

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

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

Form C-144  
Revised June 6, 2013

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

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

12554  
45-35539  
45-35538

- 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

OIL CONS. DIV DIST. 3  
JAN 15 2015

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: WPX Energy Production, LLC OGRID #: 120782  
Address: PO Box 640 / 721 S Main Aztec, NM 87410  
Facility or well name: Chaco 2308-03E #404H & Chaco 2308-03E #405H  
API Number: 30-045-35539 & 30-045-35538 OCD Permit Number: 11964  
U/L or Qtr/Qtr L Section 3 Township 23N Range 8W County: San Juan  
Center of Proposed Design: Latitude 36.2553958 N Longitude 107.677637 W NAD:  1927  1983  
Surface Owner:  Federal  State  Private  Tribal Trust or Indian Allotment

2.  
 **Pit:** Subsection F, G or J of 19.15.17.11 NMAC  
Temporary:  Drilling  Workover  
 Permanent  Emergency  Cavitation  P&A  Multi-Well Fluid Management Low Chloride Drilling Fluid  yes  no  
 Lined  Unlined Liner type: Thickness 20 mil  LLDPE  HDPE  PVC  Other \_\_\_\_\_  
 String-Reinforced  
Liner Seams:  Welded  Factory  Other \_\_\_\_\_ Volume: 8,000 bbl Dimensions: L 130' x W 75' x D 12'

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

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

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

6.  
**Netting:** Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)  
 Screen  Netting  Other \_\_\_\_\_  
 Monthly inspections (If netting or screening is not physically feasible)

7.  
**Signs:** Subsection C of 19.15.17.11 NMAC  
 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers  
 Signed in compliance with 19.15.16.8 NMAC

8.  
**Variations 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.*

<u>General siting</u>	
<b>Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.</b> - <input checked="" type="checkbox"/> NM Office of the State Engineer - iWATERS database search; <input type="checkbox"/> USGS; <input type="checkbox"/> Data obtained from nearby wells	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
<b>Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit.</b> NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. <b>(Does not apply to below grade tanks)</b> - Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within the area overlying a subsurface mine. <b>(Does not apply to below grade tanks)</b> - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within an unstable area. <b>(Does not apply to below grade tanks)</b> - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within a 100-year floodplain. <b>(Does not apply to below grade tanks)</b> - FEMA map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b><u>Below Grade Tanks</u></b>	
Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption; - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b><u>Temporary Pit using Low Chloride Drilling Fluid</u></b> (maximum chloride content 15,000 mg/liter)	
Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.) - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Within 100 feet of a wetland.  
 - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  Yes  No

**Temporary Pit Non-low chloride drilling fluid**

Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  
 - Topographic map; Visual inspection (certification) of the proposed site  Yes  No

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

Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;  
 - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site  Yes  No

Within 300 feet of a wetland.  
 - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  Yes  No

**Permanent Pit or Multi-Well Fluid Management Pit**

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  
 - Topographic map; Visual inspection (certification) of the proposed site  Yes  No

Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  
 - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image  Yes  No

Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.  
 - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site  Yes  No

Within 500 feet of a wetland.  
 - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  Yes  No

10.  
**Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC  
*Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.*

- Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
  - Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
  - Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
  - Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
  - Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
  - Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
- Previously Approved Design (attach copy of design) API Number: 30-045-35539 & 30-045-35538 or Permit Number: 11964

11.  
**Multi-Well Fluid Management Pit Checklist:** Subsection B of 19.15.17.9 NMAC  
*Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.*

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

12.

**Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC

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

- Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- Climatological Factors Assessment
- Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- Quality Control/Quality Assurance Construction and Installation Plan
- Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan
- Emergency Response Plan
- Oil Field Waste Stream Characterization
- Monitoring and Inspection Plan
- Erosion Control Plan
- Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13.

**Proposed Closure:** 19.15.17.13 NMAC

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

- Type:  Drilling  Workover  Emergency  Cavitation  P&A  Permanent Pit  Below-grade Tank  Multi-well Fluid Management Pit  
 Alternative
- Proposed Closure Method:  Waste Excavation and Removal  
 Waste Removal (Closed-loop systems only)  
 On-site Closure Method (Only for temporary pits and closed-loop systems)  
 In-place Burial  On-site Trench Burial  
 Alternative Closure Method

14.

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

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

15.

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

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

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

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

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

- 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: Janeth D. Kelly Approval Date: 1/15/2015

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: 8/6/2014

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.*

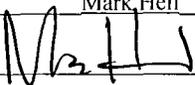
- Proof of Closure Notice (surface owner and division)
- Proof of Deed Notice (required for on-site closure for private land only)
- Plot Plan (for on-site closures and temporary pits)
- Confirmation Sampling Analytical Results (if applicable)
- Waste Material Sampling Analytical Results (required for 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 36.2553958 Longitude -107.677637 NAD:  1927  1983

**Operator Closure Certification:**

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

Name (Print): Mark Heil Title: Regulatory Specialist

Signature:  Date: 1/13/2015

e-mail address: mark.heil@wpenergy.com Telephone: 505-333-1806

**WPX Energy Production, LLC**  
**San Juan Basin: New Mexico Assets**  
Temporary Pit In-place Closure Report  
Drilling/Completion and Workover  
(Groundwater >100 feet bgs)

**Well:** CHACO 2308-03L #404H & CHACO 2308-03L #405H  
**API No:** 30-045-35539 & 30-045-35538  
**Location:** L-S03-T23N-R08W, NMPM

In accordance with Rule 19.15.17.13 NMAC, the following plan describes the general in-place closure requirements of temporary pits on WPX Energy Production, LLC (WPX) locations in the San Juan Basin of New Mexico. This is WPX's standard procedure for all temporary pits to be utilized for the drilling, completion and/or workovers of oil and gas wells operated by WPX. For those temporary pits which do not conform to this standard closure plan, a separate well/pit specific closure plan will be developed and utilized.

All closure activities will include proper documentation and will be submitted to OCD within 60 days of the pit closure on a Closure Report using Division Form C-144. The Report will include the following:

- Details on Capping and Covering, where applicable
- Plot Plan (Pit Diagram)
- Inspection reports
- Sampling Results
- Division Form C-105: *WELL COMPLETION OR RECOMPLETION REPORT AND LOG*
- Copy of Deed Notice filed with the County Clerk (format to meet County requirements)  
*A deed notice is not required on state, federal or tribal land according to NMOCD FAO dated October 30, 2008 and posted on the NMOCD website.*

**NOTE: The original construction of the pit was conducted by Logos Operating, LLC (Logos). WPX acquired the well pad from Logos in August of 2014, after the pit was covered by Logos on (8/6/2014). Logos had not re-contoured or reclaimed the pit when WPX acquired the well pad. After WPX overtook operations of the well pad, WPX obtained the responsibility to reclaim the pit.**

General Plan Requirements:

1. It was the responsibility of Logos to remove free standing liquids at the start of the pit closure process from the pit and dispose of in a division-approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves.  
*It is the understanding of WPX that records of pit inspections were not kept by Logos (communication with Tamra Sessions). Therefore, WPX does not have knowledge of the absence or existence of free standing liquids during the life of the pit.*
2. The preferred method of closure for all temporary pits will be on-site closure by in-place burial, provided all the criteria in 19.15.17.13.B are met.  
*The on-site burial plan for this location was approved by the Aztec District Office on (6/27/2014).*
3. Logos will notify the surface owner by certified mail, return receipt requested, unless 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 of the pit.  
*Logos notified the SMA of its intent to use a temporary pit and onsite burial in the Surface Use Plan in the well APD. The SMA was notified by email see attached. No return receipt required per BLM: FFO/NMOCD MOU dated 5/4/09.*
4. Within six months of the "rig-off" status occurring on the continuous drilling of dual pad wells, Logos will ensure that the temporary pit is closed, recontoured, and reseeded.  
*Drill rig-off (7/8/2014). Completion Rig-off (9/11/2014) Pit closed (8/6/2014). The pit was re-contoured and reseeded on (1/9/2015). The pit area, in addition to unused portions of well pad, are to be interim reclaimed in accordance with Surface Management Agency requirements in APD-COAs and per BLM: FFO/NMOCD MOU dated 5/4/09.*
5. Notice of Closure will be given to the Aztec District office between 72 hours and one week of the scheduled closure via email or phone. The notification of closure will include the following:
  - a. Operators Name (WPX)
  - b. Well Name and API Number

c. Location (USTR)

The Aztec District Office of NMOCD was notified by email using a format acceptable to the District. Copies of the notification from Logos on (8/4/2014) 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 mechanical mixing. Pit contents will be mixed with non-waste, earthen material to a consistency that is deemed safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents.

The pit contents were mixed with non-waste containing, earthen material in order to achieve appropriate solidification and a consistency that was deemed safe and stable. The solidification process was accomplished using a combination of natural drying, and mechanically mixing using a dozer and track hoe. The mixing ration was approximately 2.5-3 parts native soil to 1 part pit contents. Solidification was completed (8/6/2014).

7. A five-point composite sample will be taken of the pit using sampling tools and all samples tested per 19.15.17.13(B)(1)(b) NMAC. In the event that the criteria are not met (See Table 1), all contents will be handled per 19.15.17.13(B)(1)(a) (i.e. dig and haul to a Division-approved facility). Approval to haul will be requested of the Aztec District office prior to initiation.

A five-point composite sampling was taken of the pit area using sampling tools and the sample was tested per 19.15.17.13(B)(1)(b) NMAC. Results are shown in Table 1 and lab reports are attached.

Table 1: Closure Criteria for Temporary Pits in Non-sensitive Areas with Groundwater >100 bgs.

Components	Testing Methods	Limits (mg/Kg)	Pit (mg/Kg)
Benzene	EPA SW-846 Method 8021B or 8260B	10	ND
BTEX	EPA SW-846 Method 8021B or 8260B	50	ND
TPH	EPA SW-846 Method 418.1	2500	700
GRO/DRO	EPA SW-846 Method 8015M (GRO/DRO)	1000	ND/830
Chlorides	EPA SW-846 Method 300.1	80,000	251

8. Upon completion of solidification and testing, the operator is to 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 and impervious resistance to ultra violet light, hydrocarbons, salts, and alkaline. .

Upon completion of solidification and testing (8/6/2014), the outer edges of the trench liner was folded to overlap the waste material in the pit area. A geomembrane cover was placed over the waste material in the pit to prevent collections of infiltration water after the soil cover was in place (20-mil, string reinforced, LLDPE liner, or equivalent complying with EPA SW-846 method 9090A requirements and impervious resistance to ultra violet light, hydrocarbons, salts, and alkaline).

9. The pit area will be backfilled with compacted, non-waste containing, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0. 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 backfilled on (8/6/2014) with compacted, non-waste containing, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0. A minimum of four feet of cover was achieved on (1/9/15) and the cover included one foot of suitable material (1/9/15) to establish vegetation at the site.

10. Re-contouring of the 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.

Following cover, WPX reestablished drainage and contours to approximately match previous topography meeting the Conditions of Approval in the APD and the direction offered by a BLM/USFS inspector. Cover and re-contouring were completed (1/9/2015).

11. Notification will be sent to the Aztec District office when the reclaimed area is seeded.

WPX will comply with Surface Management Agency reseeding requirements in the COAs of the APD for the referenced well, per BLM-FFO/NMOCD MOU dated 5/4/09.

12. WPX shall seed the disturbed areas the first growing season after the pit is closed. Seeding will be accomplished via drilling on the contour whenever practical, or by other division-approved methods. BLM or Forest Service stipulated seed mix 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 percent (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 maintained that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.

*Note: WPX assumes the seeding stipulations including mix and seeding methods specified by the Surface Management Agency (BLM, BOR, USFS, Tribal, etc.) or Land owner as part of a surface use agreement or APD are Division-approved methods unless notified by the Division of their unacceptability.*

WPX will comply with Surface Management Agency reseeding requirements in the COAs of the APD for the referenced well, per BLM:FFO/NMOCD MOU dated 5/4/09.

12. 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 a four foot tall riser 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.
  - a. If the well goes into production, then an alternate interim marking system will be used to allow for safer and more efficient operations. A minimum 4" O.D. steel pipe will be set at least 36" deep at the center of the pit. A threaded collar will be on the top of the pipe. A minimum 12" x 12" steel plate will be welded atop the threaded collar. Top of the plate will be flush with ground level. The steel plate will contain the Operator Name, Lease Name, Well Number, and location information including unit letter, section, township and range, and that the marker designates an onsite burial location. This information will be welded, stamped or otherwise permanently engraved into the metal of the plate. Upon the abandonment of all the wells on the pad, the plate will be removed and replaced with a four foot tall riser containing the same information as described for the steel plate pursuant to 19.15.17.13.H.5D.

The temporary pit was located with a steel marker meeting the above listed specifications immediately after the pit reclamation date of (1/9/15). No steel marker was found to be set by Logos, who closed the pit on (8/6/2014). The marker has the following information welded for future reference: WPX ENERGY Chaco 2308-3L #404H/405H S03-T23N-R08W, San Juan County, NM. In Place Pit Burial (photo attached). Steel marker set (1/9/2015).

DISTRICT I  
1625 N. French Dr., Hobbs, N.M. 88240  
Phone: (575) 393-6181 Fax: (575) 393-0720

DISTRICT II  
811 S. First St., Artesia, N.M. 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III  
1000 Rio Brazos Rd., Aztec, N.M. 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, N.M. 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102

Revised August 1, 2011

Submit one copy to appropriate  
District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.  
Santa Fe, N.M. 87505

"AS DRILLED"

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-045-35539</b>	<sup>2</sup> Pool Code 97232	<sup>3</sup> Pool Name BASIN MANCOS
<sup>4</sup> Property Code 313147	<sup>5</sup> Property Name <b>HEROS</b>	<sup>6</sup> Well Number <b>002H</b>
<sup>7</sup> OCRID No. <b>289408</b>	<sup>8</sup> Operator Name <b>LOGOS OPERATING, LLC</b>	<sup>9</sup> Elevation <b>6879</b>

<sup>10</sup> Surface Location

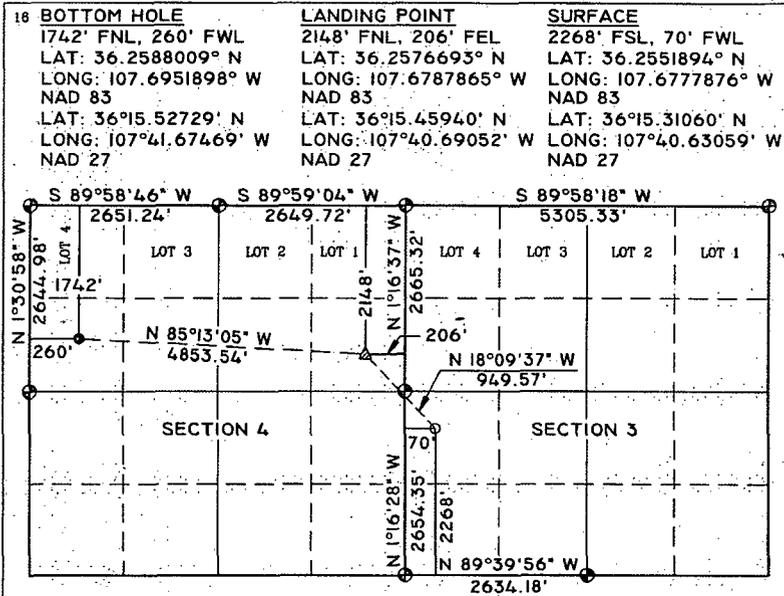
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	3	23 N	8 W		2268	SOUTH	70	WEST	SAN JUAN

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	4	23 N	8 W		174.2	NORTH	260	WEST	SAN JUAN

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.

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



BEARINGS & DISTANCES SHOWN ARE REFERENCED TO THE NEW MEXICO COORDINATE SYSTEM, WEST ZONE, NAD 83, UNLESS OTHERWISE NOTED.

NOTE: THE COORDINATES FOR THE LANDING POINT AND THE BOTTOM HOLE LOCATION CAME FROM THE CERTIFIED FINAL DIRECTIONAL SURVEY CONDUCTED BY CATHEDRAL ON 07/31/14.

**LEGEND:**  
 ○ = SURFACE LOCATION  
 ● = BOTTOM HOLE LOCATION  
 ⊕ = FOUND 1947 U.S.G.L.O. BRASS CAP  
 △ = LANDING POINT

<sup>17</sup> OPERATOR CERTIFICATION

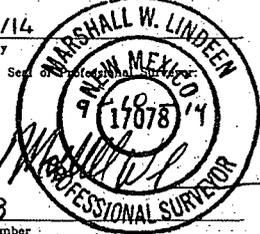
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this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

Signature: Heather Riley Date: \_\_\_\_\_  
 Printed Name: Heather Riley  
 E-mail Address: heather.riley@wpenergy.com

<sup>18</sup> SURVEYOR CERTIFICATION

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

Date of Survey: 03/27/14  
 Signature and Seal of Professional Surveyor: \_\_\_\_\_



Certificate Number: 17078  
 United Field Services, Inc.

DISTRICT I  
1625 N. French Dr., Hobbs, N.M. 88240  
Phone: (575) 393-8161 Fax: (575) 393-0720

DISTRICT II  
811 S. First St., Artesia, N.M. 88210  
Phone: (575) 748-1283 Fax: (575) 748-8720

DISTRICT III  
1000 Rio Brazos Rd., Aztec, N.M. 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, N.M. 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, N.M. 87505

Form C-102  
Revised August 1, 2011

Submit one copy to appropriate  
District Office

"AS DRILLED"

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-045-35538</b>		*Pool Code <b>97232</b>		*Pool Name <b>BASIN MANCOS</b>	
*Property Code <b>313652</b>		*Property Name <b>HEROS</b>			*Well Number <b>003H</b>
*OGRID No. 120782		*Operator Name WXP ENERGY PRODUCTION, LLC			*Elevation <b>6879</b>

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
L	3	23 N	8 W		2216	SOUTH	74	WEST	SAN JUAN

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
L	4	23 N	8 W		2254	SOUTH	250	WEST	SAN JUAN

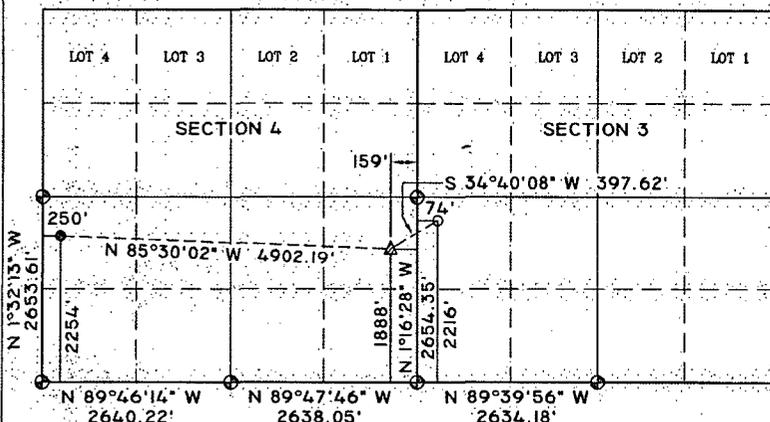
*Dedicated Acres <b>160 ACRES</b> N2/S2 SEC 4	*Joint or Infill	*Consolidation Code	*Order No.
---	------------------	---------------------	------------

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

<sup>16</sup> BOTTOM HOLE	LANDING POINT	SURFACE
2254' FSL, 250' FWL	1888' FSL, 159' FEL	2216' FSL, 74' FWL
LAT: 36.2552258° N	LAT: 36.2541491° N	LAT: 36.2550465° N
LONG: 107.6951132° W	LONG: 107.6785395° W	LONG: 107.6777705° W
NAD 83	NAD 83	NAD 83
LAT: 36°15.31279' N	LAT: 36°15.24818' N	LAT: 36°15.30203' N
LONG: 107°41.67009' W	LONG: 107°40.67570' W	LONG: 107°40.62957' W
NAD 27	NAD 27	NAD 27

<sup>17</sup> OPERATOR CERTIFICATION  
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature \_\_\_\_\_ Date \_\_\_\_\_  
Larry Higgins  
Printed Name  
larry.higgins@wpxenergy.com  
E-mail Address



BEARINGS & DISTANCES SHOWN ARE REFERENCED TO THE NEW MEXICO COORDINATE SYSTEM, WEST ZONE, NAD 83, UNLESS OTHERWISE NOTED.

NOTE: THE COORDINATES FOR THE LANDING POINT AND THE BOTTOM HOLE LOCATION CAME FROM THE CERTIFIED FINAL DIRECTIONAL SURVEY CONDUCTED BY CATHEDRAL ON 07/31/14.

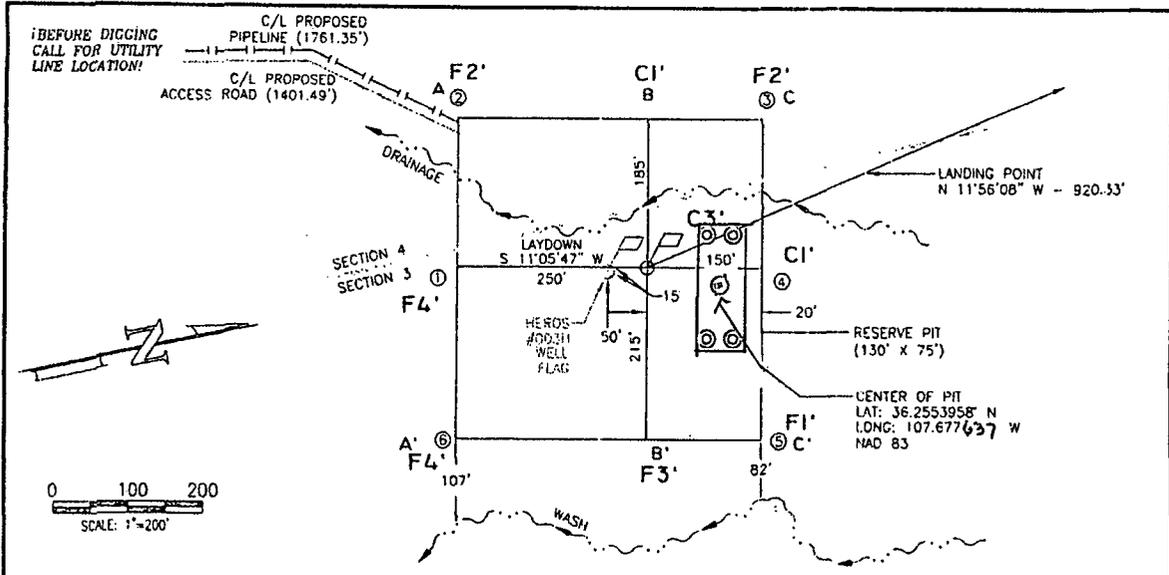
LEGEND:  
○ = SURFACE LOCATION  
● = BOTTOM HOLE LOCATION  
⊕ = FOUND 1947 U.S.G.L.O. BRASS CAP  
△ = LANDING POINT

<sup>18</sup> SURVEYOR CERTIFICATION  
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

02/12/14  
Date of Survey  
Signature and Seal \_\_\_\_\_

**MARSHALL W. LINDEEN**  
NEW MEXICO  
17078  
PROFESSIONAL SURVEYOR

17078  
Certificate Number  
United Field Services, Inc.



ELEVATION A-A'

6900				
6890				
6880				
6870				
6860				

B-B'

6900				
6890				
6880				
6870				
6860				

C-C'

6900				
6890				
6880				
6870				
6860				

CROSS SECTIONS  
HORIZONTAL: 1"=200'  
VERTICAL: 1"=50'

⊙ Sample Location

LEASE: HEROS #002H  
2268' FSL, 70' FWL (SURFACE) SEC. 3  
 FOOTAGES: 2150' FNL, 250' FWL (BOTTOM HOLE) SEC. 4  
 SEC. 3 8 4 TWN. 23 N RNG. 8 W N.M.P.M.  
 LAT: 36.2551894° N LONG: 107.6777876° W (NAD83)  
 PROPOSED ELEVATION: 6881

LOGOS  
OPERATING, LLC

P.O. BOX 3651  
FARMINGTON, NM 87499  
OFFICE: (505) 334-0408

SURVEYED: 03/27/14	REV. DATE: 06/02/14	APP. BY: M.W.L.
DRAWN BY: V.C.	DATE DRAWN: 03/31/14	FILE NAME: 10656C02

UNITED  
FIELD SERVICES INC.



**Analytical Report**

**Report Summary**

Client: Logos Operating, LLC  
Chain Of Custody Number: 17286  
Samples Received: 8/6/2014 2:25:00PM  
Job Number: 12035-0061  
Work Order: P408021  
Project Name/Location: Heros #2H & #3H

Entire Report Reviewed By:

Date: 8/8/14

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



Summary of Analytical Results  
 Logos Operating, LLC  
 Heros #2H and #3H  
 Drill Pit Closure and Backfill Material Sampling Report  
 San Juan County, New Mexico  
 Project Number 12035-0061

Sample Description	Sample Number	Date	TPH USEPA Method 418.1 (ppm)	TPH USEPA Method 8015 (ppm)	Benzene USEPA Method 8021 (ppm)	BTEX USEPA Method 8021 (ppm)	Chlorides USEPA Method 300.0 (ppm)
NMOCD/RCRA Standards	NA	NA	2500	1000	10	50	80000
Drill Pit Mud	1	8/6/2014	700	833	ND	ND	251
NMOCD/RCRA Standards	NA	NA	NA	NA	NA	NA	600
Top Soil	2	8/6/2014	NS	NS	NS	NS	ND

NS = Not Sampled

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

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



Logos Operating, LLC PO Box 18 Flora Vista NM, 87413	Project Name: Heros #2H & #3H Project Number: 12035-0061 Project Manager: Sheena Leon	Reported: 08-Aug-14 13:22
--	---	------------------------------

**Analytical Report for Samples**

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Drill Pit Mud	P408021-01A	Soil	08/06/14	08/06/14	Glass Jar, 4 oz.
Top Soil	P408021-02A	Soil	08/06/14	08/06/14	Glass Jar, 4 oz.

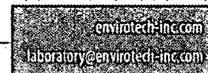
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

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





Logos Operating, LLC PO Box 18 Flora Vista NM, 87415	Project Name: Heros #2H & #3H Project Number: 12035-0061 Project Manager: Sheena Leon	Reported: 08-Aug-14 13:22
--	---	------------------------------

**Drill Pit Mud  
P408021-01 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1432020	08/06/14	08/07/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1432020	08/06/14	08/07/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1432020	08/06/14	08/07/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1432020	08/06/14	08/07/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1432020	08/06/14	08/07/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1432020	08/06/14	08/07/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1432020	08/06/14	08/07/14	EPA 8021B	
Surrogate: Bromochlorobenzene		102 %		80-120	1432020	08/06/14	08/07/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		98.1 %		80-120	1432020	08/06/14	08/07/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg	1	1432020	08/06/14	08/07/14	EPA 8015D	
Diesel Range Organics (C10-C28)	833	24.9	mg/kg	1	1432017	08/07/14	08/07/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		55.4 %		50-200	1432017	08/07/14	08/07/14	EPA 8015D	
<b>Cation/Anion Analysis</b>									
Chloride	251	9.79	mg/kg	1	1432018	08/06/14	08/07/14	EPA 300.0	

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

5796 US Highway 64, Farmington, NM 87401  
Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865  
Ph (970) 259-0615 Fr (800) 362-1879





Logos Operating, LLC	Project Name:	Heros #2H & #3H	Reported:
PO Box 18	Project Number:	12035-0061	08-Aug-14 13:22
Flora Vista NM, 87415	Project Manager:	Sheena Leon	

**Top Soil**  
**P408021-02 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Cation/Anion Analysis</b>									
Chloride	ND	9.96	mg/kg	1	1432018	08/06/14	08/06/14	EPA 300.0	

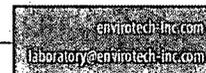
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

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





Logos Operating, LLC PO Box 18 Flora Vista NM, 87415	Project Name: Heros #2H & #3H Project Number: 12035-0061 Project Manager: Sheena Leon	Reported: 08-Aug-14 13:22
--	---	------------------------------

**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 1432020 - Purge and Trap EPA 5030A**

<b>Blank (1432020-BLK1)</b>		<b>Prepared: 06-Aug-14 Analyzed: 07-Aug-14</b>								
Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.10	"							
o-Xylene	ND	0.05	"							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: 1,3-Dichlorobenzene	50.1		ug/L	50.0		100	80-120			
Surrogate: Bromochlorobenzene	51.8		"	50.0		104	80-120			

<b>Duplicate (1432020-DUP1)</b>		<b>Source: P408021-01 Prepared: 06-Aug-14 Analyzed: 07-Aug-14</b>								
Benzene	ND	0.05	mg/kg		ND					30
Toluene	ND	0.05	"		ND					30
Ethylbenzene	ND	0.05	"		ND					30
p,m-Xylene	ND	0.10	"		ND					30
o-Xylene	ND	0.05	"		ND					30
Surrogate: 1,3-Dichlorobenzene	48.9		ug/L	50.0		97.9	80-120			
Surrogate: Bromochlorobenzene	52.8		"	50.0		106	80-120			

<b>Matrix Spike (1432020-MS1)</b>		<b>Source: P408021-01 Prepared: 06-Aug-14 Analyzed: 07-Aug-14</b>								
Benzene	51.6		ug/L	50.0	ND	103	39-150			
Toluene	55.3		"	50.0	ND	111	46-148			
Ethylbenzene	51.8		"	50.0	ND	104	32-160			
p,m-Xylene	108		"	100	ND	108	46-148			
o-Xylene	53.0		"	50.0	ND	106	46-148			
Surrogate: 1,3-Dichlorobenzene	50.3		"	50.0		101	80-120			
Surrogate: Bromochlorobenzene	53.7		"	50.0		107	80-120			

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

5796 US Highway 64, Farmington, NM 87401  
Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865  
Ph (970) 259-0615 Fr (800) 362-1879





Logos Operating, LLC PO Box 18 Flora Vista NM, 87415	Project Name: Heros #2H & #3H Project Number: 12035-0061 Project Manager: Sheena Leon	Reported: 08-Aug-14 13:22
--	---	------------------------------

**Nonhalogenated Organics by 8015 - Quality Control**  
**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	RPD	RPD Limit	Notes
<b>Batch 1432017 - DRO Extraction EPA 3550M</b>									
<b>Blank (1432017-BLK1)</b>				Prepared & Analyzed: 06-Aug-14					
Diesel Range Organics (C10-C28)	52.4	25.0	mg/kg						
Surrogate: Benzo[a]pyrene	20.0		mg/L	20.0		99.8	50-200		
<b>LCS (1432017-BS1)</b>				Prepared & Analyzed: 06-Aug-14					
Diesel Range Organics (C10-C28)	524	24.9	mg/kg	498		105	38-132		
Surrogate: Benzo[a]pyrene	20.5		mg/L	20.0		103	50-200		
<b>Matrix Spike (1432017-MS1)</b>				Source: P408018-01		Prepared & Analyzed: 06-Aug-14			
Diesel Range Organics (C10-C28)	5310	25.0	mg/kg	499	4680	126	38-132		
Surrogate: Benzo[a]pyrene	29.1		mg/L	20.0		146	50-200		
<b>Matrix Spike Dup (1432017-MSD1)</b>				Source: P408018-01		Prepared & Analyzed: 06-Aug-14			
Diesel Range Organics (C10-C28)	4570	25.0	mg/kg	500	4680	NR	38-132	14.8	20 SPK 1
Surrogate: Benzo[a]pyrene	30.6		mg/L	20.0		153	50-200		

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

5796 US Highway 64, Farmington, NM 87401  
 Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865  
 Ph (970) 259-0615 Fr (800) 362-1879





Logos Operating, LLC PO Box 18 Flora Vista NM, 87415	Project Name: Heros #2H & #3H Project Number: 12035-0061 Project Manager: Sheena Leon	Reported: 08-Aug-14 13:22
--	---	------------------------------

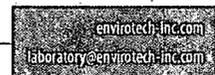
**Nonhalogenated Organics by 8015 - Quality Control**  
**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Notes
<b>Batch 1432020 - Purge and Trap EPA 5030A</b>										
<b>Blank (1432020-BLK1)</b> Prepared: 06-Aug-14 Analyzed: 07-Aug-14										
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
<b>Duplicate (1432020-DUP1)</b> Source: P408021-01 Prepared: 06-Aug-14 Analyzed: 07-Aug-14										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg		ND				30	
<b>Matrix Spike (1432020-MS1)</b> Source: P408021-01 Prepared: 06-Aug-14 Analyzed: 07-Aug-14										
Gasoline Range Organics (C6-C10)	0.53		mg/L	0.450	0.008	116	75-125			SPK 1

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

5796 US Highway 64, Farmington, NM 87401  
Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865  
Ph (970) 259-0615 Fr (800) 362-1879





Logos Operating, LLC PO Box 18 Flora Vista NM, 87415	Project Name: Heros #2H & #3H Project Number: 12035-0061 Project Manager: Sheena Leon	Reported: 08-Aug-14 13:22
--	---	------------------------------

**Cation/Anion Analysis - Quality Control**

**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1432018 - Anion Extraction EPA 300.0</b>										
<b>Blank (1432018-BLK1)</b>										
Chloride	ND	9.96	mg/kg							Prepared & Analyzed: 06-Aug-14
<b>LCS (1432018-BS1)</b>										
Chloride	495	9.92	mg/kg	496		99.8	90-110			Prepared & Analyzed: 06-Aug-14
<b>Matrix Spike (1432018-MS1)</b>										
Chloride	967	9.92	mg/kg	496	488	96.5	80-120			Source: P408012-01 Prepared & Analyzed: 06-Aug-14
<b>Matrix Spike Dup (1432018-MSD1)</b>										
Chloride	960	9.87	mg/kg	494	488	95.6	80-120	0.682	20	Source: P408012-01 Prepared & Analyzed: 06-Aug-14

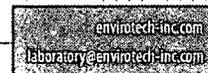
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

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





Logos Operating, LLC PO Box 18 Flora Vista NM, 87415	Project Name: Heros #2H & #3H Project Number: 12035-0061 Project Manager: Sheena Leon	Reported: 08-Aug-14 13:22
--	---	------------------------------

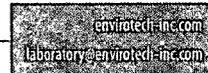
**Notes and Definitions**

- SPKI The spike recovery for this QC sample is outside of 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

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

5796 US Highway 64, Farmington, NM 87401  
Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865  
Ph (970) 259-0615 Fr (800) 362-1879





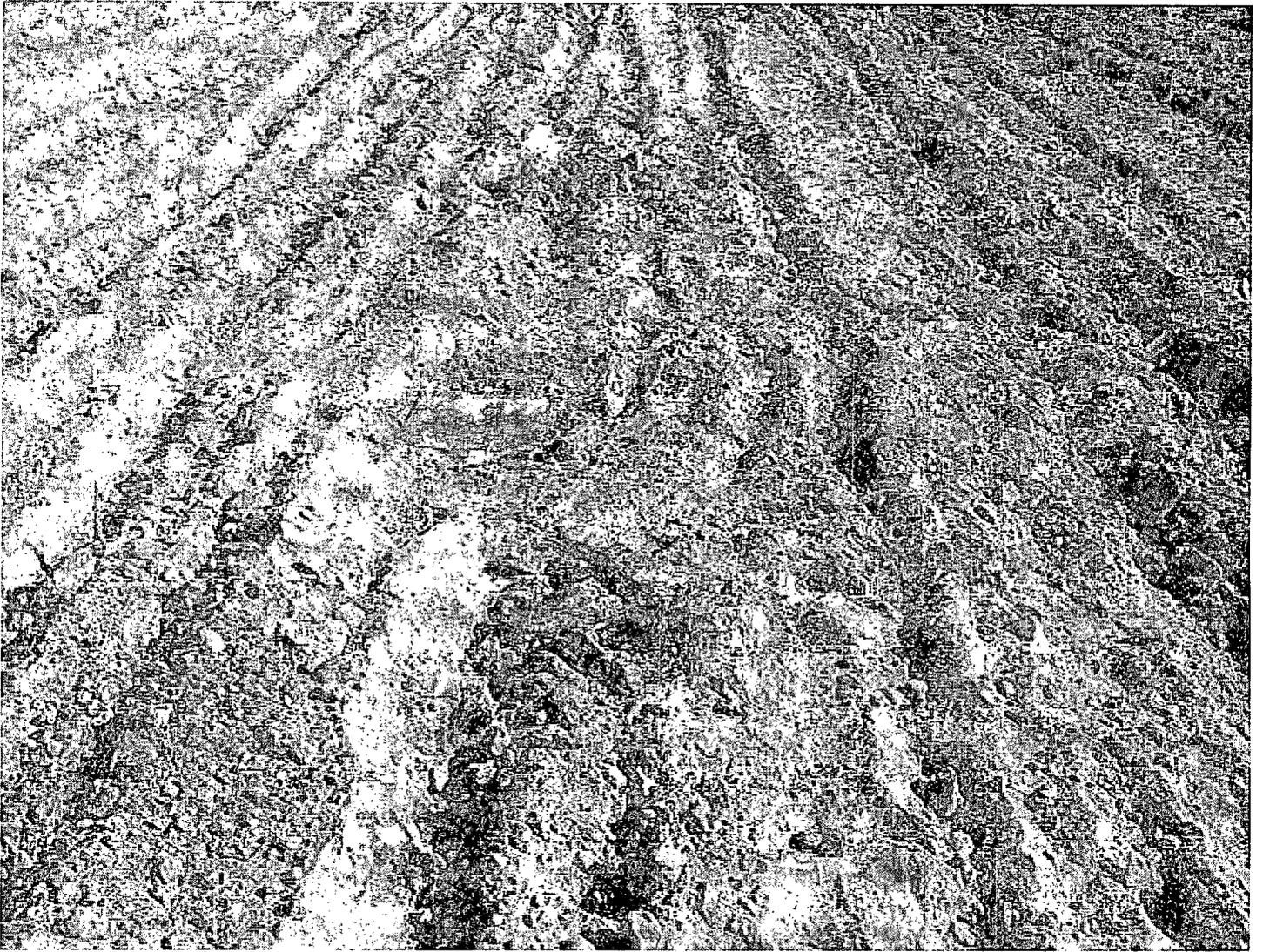


**From:** Tamra Sessions  
**Sent:** Wednesday, July 30, 2014 12:06 PM  
**To:** Mark Kelly (mkelly@blm.gov)  
**Cc:** Jonathan Kelly (jonathan.kelly@state.nm.us); brandon.powell@state.nm.us; Wayne Ritter (writter@logosresourcesllc.com)  
**Subject:** Heros 2H 3H\_Federal Pit Closure 72hr notice

Heros 2H & Heros 3H  
Federal Lease 109398  
API #30-045-35539 & 30-045-35538  
UL L, Section 03, T23N, R08W

Logos Operating is giving 72hr notice of plans to start temporary pit closure operations on Monday, August 4, 2014.

Tamra Sessions  
Logos Resources, LLC  
Operations Technician  
[tsessions@logosresourcesllc.com](mailto:tsessions@logosresourcesllc.com)  
(o) 505-436-3790  
(c) 505-330-9333









OIL CONS. DIV DIST. 3  
JAN 15 2015

Permit Number: 11964

January 14, 2015

Mr. Jonathan Kelly,

This letter serves the purpose of supplying NMOCD with significant information about the CHACO 2308-03L #404H and CHACO 2308-03L #405H temporary pit closure:

This temporary pit was originally constructed by Logos Operating, LLC (Logos) as the Heros #2 and Heros #3 pit. On August 6<sup>th</sup>, 2014, Logos closed the pit, but did not reclaim the surface above the pit. A sampling report conducted by Envirotech is attached to this cover letter. After WPX Energy Production, LLC (WPX) acquired possession of the well pad; WPX acquired the responsibility to reclaim the surface above the pit.

The surface owner is of public entity (BLM). Logos Operating, LLC made the notification within 72 hours of closing the temporary pit by email (instead of a certified mail letter).

Pit inspections were not conducted by Logos, as documented in the attached temporary pit closure.

Thank you,

A handwritten signature in black ink, appearing to read 'Mark Heil'.

Mark Heil  
Regulatory Specialist  
WPX Energy  
[mark.heil@wpxenergy.com](mailto:mark.heil@wpxenergy.com)  
505-333-1806