	ownsh		Range	Lot			Feet from	the	N/S Line	Feet	from th	e F/W	Line	County
Surface:			— <u> </u> ·	ownan		Runge	Lot		_				1001				County
BH:			— -					· · · · -	_								
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15. Date Spudded	14. Date			10/06	/2012	S INCICASCU			10.	Date Comp	leteu	(Ready to From	uce)		RT, GR,	etc.)	anu KKD,
18. Total Measured	d Depth of	Well		19. Pl	ug Bao	ck Measured Dep	oth		20.	Was Direc	tional Survey Made? 21. Type Electric and Other Logs R			her Logs Run			
22. Producing Inter	rval(s), of	this complet	ion - Top	o, Bott	om, Na	ame				<u> </u>				I		· · · · ·	
23.	•				CAS	ING REC	OR	D (Re	epo	ort all st	ring	gs set in w	ell)				
CASING SIZ	E	WEIGHT	LB./FT.			DEPTH SET		- (	HO	LE SIZE		CEMENTIN	G RE	CORD	A	MOUNT	PULLED
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24.	I				LIN	ER RECORD	l.				25.	т	UBI	NG REO	CORD		
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26 Destantion a	internal (inter	mul sime er						0.7		D. GUOT					IPPZP		
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Date of Test	Hours T	ested	Choke	Size		Prod'n For Test Period		Oil - I	Bbl		Gas	Is - MCF Water - Bbl. Gas - Oil Ratio		vil Ratio			
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29. Disposition of C	Jas <i>(Sold</i> ,	used for fue	l, vented,	vented, etc.) 30. Test Witnessed By													
31. List Attachmen	ts																
37 If a termorary r	nit was use	ed at the wel	attach	a plat v	with the	e location of the	tempo	prary ni	t.	SEF ATT	ACF	IED				_	
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I hereby certify	that the	informati 1	on show	wn or	n both	h sides of this	form	is tru	ie c	and comp	lete	to the best of	f my	knowle	edge an	d belief	. 1705
Signature 10	inse	Spir-			]	Name Tamra	Sess	sions		Title	C	Derations Te	chni	cian	Da	<sup>ite</sup> 9/2	5/14
E-mail Address	tsessi	ons@logo	sresou	rcesll	c.con	n											<u>''/</u>



## **Pit Closure Form:**

Date: <u>/O-26-1</u> Well Name: LOGOS 2 Footages: 1930' FSL & 730' FEL Unit Letter: I Section: 6, T-22<u>N</u>, R-5<u>W</u>, County: SANDOVAL State: <u>NM</u> Contractor Closing Pit: <u>WSS</u>

Construction Inspector: Dun hourales	
Inspector Signature: Aun Mar	
Date: $10 - 26 - 12$	

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Form 3160-5 (March 2012)	DE	UNITED STATI PARTMENT OF THE	ES INTERIOR			Е	FORM APPROVED OMB No. 1004-0137 xpires: October 31, 2014
	BUF	REAU OF LAND MAN	AGEMENT			5. Lease Serial No. Jicarilla Tribal #424	<u> </u>
S Do not abandon	UNDRY I use this ed well.	NOTICES AND REP form for proposals Use Form 3160-3 (A	ORTS ON WEI to drill or to re APD) for such	₋LS ⊱enter an proposal	n 's.	6. If Indian, Allottee o Jicarilla Apache	r Tribe Name
	SUBM	T IN TRIPLICATE - Other	r instructions on pa	ige 2.	- ·· ··	7. If Unit of CA/Agre	ement, Name and/or No.
1. Type of Well Oil Well	Gas V	Vell 🗌 Other				8. Well Name and No Logos #2	
2. Name of Operator Logos Operating, LLC			_			9. API Well No. 30-043-21120	
3a. Address 4001 North Butter, Building 710 Farmington, New Mexico 87401		·	3b. Phone No. (inc 303-550-1877	lude area coa	de)	10. Field and Pool or 1 *Please see sundry	Exploratory Area summary for Pool information
4. Location of Well (Foot 1930' FSL & 730' FEL Section 6, Township 22N, Range	nge, Sec., T., 5W	R.,M., or Survey Description	)			11. County or Parish, Sandoval, New Mex	State ico
	12. CHEO	CK THE APPROPRIATE BC	DX(ES) TO INDICA	TE NATURE	E OF NOTIC	E, REPORT OR OTH	ER DATA
TYPE OF SUBMIS	SION			TYI	PE OF ACT	ION	
Notice of Intent		Acidize	Deepen Fracture T	reat	Produ	action (Start/Resume) mation	Water Shut-Off Well Integrity
Subsequent Report		Change Plans	Plug and A	Abandon		orarily Abandon	Location and Flowline
Final Abandonment N	lotice	Convert to Injection	Plug Back		Water Water	Disposal	
Pool Information: WC 22N5W6; Dakota (O WC 22N5W6; Gallup (O) Venado Mesaverde 6249	of the involv eted. Final . poposes to r and seedi 97990 97989 0	ed operations. If the operation Abandonment Notices must b final inspection.) eclaim the Logos #2 well b ng 5/13/13.	on results in a multip of filed only after all ocation and flowlin	le completior requirements	n or recompl	etion in a new interval, reclamation, have been ding requirements. L	a Form 3160-4 must be filed once completed and the operator has ogos plans to mark the teardrop
14. I hereby certify that the for Kristy Graham	regoing is tr	ue and correct. Name (Printed	/Typed)				
			Title	+ Production	n Engineer		· · · · · · · · · · · · · · · · · · ·
Signature D	>(	×	Date	÷ 04/26/201	13		
t		THIS SPACE I	FOR FEDERA		TE OFF		
Approved by				1			
A. 19		A1 04		Title		D	ate
Conditions of approval, if any, that the applicant holds legal or entitle the applicant to conduct	are attached. equitable tit operations th	Approval of this notice does in the subject thereon.	not warrant or certify lease which would	Office			
Title 18 U.S.C. Section 1001 a fictitious or fraudulent stateme	nd Title 43 U nts OF repres	S.C. Section 1212, make it a centations as to any matter with	crime for any person in its jurisdiction.	cnowingly and	l willfully to	make to any department	or agency of the United States any false,

(]	Inst	ruct	ions	on	page	2)
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If, in its operation, operator/sub-contractor discovers any Threatened/Endangered/Sensitive Species

 Plant/Animal, the work in the vicinity of the discovery will be suspended and the discovery
 promptly reported to the Surface Managing Agency (BIA). The Authorized Officer will then
 specify what action is to be taken. Failure to notify the Surface Managing Agency (BIA) about a
 discovery that leads to the take of a listed species may result in civil or criminal penalties in
 accordance with the Endangered Species Act of 1973 (as amended).

## L. <u>RESEEDING</u>

- All surface areas disturbed during drilling activities and not in use for production activities will be reseeded. Any stockpiled topsoil on location will be used in the reseeding effort. The goal of reseeding is the successful revegetation of the site. If, in the opinion of the Surface Managing Agency (BIA), the seeding is unsuccessful, the operator/subcontractor may be required to make subsequent seedings.
- 2. Prior to developing the site location, all topsoil should be stockpiled separately when the site is disturbed. Upon completion of the project the disturbed area should be recontoured to its original shape wherever possible and the topsoil evenly distributed. Disking will enhance the seedbed preparation if large clods are present. If the soil is rocky or too much debris is apparent, avoid disking and broadcast the seed.
- 3. Seeding types vary from dead litter cover, rangeland, critical area treatment, pasture, hay land, etc. Oil and gas impacts should be treated as critical area treatment sites because of the potential for increased soil erosion and introduction of noxious weed infestations. Sloped areas 4:1 or flatter will be treated by using a suitable seed drill for seeding. Slopes steeper than 4:1, but less than 3:1 will include hand raking or chain harrowing to cover seed to a depth of ¼" to ½". Steep slope seeding will be applied to slopes greater than 3:1 as follows: seed and fertilizer will be applied on the slope by a hydroseeder and the appropriate mulch will be applied immediately afterward.
- 4. Certified weed free straw mulch (i.e. barley, wheat, oat, etc.) will be uniformly applied at a rate of 1.5 tons (3,000#) per acre on slopes greater than 4:1. Mulch will be applied the same day to those areas where the seed and fertilizer are in place. Mulch anchoring will utilize an approved commercial liquid tackifier at a sufficient rate to prevent mulch from moving due to winds or turbulence caused by traffic on adjacent roadways. Also, mulch can be anchored on slopes <4:1 by lightly crimping with a disk. Do not use grass hay for mulch.</p>
- 5. Soil retention blankets (i.e. jute netting, American Excelsior blankets, or an approved equal) will be required on locations where it is impractical to use a tackifier or crimper to anchor the mulch. This method will apply to severe slopes, remote sites, or other areas prone to excessive erosion. Blankets will be anchored by using 8" x 1" x 8" "U" shaped steel staples of 0.091 minimum diameter and spaced per the manufacturer's recommendation. Blankets will be laid from top to bottom on the slopes with seams running vertically and lapped as specified by the manufacturer.

6. In conformance with the BIA - Jicarilla Agency and EPO, the following recommended seed mixtures will be applied.

Species	Variety	PLS/A**
Western wheatgrass	Arriba or Barton	3.2
Arizona Fescue	Redondo	1.0
Intermediate Wheatgrass	Amur or Oahe	2.25
Smooth Brome	Manchar	1.95
Galleta (caryopsis)	Viva	0.6
Spike Muhly	El Vado	0.45
Rocky Mtn. Penstemon	Bandera	0.1
Small burnet	Delar	2.0
	Total	11.55

### NORTH OF T26N Seed Mix

#### SOUTH OF T27N Seed Mix

Species	Variety	PLS/A**
Blue Grama	Hachita	0.6
Galleta	Viva	0.8
Indian Ricegrass	Paloma or Nezpar	1.1
Western Wheatgrass	Arriba or Barton	3.2
Pubescent Wheatgrass	Luna	2.1
Crested Wheatgrass	Ephraim or Hycrest	1.5
Blue Flax	Appar	0.3
Palmar Penstemon	Cedar	1.0
	Total	10.60

- \* Recommended seeding rate will be doubled if seed is applied by broadcasting or hydroseeding.
- \*\* Pure Live Seed (PLS) = Purity x (Germination + Hard Seed) x Total Bulk# Example: 25# PLS = 50% Purity x (35% Germ + 15% dormant) x 100# bulk
  - 7. Fertilizer will be applied according to a current soils test recommendations. If no soils test is available, advice will be sought from the New Mexico State Extension Service.
  - 8. Whenever possible, seed will be planted approximately 1/2" to 1/4" deep with a suitable seed drill on a firm seedbed free of weeds and litter. If seed is broadcast then double the recommended rate and drag with a harrow, rail, or chain link fence to obtain adequate soil contact. Defer from grazing for two complete growing seasons. Do not seed when wet conditions exist.

- 9. Seed mixture used must be certified. There will be <u>NO</u> primary or secondary noxious weeds in seed mixture. Seed labels from each bag shall be available for inspection while seed is being sown.
- 10. Seeding will be accomplished between July 1 and October 14 (a later date may be extended on a case-by-case basis with BIA/JOGA approval). Seeding will be repeated if a satisfactory stand is not obtained as determined by BIA/JOGA upon evaluation after the second growing season.
- 11. Mulch/cover seeded area following seeding.

## M. <u>ABANDONMENT</u>

- 1. The location will be recontoured in a manner that resembles the original topography of the site prior to development activities.
- 2. At the time of abandonment of the well location, the retention of the access road will be determined by JOGA.
- 3. If, upon abandonment of wells, the retention of access road is not considered necessary for the management and multiple-use of the natural resources, it will be ripped a minimum of 12" in depth. After ripping, water bars will be installed. All ripped surfaces are to be protected from vehicular travel by construction of a dead end ditch and earthen barricade at the entrance to these ripped areas. Reseeding of affected areas may be required.
- 4. An inspection will be held within 30 days of final plugging between a representative of JOGA and the operator to determine an acceptable rehabilitation plan. The plan will be submitted to (BIA). Monitoring will be made by Jicarilla Oil and Gas Administration. The plan will include, but not be limited to, removal of equipment, removal of drainage structures, removal of surfacing materials, recontouring, topsoiling, and reseeding. The rehabilitation will be complete within 30 days of the inspection, considering weather or season is not a limiting factor.

## N. CONTACT INFORMATION

For wells within the exterior boundaries of the Jicarilla Apache Nation, the operator will contact Jicarilla Oil & Gas Administration at (575) 759-3485.



## **Reclamation Form:**

Date:	9/17/13
-	/

Well Name: LOGOS 2

Footages: 1930' FSL & 730' FEL Unit Letter: I

Section: 6, T-22<u>N</u>, R-5<u>W</u>, County: SANDOVAL State: <u>NM</u>

Reclamation Contractor: WSS

Reclamation Start Date: 10/21/12-

Reclamation Complete Date: <u>6/24/13</u>

Road Completion Date: <u>6/24/13</u>

Seeding Date: <u>9/17/13</u>

## PIT MARKER STATUS

\_\_\_\_\_

\_\_\_\_\_

(When Required) Picture of Marker set needed

Date Marker Placed: 12/4/13
Latitude: 36. 16454
Longitude: 107,39610
Date Pit Manifold Removed: <u>N/A</u>
Construction Inspector Signature: <u>Wayne Rec</u>
Date Inspected: <u>9-1-1-13</u>



1930' FSL 730' FEL 1–SEC. 6–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

1

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, Candidiu

Jaynie Goodwin Regulatory Technician