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

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

Form C-144
Revised June 6, 2013

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

RCVD OCT 1 '14
OIL CONS. DIV.
DIST. 3

Pit, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

12248

45-35518

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

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

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

1.
Operator: LOGOS OPERATING, LLC OGRID #: 289408
Address: 4001 NORTH BUTLER AVENUE, BUILDING 7101 FARMINGTON NM 87401
Facility or well name: ROADRUNNER 4G
API Number: 30-045-35518 OCD Permit Number: 11790
U/L or Qtr/Qtr ___G____ Section ___02____ Township _24N_____ Range ___08W_____ County: SAN JUAN
Center of Proposed Design: Latitude _36.34542N _____Longitude __107.64901W_____ NAD: ☐1927 ☒ 1983
Surface Owner: ☐ Federal ☒ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☒ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC
Temporary: ☒ Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management Low Chloride Drilling Fluid ☒ yes ☐ no
☒ Lined ☐ Unlined Liner type: Thickness __20_____mil ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☐ String-Reinforced
Liner Seams: ☒ Welded ☒ Factory ☐ Other _____ Volume: 8,000 bbl Dimensions: L 135 x W 60 x D 15

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

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

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

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6.

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

☐ Screen ☐ Netting ☐ Other_____

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

7.

Signs: Subsection C of 19.15.17.11 NMAC

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

☐ Signed in compliance with 19.15.16.8 NMAC

8.

Variances and Exceptions:

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

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

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

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

9.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC

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

General siting

Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank. ☐ Yes ☐ No ☐ NA
- ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells

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

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. **(Does not apply to below grade tanks)** ☐ Yes ☐ No
- Written confirmation or verification from the municipality; Written approval obtained from the municipality

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

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

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

Below Grade Tanks

Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark). ☐ Yes ☐ No
- Topographic map; Visual inspection (certification) of the proposed site

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

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

Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.) ☐ Yes ☐ No
- Topographic map; Visual inspection (certification) of the proposed site

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

Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application. ☐ Yes ☐ No
NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

Within 100 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Temporary Pit Non-low chloride drilling fluid	
Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application; - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Permanent Pit or Multi-Well Fluid Management Pit	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No

10.

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

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

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

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

11.

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

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

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

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

12.

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC

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

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H_2S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13.

Proposed Closure: 19.15.17.13 NMAC

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

Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Multi-well Fluid Management Pit ☐ Alternative

Proposed Closure Method: ☐ Waste Excavation and Removal
☐ Waste Removal (Closed-loop systems only)
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)
☐ In-place Burial ☐ On-site Trench Burial
☐ Alternative Closure Method

14.

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

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

15.

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

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

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

adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☐ No

16.
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

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

17.
Operator Application Certification:

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

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

18.
OCD Approval: ☐ Permit Application (including closure plan) ☒ ~~Closure Plan (only)~~ ☐ OCD Conditions (see attachment)

OCD Representative Signature: Jonathan Kelly **Approval Date:** 10/27/2014

Title: Compliance Officer **OCD Permit Number:** _____

19.
Closure Report (required within 60 days of closure completion): 19.15.17.13 NMAC

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

☒ **Closure Completion Date: 7/22/14**

20.
Closure Method:

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

21.
Closure Report Attachment Checklist: ***Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.***

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

On-site Closure Location: Latitude 36.34542N Longitude 107.64901W NAD: ☐1927 ☒ 1983

22.

Operator Closure Certification:

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

Name (Print): Tamra Sessions Title: Operations Technician

Signature: Tamra 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: ROADRUNNER 4G
API NO: 30-045-35518

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

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

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

General Plan

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

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

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

The pit was closed using onsite burial.

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

The closure process notification to the landowner was sent via email. (See attached) (Well located on Federal Land/STATE LAND, certified mail is not required for Federal Land per BLM/OCD).

***Due to confusion on surface owner notification for State land, only the NMOCD was notified. In the future the State Land Office will be notified where the State is the surface owner.**

***Variance Explanation: Rule 19.15.17.13 E. If the surface owner is a public entity (BLM/State/Tribal) then an email notification will be sent, of plans to close the temporary pit at least 72 hours, but no more than 1 week, prior to any closure operation. The notice will include the well name, API number, and location.**

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

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

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

Notification is attached.

6 Pit contents shall be mixed with non-waste containing, earthen material in order to achieve the solidification process. The solidification process will be accomplished using a combination of natural drying and

mechanically mixing. Pit contents will be mixed with non-waste, earthen material to a consistency that is deemed a safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents.

Logos mixed the pit contents with non-waste containing, earthen material in order to achieve the solidification process. The solidification process was accomplished by using a combination of natural drying and mechanically mixing. Pit contents were mixed with non-waste, earthen material to a consistency that is deemed as safe and stable. The mixing ratio consisted of not more than 3 parts clean soil to 1 part pit contents.

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

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

Components	Tests Method	Limit (mg/Kg)	Results (ppm)
Benzene	EPA SW-846 8021B or 8015M	10	ND
BTEX	EPA SW-846 8021B or 8260B	50	ND
TPH	EPA SW-846 418.1	2500	1610
GRO/DRO	EPA SW-846 8015M	1000	ND
Chlorides	EPA 300.0	80000	5860

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

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

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

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

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

The pit area was re-contoured to match fit, shape, line, form and texture of the surrounding area. Reshaping included drainage control, to prevent ponding and erosion. Natural drainages were unimpeded and water bars and/or silt traps were placed in areas where needed to prevent erosion on a large scale. Final re-contour has a uniform appearance with smooth surface, fitting the natural landscape.

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

Provision 11 was accomplished in accordance with NMOCD 19.15.17.13(5)(d) Notification will be sent to the OCD when re-vegetation is established.

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

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

Provision 12 was accomplished in accordance with NMOCD 19.15.17.13(5)(d) Notification will be sent to the OCD when re-vegetation is established.

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

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

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

Operator Name: LOGOS
Lease Name & Well Number: ROADRUNNER 4G
Unit Letter: G
Section: 2
Township: 24N
Range: 8W
API#: 30-045-35518
OBL

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

Inspection Start Date: 4/7/14
Inspection End Date: 6/11/14
NOTE: During start and end dates of temporary pit inspections no issues found.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., 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 Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Fancis Dr.
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
		Dufers Point – Gallup Dakota

[4] Property Code	[5] Property Name	[6] Well Number
	ROADRUNNER	4G

[7] OGRID No.	[8] Operator Name	[9] Elevation
289408	Logos Operating, LLC.	7345'

[10] Surface Location

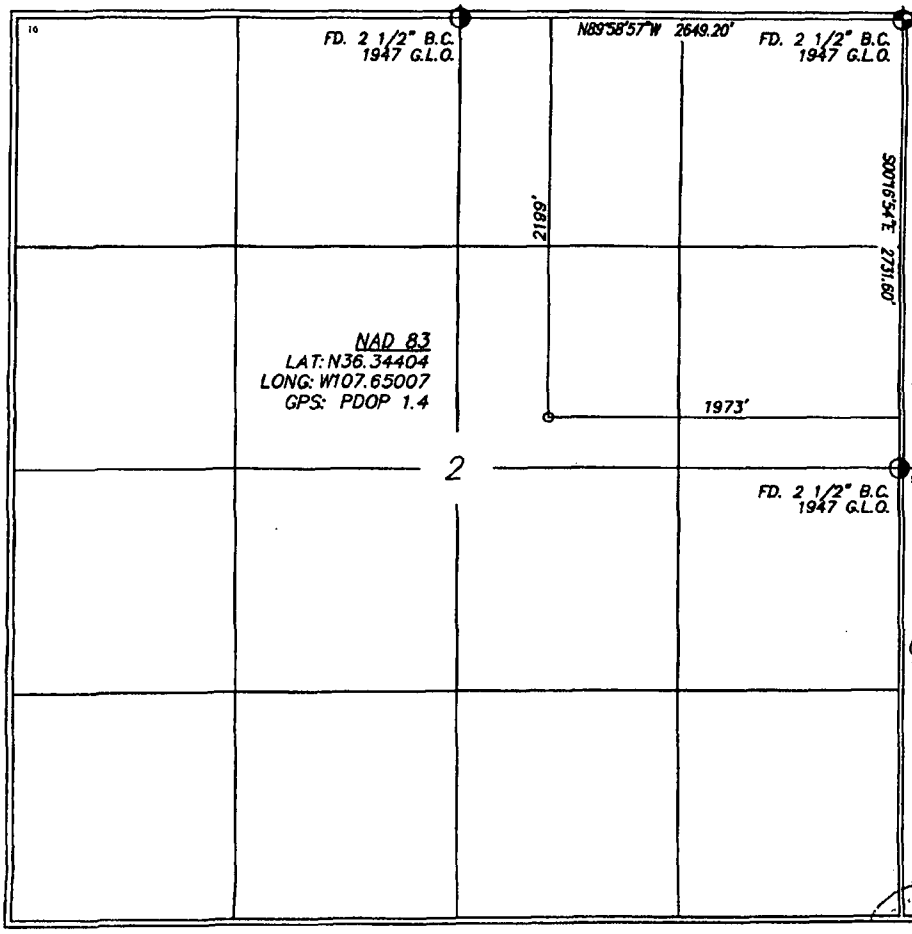
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	2	T24N	R8W		2199'	NORTH	1973'	EAST	SAN JUAN

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



[17] OPERATOR CERTIFICATION

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

Signature Date

Printed Name

E-mail Address

[18] SURVEYOR CERTIFICATION

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

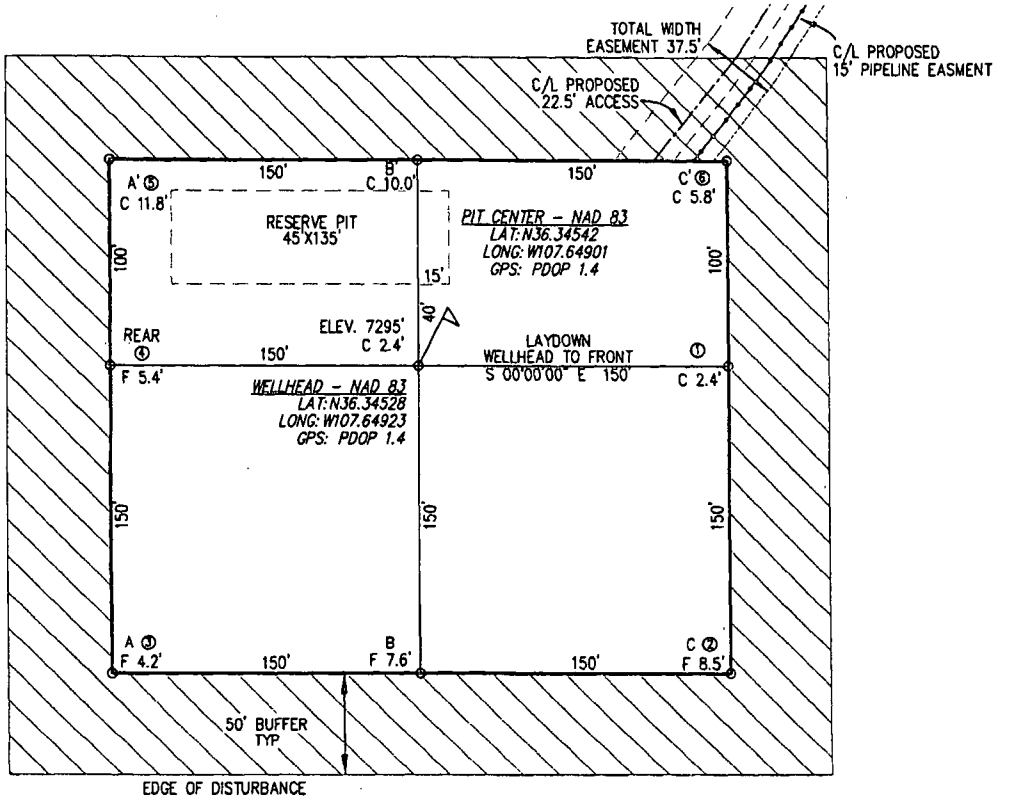
02/12/2014
Date of Survey

Signature and Seal of Professional Surveyor:

JOHN D. WAYNE
NEW MEXICO
9673
PROFESSIONAL SURVEYOR

Certificate Number N.M. PLS #9673

LOGOS OPERATING, LLC
ROADRUNNER #4G
1750' FNL, 1725' FEL
SEC. 2, T-24-N, R-8-W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO
ELEVATION: 7340'



SCALE 1"=70'

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR THE COST OF ANY AND ALL DAMAGES WHICH OCCUR AS A RESULT OF A FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING NEW MEXICO ONE CALL SYSTEM, INC. AT 1-800-321-ALERT THREE (3) DAYS PRIOR TO THE START OF ANY EXCAVATION WORK.

DATE:	REVISION
03/17/14	RESTAKE

DISTURBANCE AREA	ACRES
PAD	1.72
BUFFER	1.49
TOTAL	3.21

BASIN SURVEYING, INC.
P.O. BOX 6456, FARMINGTON, N.M. 87499
108 LLANO STREET, AZTEC, N.M. 87410
PHONE: (505)334-1500

DRAWN BY: BB | CAD DWG: ROADRUNNER4G\PADDIAGRAM.DWG | SCALE: 1"=50' | DATE: 03/19/2014

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Logos Operating, LLC
Chain Of Custody Number: 17119
Samples Received: 6/20/2014 4:35:00PM
Job Number: 12035-0055
Work Order: P406087
Project Name/Location: Roadrunner #4G

Entire Report Reviewed By: _____ Date: 6/27/14

Tim Cain, Laboratory Manager

5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fr (800) 362-1879
envirotechinc.com
laboratory@envirotechinc.com

envirotech
Analytical Laboratory

Logos Operating, LLC	Project Name:	Roadrunner #4G	
PO Box 18	Project Number:	12035-0055	**Reported:**
Flora Vista NM, 87415	Project Manager:	Sheena Leon	27-Jun-14 11:47

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Drill Pit Mud	P406087-01A	Sludge	06/20/14	06/20/14	Glass Jar, 4 oz.

Logos Operating, LLC	Project Name:	Roadrunner #4G	
PO Box 18	Project Number:	12035-0055	**Reported:**
Flora Vista NM, 87415	Project Manager:	Sheena Leon	27-Jun-14 11:47

Drill Pit Mud

P406087-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1426001	06/23/14	06/26/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1426001	06/23/14	06/26/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1426001	06/23/14	06/26/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1426001	06/23/14	06/26/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1426001	06/23/14	06/26/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1426001	06/23/14	06/26/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1426001	06/23/14	06/26/14	EPA 8021B	
Surrogate: Bromochlorobenzene		*86.9 %*		*80-120*	*1426001*	*06/23/14*	*06/26/14*	*EPA 8021B*	
Surrogate: 1,3-Dichlorobenzene		*92.1 %*		*80-120*	*1426001*	*06/23/14*	*06/26/14*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1426001	06/23/14	06/26/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1426002	06/23/14	06/24/14	EPA 8015D	

Logos Operating, LLC	Project Name:	Roadrunner #4G	
PO Box 18	Project Number:	12035-0055	**Reported:**
Flora Vista NM, 87415	Project Manager:	Sheena Leon	27-Jun-14 11:47

Drill Pit Mud

P406087-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Cation/Anion Analysis									
Chloride	**5860**	9.92	mg/kg	1	1426014	06/24/14	06/24/14	EPA 300.0	

Logos Operating, LLC	Project Name:	Roadrunner #4G	
PO Box 18	Project Number:	12035-0055	**Reported:**
Flora Vista NM, 87415	Project Manager:	Sheena Leon	27-Jun-14 11:47

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1426001 - Purge and Trap EPA 5030A										
Blank (1426001-BLK1)				Prepared & Analyzed: 23-Jun-14						
Benzene	ND	0.001	mg/kg							
Toluene	ND	0.001	"							
Ethylbenzene	ND	0.001	"							
p,m-Xylene	ND	0.001	"							
o-Xylene	ND	0.001	"							
Total Xylenes	ND	0.001	"							
Total BTEX	ND	0.001	"							
Surrogate: 1,3-Dichlorobenzene	*44.5*		*ug/L*	*50.0*		*89.0*	*80-120*			
Surrogate: Bromochlorobenzene	*43.8*		"	*50.0*		*87.5*	*80-120*			
Duplicate (1426001-DUP1)	**Source: P406082-01**			Prepared & Analyzed: 23-Jun-14						
Benzene	ND	0.001	mg/kg		ND				30	
Toluene	ND	0.001	"		ND				30	
Ethylbenzene	ND	0.001	"		ND				30	
p,m-Xylene	ND	0.001	"		ND				30	
o-Xylene	ND	0.001	"		ND				30	
Surrogate: 1,3-Dichlorobenzene	*46.2*		*ug/L*	*50.0*		*92.4*	*80-120*			
Surrogate: Bromochlorobenzene	*45.3*		"	*50.0*		*90.6*	*80-120*			
Matrix Spike (1426001-MS1)	**Source: P406082-01**			Prepared & Analyzed: 23-Jun-14						
Benzene	44.8		ug/L	50.0	ND	89.5	39-150			
Toluene	44.9		"	50.0	ND	89.8	46-148			
Ethylbenzene	44.7		"	50.0	ND	89.3	32-160			
p,m-Xylene	88.4		"	100	ND	88.4	46-148			
o-Xylene	44.3		"	50.0	ND	88.6	46-148			
Surrogate: 1,3-Dichlorobenzene	*45.1*		"	*50.0*		*90.3*	*80-120*			
Surrogate: Bromochlorobenzene	*44.2*		"	*50.0*		*88.3*	*80-120*			

Logos Operating, LLC	Project Name:	Roadrunner #4G	
PO Box 18	Project Number:	12035-0055	**Reported:**
Flora Vista NM, 87415	Project Manager:	Sheena Leon	27-Jun-14 11:47

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 1426001 - Purge and Trap EPA 5030A										
Blank (1426001-BLK1)				Prepared & Analyzed: 23-Jun-14						
Gasoline Range Organics (C6-C10)	ND	0.10	mg/kg							
Duplicate (1426001-DUP1)		**Source: P406082-01**		Prepared & Analyzed: 23-Jun-14						
Gasoline Range Organics (C6-C10)	ND	0.10	mg/kg		ND				30	
Matrix Spike (1426001-MS1)		**Source: P406082-01**		Prepared & Analyzed: 23-Jun-14						
Gasoline Range Organics (C6-C10)	0.43		mg/L	0.450	ND	95.3	75-125			

Logos Operating, LLC	Project Name:	Roadrunner #4G	
PO Box 18	Project Number:	12035-0055	**Reported:**
Flora Vista NM, 87415	Project Manager:	Sheena Leon	27-Jun-14 11:47

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 1426002 - DRO Extraction EPA 3550C										
Blank (1426002-BLK1)				Prepared & Analyzed: 23-Jun-14						
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
Duplicate (1426002-DUP1)		Source: P406082-01		Prepared & Analyzed: 23-Jun-14						
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg		40.4				30	D1
Matrix Spike (1426002-MS1)		Source: P406082-01		Prepared: 23-Jun-14 Analyzed: 24-Jun-14						
Diesel Range Organics (C10-C28)	290		mg/L	250	38.4	100	75-125			

Logos Operating, LLC	Project Name:	Roadrunner #4G	
PO Box 18	Project Number:	12035-0055	**Reported:**
Flora Vista NM, 87415	Project Manager:	Sheena Leon	27-Jun-14 11:47

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1426014 - Anion Extraction EPA 300.0										
Blank (1426014-BLK1)				Prepared & Analyzed: 24-Jun-14						
Chloride	ND	9.84	mg/kg							
LCS (1426014-BS1)				Prepared & Analyzed: 24-Jun-14						
Chloride	496	9.82	mg/kg	491		101	90-110			
Matrix Spike (1426014-MS1)		Source: P406090-01RE1		Prepared & Analyzed: 24-Jun-14						
Chloride	500	9.89	mg/kg	494	46.7	91.8	80-120			
Matrix Spike Dup (1426014-MSD1)		Source: P406090-01RE1		Prepared & Analyzed: 24-Jun-14						
Chloride	569	9.92	mg/kg	496	46.7	105	80-120	12.8	20	

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Analytical Laboratory

Logos Operating, LLC	Project Name:	Roadrunner #4G	
PO Box 18	Project Number:	12035-0055	**Reported:**
Flora Vista NM, 87415	Project Manager:	Sheena Leon	27-Jun-14 11:47

Notes and Definitions

D1	Duplicates or Matrix Spike Duplicates Relative Percent Difference exceeds control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CHAIN OF CUSTODY RECORD

17119

Client: Logos Operating	Project Name / Location: Roadrunner #4G	ANALYSIS / PARAMETERS
Email results to: S. Leon	Sampler Name: S. Leon	
Client Phone No.:	Client No.: 12035-0055	

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative HNO_3	Preservative HCl	Preservative COOL	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
Drill Pit mud	10/20/14	16:35	P406087-01	1-4oz glass jar			X	X	X								X				Y	Y

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Sheena Leon	10/20/14	16:35		10/20/14	16 35
Relinquished by: (Signature)			Received by: (Signature)		

Sample Matrix
Soil ☐ Solid ☐ Sludge ☒ Aqueous ☐ Other ☐ _____

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

8.4

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Analytical Laboratory

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

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Logos Operating, LLC
Chain Of Custody Number: 17198
Samples Received: 7/8/2014 4:35:00PM
Job Number: 12035-0055
Work Order: P407037
Project Name/Location: Roadrunner #4G

Entire Report Reviewed By: _____ Date: 7/10/14

Tim Cain, Laboratory Manager

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

5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fr (800) 362-1879
envirotech-inc.com
laboratory@envirotech-inc.com

envirotech
Analytical Laboratory

Logos Operating, LLC	Project Name:	Roadrunner #4G	
PO Box 18	Project Number:	12035-0055	**Reported:**
Flora Vista NM, 87415	Project Manager:	Sheena Leon	10-Jul-14 10:46

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Backfill	P407037-01A	Soil	07/08/14	07/08/14	Glass Jar, 4 oz.

5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fr (800) 362-1879
envirotech-inc.com
laboratory@envirotech-inc.com

Logos Operating, LLC	Project Name:	Roadrunner #4G	
PO Box 18	Project Number:	12035-0055	**Reported:**
Flora Vista NM, 87415	Project Manager:	Sheena Leon	10-Jul-14 10:46

Backfill

P407037-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Cation/Anion Analysis									
Chloride	**25.9**	9.96	mg/kg	1	1428021	07/09/14	07/09/14	EPA 300.0	

envirotech
Analytical Laboratory

Logos Operating, LLC	Project Name:	Roadrunner #4G	
PO Box 18	Project Number:	12035-0055	**Reported:**
Flora Vista NM, 87415	Project Manager:	Sheena Leon	10-Jul-14 10:46

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1428021 - Anion Extraction EPA 300.0										
Blank (1428021-BLK1)				Prepared & Analyzed: 09-Jul-14						
Chloride	ND	9.92	mg/kg							
LCS (1428021-BS1)				Prepared & Analyzed: 09-Jul-14						
Chloride	482	9.85	mg/kg	493		97.9	90-110			
Matrix Spike (1428021-MS1)		**Source: P407036-01**		Prepared & Analyzed: 09-Jul-14						
Chloride	514	9.95	mg/kg	498	20.4	99.3	80-120			
Matrix Spike Dup (1428021-MSD1)		**Source: P407036-01**		Prepared & Analyzed: 09-Jul-14						
Chloride	514	9.89	mg/kg	495	20.4	99.8	80-120	0.0927	20	

envirotech
Analytical Laboratory

Logos Operating, LLC	Project Name:	Roadrunner #4G	
PO Box 18	Project Number:	12035-0055	**Reported:**
Flora Vista NM, 87415	Project Manager:	Sheena Leon	10-Jul-14 10:46

Notes and Definitions

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

CHAIN OF CUSTODY RECORD

17198

Client: Logos Operating	Project Name / Location: Roadrunner #4G	ANALYSIS / PARAMETERS
Email results to: S. Leon	Sampler Name: S. Leon	
Client Phone No.:	Client No.: 12035-0055	

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative HNO_3	Preservative HCl	Preservative ICE	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
Backfill	7/8/14	11:00	P407037-01	1-4oz glass jar			X										X				Y	Y

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Sheena Leon	7/8/14	16:35		7/8/14	16:35
Relinquished by: (Signature)			Received by: (Signature)		

Sample Matrix

Soil ☒ Solid ☐ Sludge ☐ Aqueous ☐ Other ☐ _____

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

17.4

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Analytical Laboratory

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Summary of Analytical Results
Logos Operating, LLC
Roadrunner #4G
Drill Pit Closure Sampling Report
San Juan County, New Mexico
Project Number 12035-0055

Sample Description	Sample Number	Date	TPH USEPA Method 418.1 (ppm)	TPH USEPA Method 8015 (ppm)	Benzene USEPA Method 8021 (ppm)	BTEX USEPA Method 8021 (ppm)	Chlorides USEPA Method 300.0 (ppm)
NMOCD/RCRA Standards	NA	NA	2500	1000	10	50	40000
Drill Pit Mud	1	6/20/2014	1610	ND	ND	ND	5860
NMOCD/RCRA Standards	NA	NA	NA	NA	NA	NA	600
Backfill	2	7/8/2014	NS	NS	NS	NS	25.9

NS = Not Sampled
ND = Non-Detect at Stated Method's Detection Limit
* Values in **BOLD** above regulatory standards

Submit To Appropriate District Office
Two Copies
District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

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

Form C-105
Revised August 1, 2011

1. WELL API NO.
30-045-35518

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

3. State Oil & Gas Lease No.
LG - 1916

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

4. Reason for filing:

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

☒ **C-144 CLOSURE ATTACHMENT** (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)

5. Lease Name or Unit Agreement Name
ROADRUNNER

6. Well Number: 4G

7. Type of Completion:
☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER

8. Name of Operator
LOGOS OPERATING LLC

9. OGRID
289408

10. Address of Operator
4001 North Butler Avenue, Building 7101 Farmington, NM 87401

11. Pool name or Wildcat

12.Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:										
BH:										

13. Date Spudded	14. Date T.D. Reached	15. Date Rig Released	16. Date Completed (Ready to Produce)	17. Elevations (DF and RKB, RT, GR, etc.)
		4/17/14		

18. Total Measured Depth of Well	19. Plug Back Measured Depth	20. Was Directional Survey Made?	21. Type Electric and Other Logs Run

22. Producing Interval(s), of this completion - Top, Bottom, Name

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

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

24. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

25. TUBING RECORD

SIZE	DEPTH SET	PACKER SET

26. Perforation record (interval, size, and number)

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED

28. **PRODUCTION**

Date First Production	Production Method *(Flowing, gas lift, pumping - Size and type pump)*	Well Status *(Prod. or Shut-in)*

Date of Test	Hours Tested	Choke Size	Prod'n For Test Period	Oil - Bbl	Gas - MCF	Water - Bbl.	Gas - Oil Ratio

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - *(Corr.)*

29. Disposition of Gas *(Sold, used for fuel, vented, etc.)*

30. Test Witnessed By

31. List Attachments

32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit. SEE ATTACHED

33. If an on-site burial was used at the well, report the exact location of the on-site burial:
Latitude 36.34542N Longitude 107.64901W NAD 1927 1983X

I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief

Signature Tam Sessions Printed Name Tamra Sessions Title Operations Technician Date 9/30/14

E-mail Address tsessions@logosresourcesllc.com

LOGOS RESOURCES LLC

Pit Closure Form:

Date: 7-22-14

Well Name: ROADRUNNER 4G

Footages: 1750' FNL & 1725' FEL Unit Letter: G

Section: 2, T-24N, R-8W, County: SAN JUAN State: NM

Contractor Closing Pit: ACE

Construction Inspector: Wayne Ritter

Inspector Signature: Wayne Ritter

Date: 7-17-14

Tamra Sessions

From: Tamra Sessions
Sent: Thursday, July 3, 2014 1:43 PM
To: Jonathan Kelly (jonathan.kelly@state.nm.us)
Cc: Cory Smith (cory.smith@state.nm.us); brandon.powell@state.nm.us; Wayne Ritter (writter@logosresourcesllc.com)
Subject: Roadrunner 4G_State Pit Closure 72hr notice

Logos Operating is giving 72hr notice of plans to start temporary pit closure operations on Monday 07/07/2014 for the following well.
Please contact Wayne Ritter at 505-320-0436 for any questions or concerns. Thank you.

Roadrunner 4G
API 30-045-35518
G – Sec 2 – T24N – R08W

Tamra Sessions
Logos Resources, LLC
Operations Technician
tsessions@logosresourcesllc.com
(c) 505-330-9333
(o) 505-436-3790 ext 103

LOGOS RESOURCES LLC

Reclamation Form:

Date: 8-2-14

Well Name: ROADRUNNER 4G

Footages: 1750' FNL & 1725' FEL Unit Letter: G

Section: 2, T-24N, R-8W, County: SAN JUAN State: NM

Reclamation Contractor: ACE

Reclamation Start Date: 7-7-14

Reclamation Complete Date: 8-2-14

Road Completion Date: 8-2-14

Seeding Date: 8-8-14

PIT MARKER STATUS

(When Required) Picture of Marker set needed

Date Marker Placed: 9-2-14

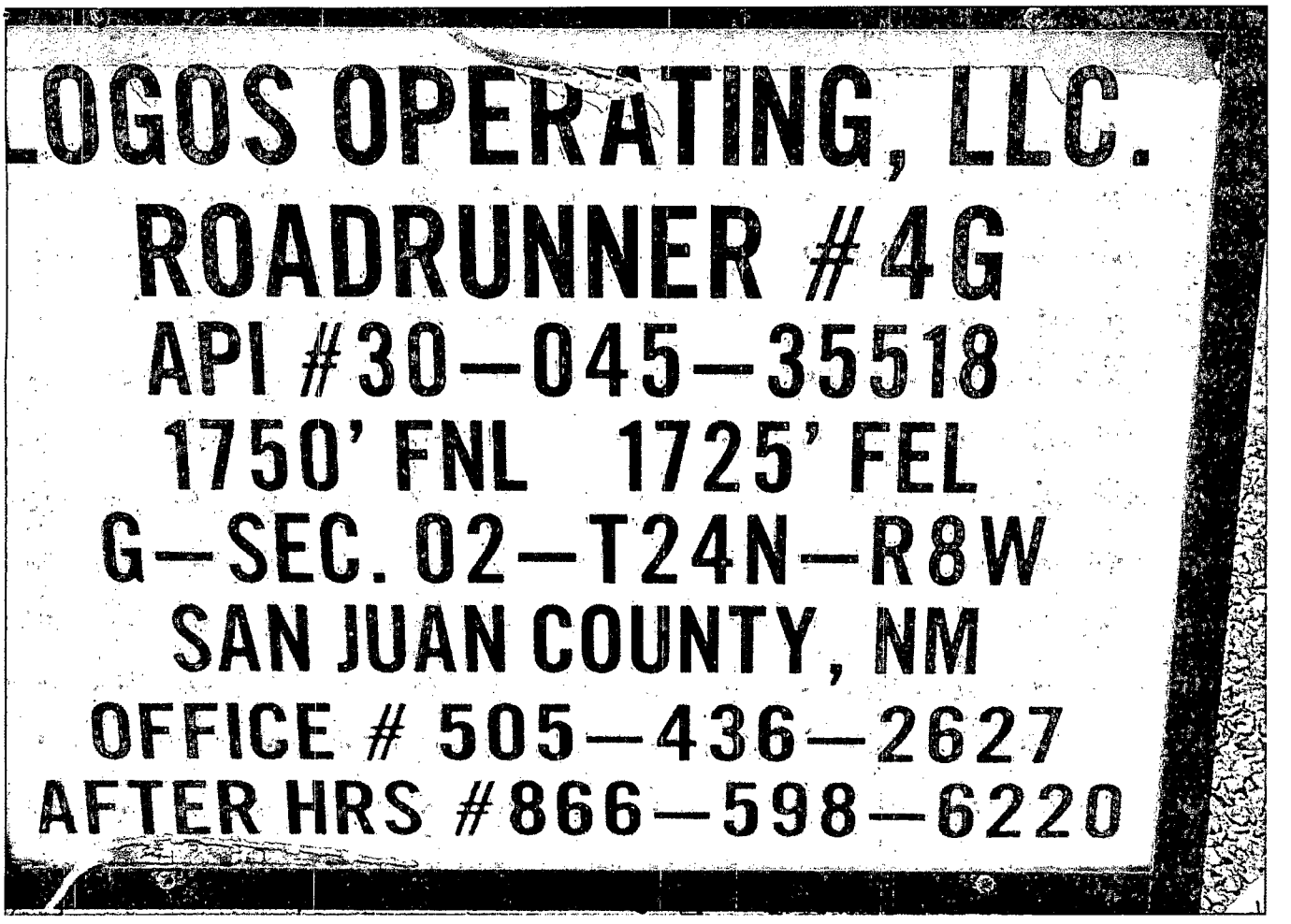
Latitude: 36.34542

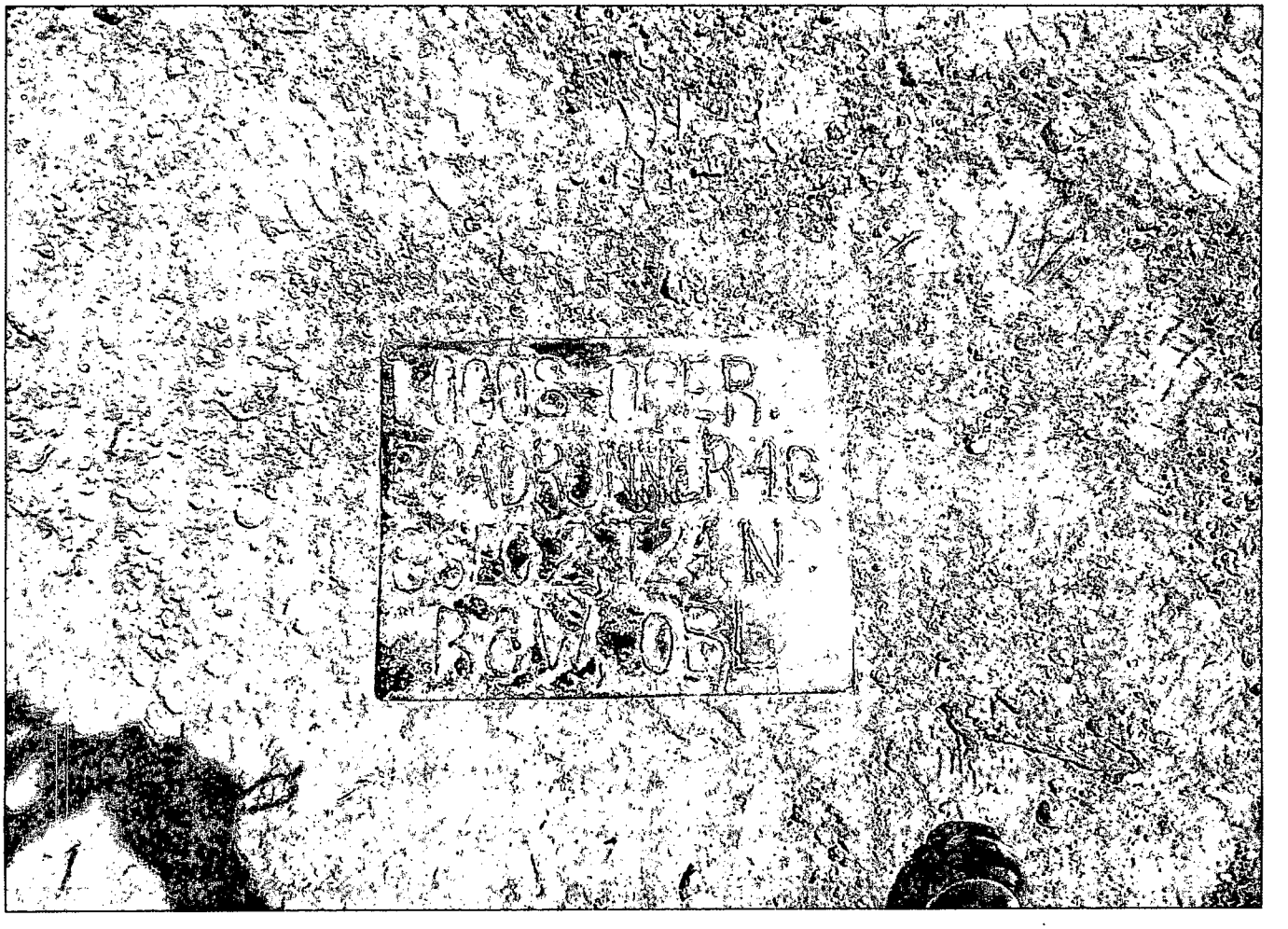
Longitude: 107.64901

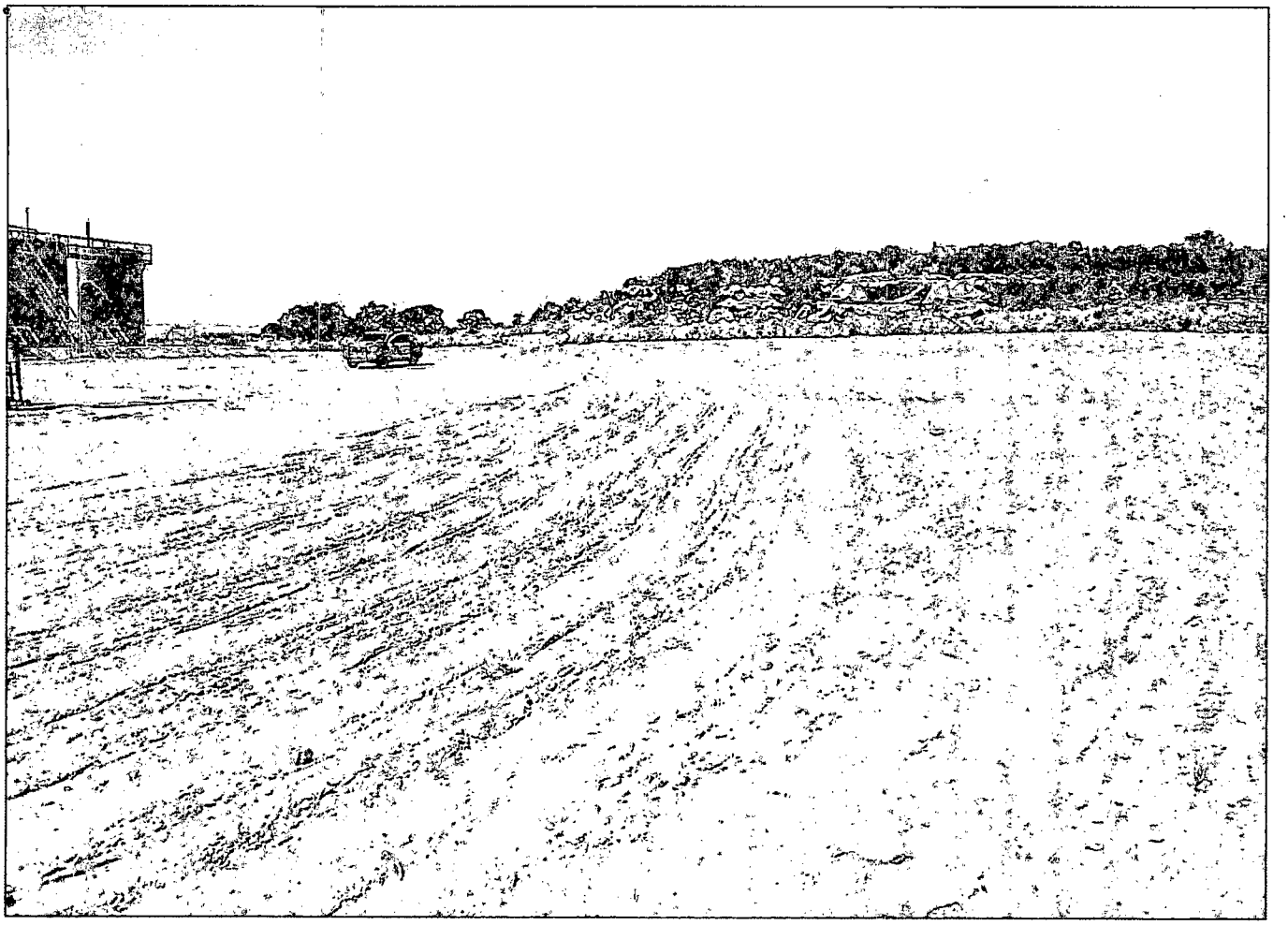
Date Pit Manifold Removed: N/A

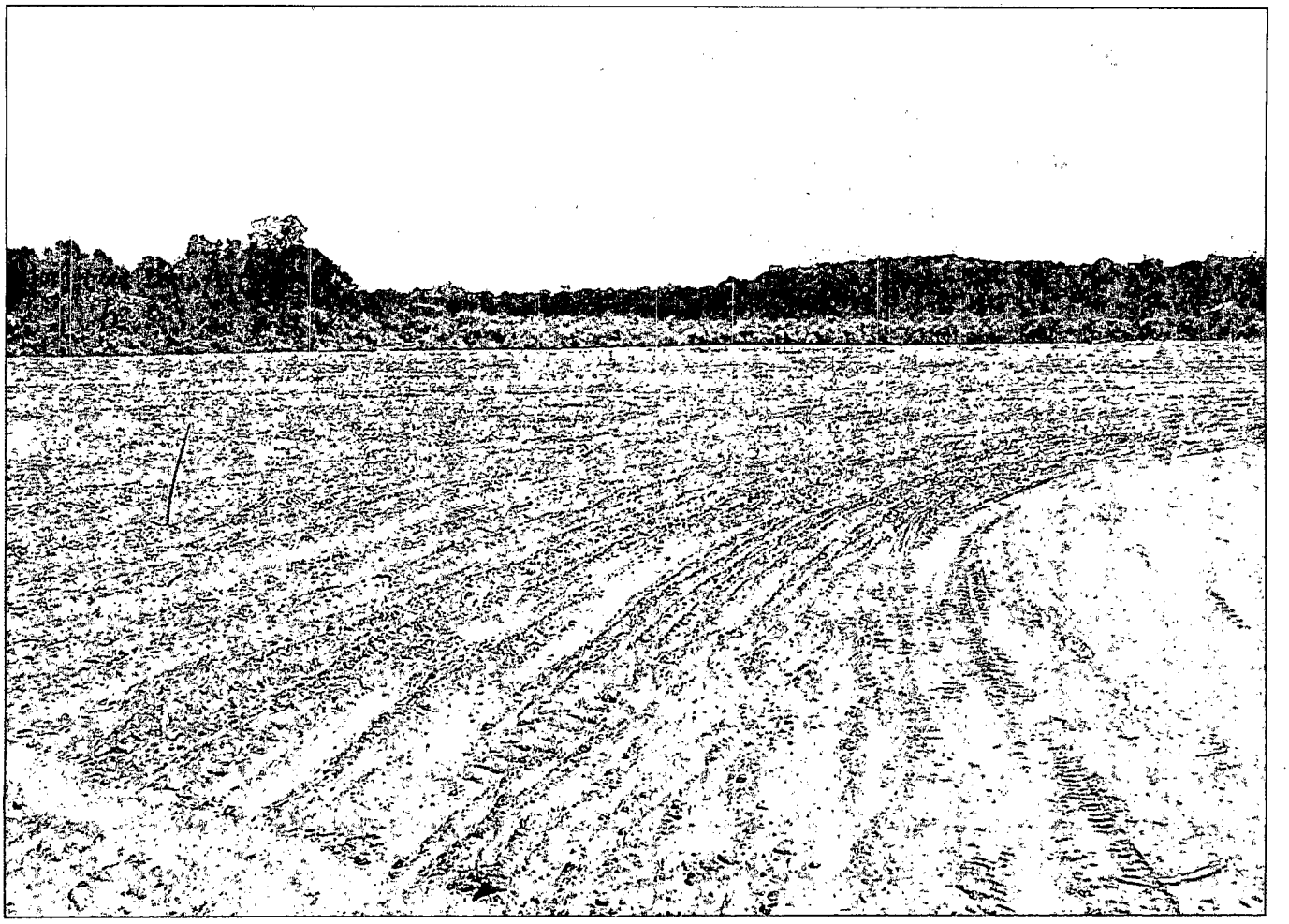
Construction Inspector Signature: Wayne

Date Inspected: 8-2-14


LOGOS OPERATING, LLC.
ROADRUNNER #4G
API #30-045-35518
1750' FNL 1725' FEL
G-SEC. 02-T24N-R8W
SAN JUAN COUNTY, NM
OFFICE # 505-436-2627
AFTER HRS #866-598-6220







Temporary Pit Weekly Inspection Form

WELL NAME:	*ROADRUNNER 4G*			**API NO:**	*30-045-35518*	
LEGALS:	**Section:**	*2*	**Township:**	*24N*	**Range:**	*8W*
Drilling RD Date:	**4/17/2014**					

Inspector's Name	RAMSEY HATALIE	RAMSEY HATALIE	RAMSEY HATALIE	CASEY RIDGLEY								
WEEK #	1	2	3	4	5	6	7	8	9	10	11	12
DATE	04/28/14	05/13/14	05/19/14	06/11/14								
Well sign on location (Y/N)	Y	Y	Y	Y								
Any liner breeches (Y/N)	N	N	N	N								
Any fluid seeps/spills (Y/N)	N	N	N	N								
HC's on top of temp. pit (Y/N)	N	N	N	N								
Temp pit free of misc. Solid Waste/Debris(Y/N)	Y	Y	Y	Y								
Discharge Line Integrity Good (Y/N)	N	N	N	Y								
Fence Integrity Good (Y/N)	Y	Y	Y	Y								
Any Dead Wildlife/ Stock (Y/N)	N	N	N	N								
Freeboard to be 2' or > Est. (ft)	Y (17')	Y (15')	Y (15')	Y (17')								
Was the OCD contacted (Y/N)	N	N	N	N								
Pictures taken (Y/N)	Y	Y	Y	Y								
Comments:	17' CLEARANCE	15' CLEARANCE	15' CLEARANCE	PIT STILL HAD MUD IN BOTTOM17" FROM SURFACE TO MUD								

LOGOS RESOURCES LLC

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

Date: October 21, 2014

To: NMOCD

Re: Closure Permit #12248
Roadrunner 4G
API 30-045-35518

Dear NMOCD,

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

- No copy of Final 418.1 sample results included with permit.
  - Please find attached the Final 418.1 sample results.

Regards,

Jamie Goodwin

Jamie Goodwin
Regulatory Technician

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Logos Operating	Project #:	12035-0055
Sample No.:	1	Date Reported:	7/14/2014
Sample ID:	Drill Pit Mud	Date Sampled:	6/20/2014
Sample Matrix:	Soil	Date Analyzed:	6/20/2014
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**1,610**	**5.0**

ND = Parameter not detected at the stated detection limit.

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

Comments: **Roadrunner #4G**

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

Analyst

Sheena Leon
Printed

Review

Toni McKnight, EIT
Printed

CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 20-Jun-14

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	
	200	200
	500	
	1000	

The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.

Analyst — Date: 7/14/2014

Sheena Leon
Print Name

Review — Date: 7/14/2014

Toni McKnight, EIT
Print Name