

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

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.

<p>1. Operator: <b>WHITING OIL &amp; GAS CORPORATION OGRID #: 25078</b> Address: <b>400 W ILLINOIS STE 1300 MIDLAND, TEXAS 79701</b> Facility or well name: <b>DAHL 1927 12 WELL # 1</b> API Number: <b>30-021-20649</b>      OCD Permit Number: 186146 U/L or Qtr/Qtr   F   Section <u>12</u> Township <u>19N</u> Range <u>27E</u> County: <b>HARDING COUNTY</b> Center of Proposed Design: Latitude 35.893075      Longitude -104.024406      NAD: <input checked="" type="checkbox"/> 1927 <input type="checkbox"/> 1983 Surface Owner: <input type="checkbox"/> Federal <input type="checkbox"/> State <input checked="" type="checkbox"/> Private <input type="checkbox"/> Tribal Trust or Indian Allotment</p>	<div style="writing-mode: vertical-rl; transform: rotate(180deg);">2015 APR 20 P 2:03</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">RECEIVED OCD</div>
<p>2. <input checked="" type="checkbox"/> <b>Pit:</b> Subsection F, G or J of 19.15.17.11 NMAC Temporary: <input checked="" type="checkbox"/> Drilling <input type="checkbox"/> Workover <input type="checkbox"/> Permanent <input type="checkbox"/> Emergency <input type="checkbox"/> Cavitation <input type="checkbox"/> P&amp;A <input type="checkbox"/> Multi-Well Fluid Management      Low Chloride Drilling Fluid <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Lined <input type="checkbox"/> Unlined    Liner type: Thickness _____ mil    <input type="checkbox"/> LLDPE <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____ <input type="checkbox"/> String-Reinforced Liner Seams: <input type="checkbox"/> Welded <input type="checkbox"/> Factory <input type="checkbox"/> Other _____    Volume: _____ bbl    Dimensions: L _____ x W _____ x D _____</p>	
<p>3. <input type="checkbox"/> <b>Below-grade tank:</b> Subsection I of 19.15.17.11 NMAC Volume: _____ bbl    Type of fluid: _____ Tank Construction material: _____ <input type="checkbox"/> Secondary containment with leak detection <input type="checkbox"/> Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off <input type="checkbox"/> Visible sidewalls and liner <input type="checkbox"/> Visible sidewalls only <input type="checkbox"/> Other _____ Liner type: Thickness _____ mil    <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____</p>	
<p>4. <input type="checkbox"/> <b>Alternative Method:</b> Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.</p>	
<p>5. <b>Fencing:</b> Subsection D of 19.15.17.11 NMAC (<i>Applies to permanent pits, temporary pits, and below-grade tanks</i>) <input type="checkbox"/> Chain link, six feet in height, two strands of barbed wire at top (<i>Required if located within 1000 feet of a permanent residence, school, hospital, institution or church</i>) <input type="checkbox"/> Four foot height, four strands of barbed wire evenly spaced between one and four feet <input type="checkbox"/> Alternate. Please specify _____</p>	

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.**

- ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells

☐ Yes ☐ No  
☐ NA

**Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit.**

NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No  
☐ 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. **(Does not apply to below grade tanks)**

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☐ No

Within the area overlying a subsurface mine. **(Does not apply to below grade tanks)**

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☐ No

Within an unstable area. **(Does not apply to below grade tanks)**

- 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. **(Does not apply to below grade tanks)**

- FEMA map

☐ Yes ☐ No

**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).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ 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

☐ Yes ☐ No

**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.)

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ 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

☐ Yes ☐ 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

☐ Yes ☐ 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: \_\_\_\_\_ 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<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 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 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 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 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 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 type="checkbox"/> No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input 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 type="checkbox"/> No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	

adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ 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: [Signature] Approval Date: 04/20/15

Title: Environmental Engineer 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: 02/10/2015

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 35.893075 Longitude -104.024406 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): KAY MADDOX Title: REGULATORY SUPERVISOR

Signature: \_\_\_\_\_



Date: \_\_\_\_\_

3/23/2015

e-mail address: KAY.MADDOX@WHITING.COM Telephone: 432.686.6709

**WHITING OIL AND GAS CORPORATION  
PIT CLOSURE REPORT**

DAHL 1927 12 Well #1  
API NO 30-021-20649

- 1) The pit will be closed within six (6) months from the date that the drilling or workover rig is released. If necessary, the division district office may grant an extension not to exceed three (3) months.

**The Drlg rig was released 09/03/2014 after plugging this well**

- 2) Surface Owners will be notified by Certified mail at least 72 hours but not more than one week prior to closure of the Temporary pit. The notice shall include well name, API number and location.

**Reference attached notification**

- 3) The Appropriate Division District Office (OCD) will be notified verbally and in writing at least 72 hours but not more than one week prior to closure of the Temporary pit. The notice shall include well name, API number and location.

**NMOCD was notified via email – reference attached copy of email**

- 4) If on site burial is on PRIVATE LAND, Whiting will file a deed notice identifying the exact location of the onsite burial with the county clerk in county where onsite burial occurs

**Certified Recorded Deed Notice attached**

- 5) All liquids from the pit will be removed prior to closure. Liquids will be disposed of at the Sundance Services, Inc. Parabo Disposal Facility (Permit No. 010003), unless they are recycled, reused, or reclaimed in a division district office-approved manner.

**Liquids from pit evaporated, no removal was required.**

- 6) The pit will be stabilized with clean non-waste containing earthen material with a ratio no more than 3:1

**Pit was stabilized 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 safe and stable. The mixing ratio consisted of approximately 3 parts clean soil to 1 part pit contents.**

- 7) After stabilization, the contents of the pit will be tested to determine whether concentrations are below standards. A five-point composite sample will be collected. The samples will be sent to an approved laboratory and analyzed for benzene, total BTEX, TPH, the GRO and DRO combined fraction, and chlorides. Assuming water could be encountered around 100', the following should not be exceeded:

- Chlorides (ads determined by EPA method 300.1): 40,000 mg/kg or background concentration, whichever is greater
- TPH (EPA SW-846 method 418.a or other division-approved EPA method): 2500 mg/kg.
- GRO and DRO combined fraction (EPA SW-846 method 8015M): 1000 mg/kg.
- BTEX (EPA SW-846 method 8021B or 8260B or other approved EPA method): 50 mg/kg
  - Benzene (EPA SW-846 method 8021B or 8260B or other approved EPA method): 10 mg/kg

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

- 8) If the contents are above the concentration limits after stabilization Whiting will comply with 19.15.17.13.C (Waste Excavation and Removal)

**Not necessary**

- 9) If it is determined that contents of the pit doesn't exceed the above-specified concentrations, the pit will be covered with compacted, non-waste-containing, earthen material. A division-prescribed soil cover will be constructed and the site will be re-contoured and re-vegetated, per Subsections D, E, F, G, H, of 19.15.17.13 NMAC

**The pit material passed solidification and testing standards. The pit area was then back filled with compacted, non-waste containing earthen material.**

- 10) All areas associated with the pit that are no longer being used will be substantially restored to the condition that existed prior to oil and gas operations by placement of the soil cover re-contouring to match original contours and surrounding topography, and re-vegetating.

**This was done – please see attached pictures**

- 11) If an alternative to the re-vegetation requirements is required to prevent erosion, protect fresh water, or protect human health and the environment, this alternative will be proposed to the surface owner. The proposed alternative, with written documentation demonstrating that the surface owner approves the alternative, will be submitted to the division for approval.

**No alternative is required**

- 12) Soil cover will consist of 4' of non-waste containing earthen material with chloride concentrations less than 600mg/KG including 1' of topsoil

**Four feet of non-waste earthen cover was achieved including one foot of suitable material to establish vegetation.**

- 13) All contents, including synthetic pit liners, will be buried in place. By folding outer edges of the pit liner to overlap waste material, and then installing a geomembrane liner cover that is 20 mil string reinforced LLDPE, synthetic material, impervious, resistant to ultra violet light, petroleum hydrocarbons, salts, acid and alkaline.

**These was done including placing a 20 mil LLDPE liner cover**

- 14) Soil cover will be constructed to the site's existing grade and will prevent ponding of water and erosion of the cover material.

**This was done – reference attached photos**

- 15) The first favorable growing season following pit closure, all disturbed areas associated with the pit and no longer being used will be seeded or planted.

**This area will be re-seeded during the next growing season in this area – reference attached letter**

- 16) Seeding will be accomplished by drilling on the contour whenever practical, or by other division-approved methods. Vegetative cover will be considered complete when there is a life form ratio of +/- 50% of pre-disturbance levels with at least 70% total plant cover of pre-disturbance level (Excluding Noxious Weeds) OR in accordance to 19.15.17.13.H.5.d

**This will be done during the next growing season in this area**

- 17) Seeding or planting will be repeated until the required vegetative cover is successfully achieved.

**Whiting will comply**

- 18) When conditions aren't favorable for the establishment of vegetation (such as during periods of drought), the division will be contacted for approval to delay seeding or planting, or for approval to use additional cultural techniques such as mulching, fertilizing, irrigating, fencing, etc. **Attached letter**

- 19) The division will be notified when seeding or planting is completed, and when successful re-vegetation has been achieved.



**Whiting will comply**

- 20) Place a steel marker at the center of the onsite burial. The marker shall be 4" diameter, at least 4' high and cemented 3' deep. The following will be welded, stamped or otherwise permanently engraved into the marker; operator name, lease name, well number and location, unit letter, section, township, range, and that the marker designates an onsite burial

**Reference attached pictures**

- 21) Within 60 days of closure, completion, a closure report will be submitted on form C-144, with necessary attachments, to document closure activities, including sampling results, a plot plan, and backfilling details. In this closure report, Whiting will certify that all information in the report and attachments is correct and that Whiting has complied with all applicable closure requirements and conditions specified in the approved Closure Plan. A plat of the temporary pit location will be provided on form C-105.



January 30, 2015

Eugene and Virginia Dahl  
120 Dahl Road  
Roy, New Mexico 87743

RE: Notification to Surface Owner of On-Site Drilling Pit Closure  
Well: Dahl 1927 Well # 12-1  
Harding County, NM

Whiting Oil & Gas proposes to close and remediate the surface land according to all rules and regulations noted in Subsection E of 19.15.17.13 NMAC around February 9, 2015

If you have any additional question please contact Kay Maddox @ 432.686.6709.

Sincerely,

Kay Maddox  
Regulatory Supervisor

Mailed by certified mail to above listed party on this the 30th day of January , 2015

  
Signed: Kay Maddox-Regulatory Supervisor

7011-3500-0002-4991-2264  
Certified Mail Number

*Whiting Petroleum Corporation  
and its wholly owned subsidiary  
Whiting Oil and Gas Corporation*

400 W. Illinois Avenue, Suite 1300, Midland, TX 79701 Office: 432.686.6700 Fax 432.686.6799

## Kay Maddox

---

**From:** Kay Maddox  
**Sent:** Friday, January 30, 2015 3:06 PM  
**To:** Lowe, Leonard, EMNRD (Leonard.Lowe@state.nm.us)  
**Cc:** Jones, William V, EMNRD (WilliamV.Jones@state.nm.us)  
**Subject:** Closed Pits

Whiting plans on closing these two temporarily pits on 02/09/2015 and 02/10/2015

Lewis 1928 04 Well #1  
30-021-20647  
Section 4, T19N, R28E  
Harding County, NM  
Released Rig 8/18/2014

Dahl 1927 12 Well # 1  
30-021-20649  
Section 12, T12N, R27E  
Harding, NM  
Released Rig 09/03/2014

**Kay Maddox**  
Regulatory Supervisor  
**Whiting Petroleum Corporation**  
*and its wholly owned subsidiary*  
**Whiting Oil and Gas Corporation**  
400 West Illinois Avenue, Suite 1300  
Midland, TX 79701  
Direct (432) 686-6709  
Cell (432) 638-8475  
[kay.maddox@whiting.com](mailto:kay.maddox@whiting.com)  
[www.whiting.com](http://www.whiting.com)

The information contained in this message may be privileged and confidential and protected from disclosure. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by replying to this message and deleting it from your computer.

STATE OF NEW MEXICO

COUNTY OF HARDING


**NOTICE OF PIT CLOSURE**

In accordance with Section 19.15.17.13.E.4 of the NMOCD , the operator hereby provides notice of an on-site burial of a temporary Oil & Gas drilling pit. All rules and regulations of Rule 19.15.17 have been adhered to.

Lease name: DAHL 1927 12  
Well No: 1  
API No: 30-021-20649  
TWN & RGE: TWN 19N RGE 27E Section 12  
Unit Letter: F  
Footages: 1659 FNL & 1660 FWL  
Date of Closure: 02/10/2015

IN WITNESS WHEREOF, the recordation notice of Pit Closure/burial has been executed on the date indicated below by undersigned.

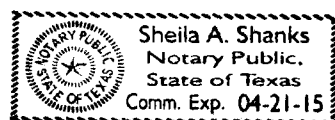
Whiting Petroleum Corporation  
And its wholly owned subsidiary  
Whiting Oil & Gas Corporation


  
\_\_\_\_\_  
Kay Maddox - Regulatory Supervisor

STATE OF TEXAS  
COUNTY OF MIDLAND

This instrument was acknowledged before me this 10TH day of JANUARY, 2015, by

Kay Maddox on behalf of Whiting Oil & Gas Corporation.



  
\_\_\_\_\_  
Notary Public

HARDING COUNTY, NM  
RECEPTION# 20976  
02/27/2015 10:34:18 AM  
BK 19 PAGE 11212  
1 of 1  
BY CJ GARRISON, DEPUTY

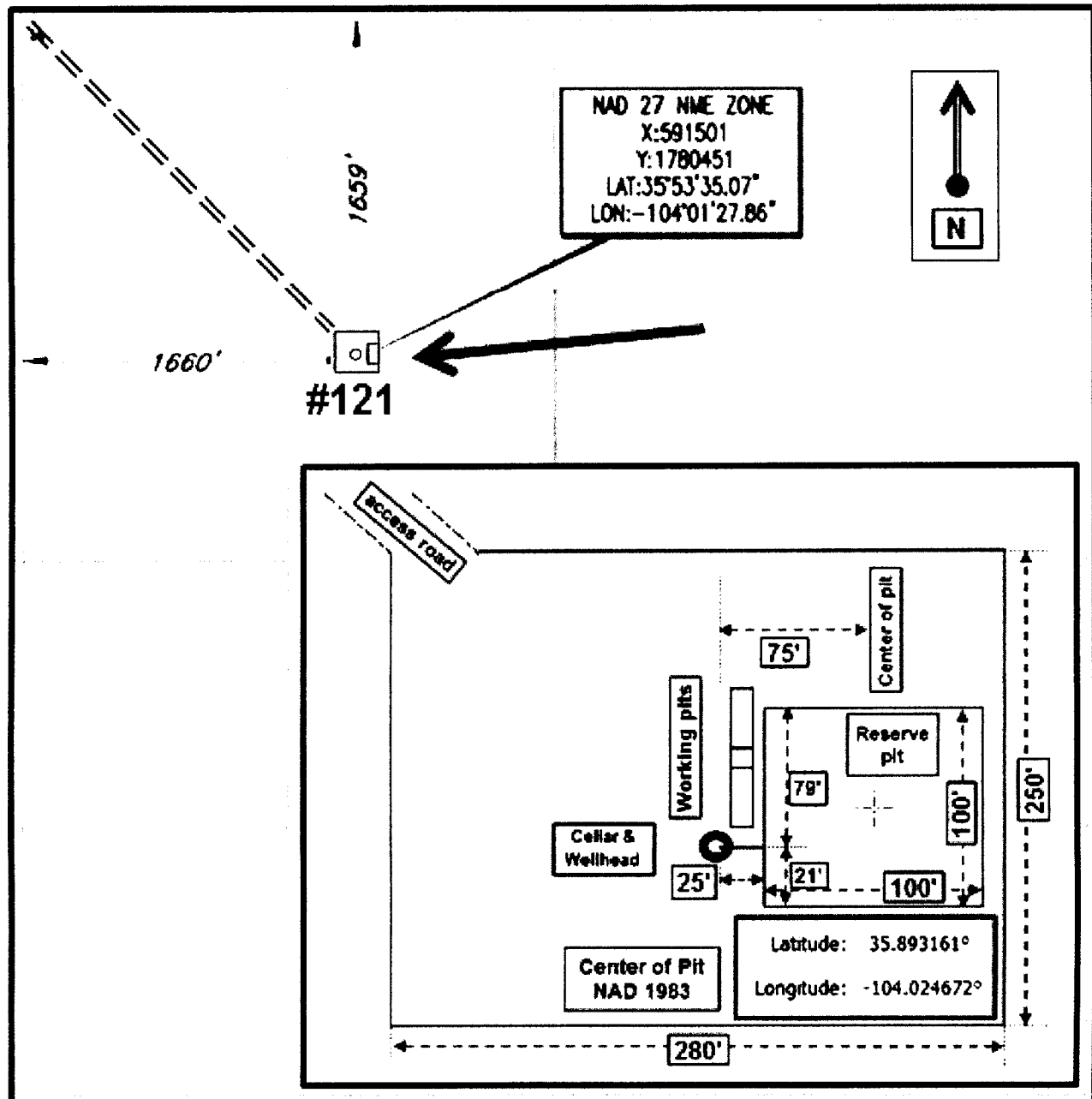
# Pit Location

Whiting Petroleum Corporation

Dahl 1927 #121

T-19-N, R-27E, Section 12 NMPM

Harding County, New Mexico



DAHL 1927-12 #1



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

November 21, 2014

DANNY HOLCOMB

WHITING OIL & GAS

400 W. ILLINOIS, SUITE 1300

MIDLAND, TX 79701

RE: WEST BRAVO DOME

Enclosed are the results of analyses for samples received by the laboratory on 11/14/14 8:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

WHITING OIL & GAS  
DANNY HOLCOMB  
400 W. ILLINOIS, SUITE 1300  
MIDLAND TX, 79701  
Fax To: NONE

Received: 11/14/2014  
Reported: 11/21/2014  
Project Name: WEST BRAVO DOME  
Project Number: NONE GIVEN  
Project Location: HARDING COUNTY NM

Sampling Date: 11/12/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: DAHL 1927 #121 (H403505-01)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2014	ND	1.83	91.4	2.00	8.21	
Toluene*	<0.050	0.050	11/17/2014	ND	1.76	88.2	2.00	6.70	
Ethylbenzene*	<0.050	0.050	11/17/2014	ND	1.75	87.4	2.00	6.66	
Total Xylenes*	<0.150	0.150	11/17/2014	ND	5.27	87.9	6.00	6.78	
Total BTX	<0.300	0.300	11/17/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 101 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/14/2014	ND	400	100	400	0.00	

TPH 418.1		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	915	100	11/21/2014	ND	5570	111	5000	1.97	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/15/2014	ND	187	93.7	200	3.04	
DRO >C10-C28	24.6	10.0	11/15/2014	ND	191	95.6	200	4.30	

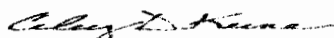
Surrogate: 1-Chlorooctane 126 % 47.2-157

Surrogate: 1-Chlorooctadecane 136 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

WHITING OIL & GAS  
DANNY HOLCOMB  
400 W. ILLINOIS, SUITE 1300  
MIDLAND TX, 79701  
Fax To: NONE

Received: 11/14/2014  
Reported: 11/21/2014  
Project Name: WEST BRAVO DOME  
Project Number: NONE GIVEN  
Project Location: HARDING COUNTY NM

Sampling Date: 11/12/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: STATE 1928 #161 (H403505-02)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2014	ND	1.83	91.4	2.00	8.21	
Toluene*	<0.050	0.050	11/17/2014	ND	1.76	88.2	2.00	6.70	
Ethylbenzene*	<0.050	0.050	11/17/2014	ND	1.75	87.4	2.00	6.66	
Total Xylenes*	<0.150	0.150	11/17/2014	ND	5.27	87.9	6.00	6.78	
Total BTEX	<0.300	0.300	11/17/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.5 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3880	16.0	11/14/2014	ND	400	100	400	0.00	

TPH 418.1		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	497	100	11/21/2014	ND	5570	111	5000	1.97	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/15/2014	ND	187	93.7	200	3.04	
DRO >C10-C28	<10.0	10.0	11/15/2014	ND	191	95.6	200	4.30	

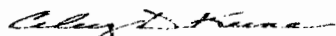
Surrogate: 1-Chlorooctane 126 % 47.2-157

Surrogate: 1-Chlorooctadecane 141 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

WHITING OIL & GAS  
DANNY HOLCOMB  
400 W. ILLINOIS, SUITE 1300  
MIDLAND TX, 79701  
Fax To: NONE

Received: 11/14/2014  
Reported: 11/21/2014  
Project Name: WEST BRAVO DOME  
Project Number: NONE GIVEN  
Project Location: HARDING COUNTY NM

Sampling Date: 11/12/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: STATE 2028 #361 (H403505-03)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2014	ND	1.83	91.4	2.00	8.21	
Toluene*	<0.050	0.050	11/17/2014	ND	1.76	88.2	2.00	6.70	
Ethylbenzene*	<0.050	0.050	11/17/2014	ND	1.75	87.4	2.00	6.66	
Total Xylenes*	<0.150	0.150	11/17/2014	ND	5.27	87.9	6.00	6.78	
Total BTX	<0.300	0.300	11/17/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 98.6 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	11/14/2014	ND	400	100	400	0.00	

TPH 418.1		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	482	100	11/21/2014	ND	5570	111	5000	1.97	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/15/2014	ND	187	93.7	200	3.04	
DRO >C10-C28	<10.0	10.0	11/15/2014	ND	191	95.6	200	4.30	

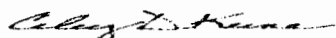
Surrogate: 1-Chlorooctane 119 % 47.2-157

Surrogate: 1-Chlorooctadecane 132 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

WHITING OIL & GAS  
DANNY HOLCOMB  
400 W. ILLINOIS, SUITE 1300  
MIDLAND TX, 79701  
Fax To: NONE

Received: 11/14/2014  
Reported: 11/21/2014  
Project Name: WEST BRAVO DOME  
Project Number: NONE GIVEN  
Project Location: HARDING COUNTY NM

Sampling Date: 11/12/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: GALVESTON 2028 #291 (H403505-04)**

BTEX 8021B			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/18/2014	ND	1.83	91.4	2.00	8.21	
Toluene*	<0.050	0.050	11/18/2014	ND	1.76	88.2	2.00	6.70	
Ethylbenzene*	<0.050	0.050	11/18/2014	ND	1.75	87.4	2.00	6.66	
Total Xylenes*	<0.150	0.150	11/18/2014	ND	5.27	87.9	6.00	6.78	
Total BTEX	<0.300	0.300	11/18/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 99.6 % 61-154

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	11/14/2014	ND	400	100	400	0.00	

TPH 418.1			mg/kg		Analyzed By: CK				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	328	100	11/21/2014	ND	5570	111	5000	1.97	

TPH 8015M			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/15/2014	ND	187	93.7	200	3.04	
DRO >C10-C28	<10.0	10.0	11/15/2014	ND	191	95.6	200	4.30	

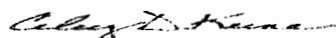
Surrogate: 1-Chlorooctane 118 % 47.2-157

Surrogate: 1-Chlorooctadecane 129 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

WHITING OIL & GAS  
DANNY HOLCOMB  
400 W. ILLINOIS, SUITE 1300  
MIDLAND TX, 79701  
Fax To: NONE

Received: 11/14/2014  
Reported: 11/21/2014  
Project Name: WEST BRAVO DOME  
Project Number: NONE GIVEN  
Project Location: HARDING COUNTY NM

Sampling Date: 11/12/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: LEWIS 1928 #041 (H403505-05)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/18/2014	ND	1.83	91.4	2.00	8.21	
<b>Toluene*</b>	<b>0.084</b>	0.050	11/18/2014	ND	1.76	88.2	2.00	6.70	
Ethylbenzene*	<0.050	0.050	11/18/2014	ND	1.75	87.4	2.00	6.66	
Total Xylenes*	<0.150	0.150	11/18/2014	ND	5.27	87.9	6.00	6.78	
Total BTEX	<0.300	0.300	11/18/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIB) 97.3 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>704</b>	16.0	11/17/2014	ND	400	100	400	3.92	

TPH 418.1		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>TPH 418.1</b>	<b>565</b>	100	11/21/2014	ND	5570	111	5000	1.97	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/14/2014	ND	212	106	200	1.79	
DRO >C10-C28	<10.0	10.0	11/14/2014	ND	213	107	200	1.12	

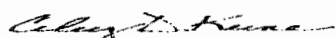
Surrogate: 1-Chlorooctane 123 % 47.2-157

Surrogate: 1-Chlorooctadecane 121 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

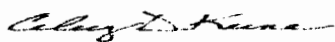
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



---

Celey D. Keene, Lab Director/Quality Manager



# CARDINAL Laboratories

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

### BILL TO

### ANALYSIS REQUEST

Company Name: Whiting Oil & Gas

Project Manager: Robert McNaughton

Address: 400 W Illinois, Suite 1300

City: Midland State: TX Zip: 79701

Phone #: 806-471-5628 Fax #:

Project #: West Grand Dene Project Owner:

Project Name: West Grand Dene

Project Location: Harding Co, NM

Sampler Name: Denny Holcomb

P.O. #:

Company: Whiting Oil & Gas

Attn: Gary Bullock

Address: 400 W Illinois, Suite 1300

City: Midland

State: TX Zip: 79701

Phone #:

Fax #:

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER

ACID/BASE

ICE / COOL

OTHER

DATE

TIME

TPH

TPH

Btex

CI

**Whiting Oil & Gas Corporation**  
**West Bravo Dome Pit Sample Results**

Analyte	Thresholds			Results													
	Groundwater at 25-50 ft	Groundwater at 51-100 ft	Groundwater at > 100 ft	Lewis 1928 #051	Lewis 2028 #321	Lewis 2028 #331	Lewis 2028 #341	Galveston 1928 #011	Miera 2130 #352	Miera 2130 #353	Miera 2130 #354	Dahl 1927 #121	State 1928 #161	State 2028 #361	Galveston 2028 #291	Lewis 1928 #041	
Benzene	10	10	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Total BTEX	50	50	50	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	
Chlorides	20,000	40,000	80,000	32	144	736	160	512	592	304	576	<16	3,880	144	160	704	
TPH	100	2500	2500	140	508	681	314	280	622	239	182	915	497	482	328	565	
GRO	1000	1000	1000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
DRO	1000	1000	1000	<10	12.7	<10	<10	<10	<10	<10	<10	24.6	<10	<10	<10	<10	
Sample Delivery Date				10/9/14	10/9/14	10/9/14	10/9/14	10/9/14	10/9/14	10/9/14	10/9/14	11/14/14	11/14/14	11/14/14	11/14/14	11/14/14	

Samples delivered to Cardinal Labs (Hobbs) 10/9/14



February 14, 2015

Mr. Leonard Lowe  
New Mexico Oil Conservation Division  
1220 S. St. Francis Dr  
Santa Fe, NM 87505

RE: Pit Closure

Dear Mr. Lowe,

Whiting Oil & Gas shall re-seed the disturbed Pit area for the well listed below. The re-seeding shall occur in the next rainy season documented for Harding County, New Mexico approximately August/September 2015.

If you have additional question please contact me @ 432.686.6709 or [kay.maddox@whiting.com](mailto:kay.maddox@whiting.com)  
Thank you for your time.

Sincerely,

Kay Maddox  
Regulatory Supervisor

DAHL 1927 12 Well # 1  
30-021-20649  
Harding County, New Mexico

*Whiting Petroleum Corporation  
and its wholly owned subsidiary  
Whiting Oil and Gas Corporation*

400 W. Illinois Avenue, Suite 1300, Midland, TX 79701 Office: 432.686.6700 Fax 432.686.6799

**WHITING OIL & GAS CORPORATION****Workover and Completion Report**

Well Name: Dahl 1927 121 Field: Other Date: 02/10/15 Day: 15 Type: Plug & Abandon  
 API: 30-021-20649 Move On Date: 8/22/2014 AFE #: 14-1125-01 Rig: NA Supv DH Depth: 2,315

Present Operation: Well PxA - Pit Closure

Csg: 9.625" 36# J-55 STC Liner: None

Rods: None Perfs: None

Tbg: None

[Click to Calc. HP - Hrs](#)

GHG Gas Vol(Mcf)	Dur. Hrs	mcf/d	% of gas	Gas Volume Estimated ??	Producing Method
Total Rig Hrs: 0	<b>Daily Activity</b>		GHG Event Total HP/Hr (Units > 130 HP)	0 for #### hrs	Units <= 130 HP (Count)

2/10/15

MI Hartley Construction dirt equipment to perform reserve pit closure per NMOCD rules. Remove barbed wire fencing and posts. Fold over outside edges of pit liner bottom, cover cuttings with new 20 mil LLDPE liner cap, cover new liner cap with a minimum of 4 feet of dirt cover, spread topsoil on top, MO dirt equipment. NMOCD notified and not present.

2/11/15

Install 4.5" OD steel pit burial marker in center of pit burial (set in concrete).

Will final blade surface within next two weeks and will reseed pit closure area during fall planting season. Danny

**Costs:**

Expense Account Codes	Capital Account Codes	Comments	Amount
		811.94 Contract Services and Equipment Hartley Construction	\$ 9,857
Daily Total:			\$ 9,857
Prev. Total:			
Cum. Total:			\$ 9,857



Looking East



Looking North







Looking West



Looking South





