

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

12260  
31-21105

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

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

**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: ENERGYNE LLC OGRID #: 185239  
Address: P.O. BOX 502, ALBUQU, NM 87103  
Facility or well name: STATE 32-102  
API Number: 30-021-21105 OCD Permit Number: 6258  
U/L or Qtr/Qtr 6 Section 32 Township 20N Range 9W County: MCKINLEY  
Center of Proposed Design: Latitude 35.92350 Longitude -107.81299 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 NONE Volume: 200 bbl Dimensions: L 60' x W 8' x D 6'

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 \_\_\_\_\_

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.*

**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.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br><input type="checkbox"/> NA |
| Ground water is between 25-50 feet below the bottom of the buried waste<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br><input type="checkbox"/> NA |
| Ground water is more than 100 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br><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).<br>- 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.<br>- 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.<br>- 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.<br>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   |  |

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): DON L HANSEN

Title: MANAGING MINOR

Signature: 

Date: 9/17/14

e-mail address: DHANSEN426@GMAIL.COM

Telephone: 1-505-414-8548

18.

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

OCD Representative Signature: 

Approval Date: 10/17/2014

Title: Compliance Officer

OCD Permit Number: \_\_\_\_\_

19.

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

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

Closure Completion Date: \_\_\_\_\_

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 \_\_\_\_\_ Longitude \_\_\_\_\_ NAD:  1927  1983

22.

**Operator Closure Certification:**

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

Name (Print): \_\_\_\_\_ Title: \_\_\_\_\_

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

e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

Enerdyne LLC  
State 32-102, 30-031-21105  
Burial Trench Permit & Closure Application  
September 21, 2014

Purpose:

Enerdyne LLC seeks to permit a burial trench closure for approximately 10 cubic yards of dry drill cuttings currently contained within the permitted temporary lined drying pad for the State 32-102 well. The burial trench closure method appears to be the most appropriate method given the alternatives.

The State 32-102 was drilled with fresh water and polymer (<5,000 ppm Cl ).

Upon approval of the burial trench closure permit, a trench shall be excavated south and parallel to the existing drying pad with a 20' separation between the two. Plat attached. The burial trench shall be approximately 60' long, 8' wide, and 6' deep, more than adequate in size to meet the burial requirements, in the event the OCD finds that the existing drying pad cutting require blending. The trench shall be sloped on each end to accommodate passage of the excavating equipment however berms will not be constructed around the trench. Diagram attached. Once the trench is excavated to 6' in depth, the sloped ends shall be filled in, the entire trench lined with a 20 mil liner, and the drill cuttings transferred from the existing drying pad into the trench and or blending and then transferred into the trench. The surface owner and OCD shall be notified, 72 hours prior to commencement of any construction or closure operation, to inspect, and upon approval, the excess liner shall be folded over the cuttings, a separate 20 mil liner shall be placed over the top of the contents and the trench backfilled with a minimum of 4' of cover contoured to conform to existing topography, a metal marker placed the disturbed area re-vegetated. In the event it is necessary to leave the trench open for a given period of time, the trench shall be fenced with a 4' high barbed wire fence with 4 evenly spaced barbed wires.

In conjunction with the on site burial of the existing drill cuttings, the drying pad shall also be closed and reclaimed. Once the cuttings have been entirely removed from the drying pad, the drying pad liner shall be removed and hauled to an appropriated disposal site. An earth sample shall be taken from five spots within the location of the drying pad to test for any breach of the liner during drilling operations. The samples shall be tested as required and in the event the results are within the OCD limits, the drying pad shall be backfilled, leveled to conform to the existing topography, compacted and re-vegetated.

Average water depth:

A current review ( 9/22/2014 ) of the New Mexico Office of the State Engineer's iWater database contains no wells within 1000' of the State 32-102 location to

substantiate the average depth to ground water. However it is reasonable to conclude that the ground water is not present above 120' from surface given the following: the e-log for the State 32-102 shows that the first water encountered during drilling occurred at 140' from surface, which also contained oil. The Jaco 57, located in the NW ¼ of Sec.32, T20N, R9W also reported first oil and water at 120' from surface. Along with topographic features, such as the Fajada Wash located in Section 28, T20N, R9W.

State Engineer's iWater report attached.

Drying Pad Sampling:

Sampling was taken from the State 32-102 drying pad on 6/18/2014 by Don L. Hanosh, agent for Enerdyne LLC, and delivered to Hall Environmental Analysis Laboratory, Inc. on 6/19/2014.

Test report 6/30/2014:

Choride        3600 mg/Kg

TPH            110 mg/Kg

Complete report attached.

Siting Criteria:

1. According to a current review of the iWater database of the New Mexico State Engineer's Office no ground water data is available for Sec. 32, T20N, R9W.
2. Aerial photograph and onsite inspection indicate that there is no continuously flowing watercourse, significant watercourse, lakebed or any other water source within 300' of the location of the proposed burial trench.
3. Aerial photography and onsite inspection find no permanent residence, school, hospital, institution, church or any other structure within 300' of the location of the proposed burial trench.
4. The location of the proposed burial trench is not within any municipality.
5. The FEMA wetland map information, attached, shows that the location of the proposed burial trench is not within the 100 year floodplain nor 300' of a wetland.
6. The proposed location of the burial trench is not over an existing subsurface mine and on stable ground.

Pit Design and Construction:

As previously described, the proposed burial trench will be constructed in compliance with Rule 19.15.17.

Drawing attached.

Operation Requirements:

Enerdyne LLC shall operate and maintain the proposed burial trench in compliance with Rule 19.15.17.12(A).

Closure and Site Reclamation:

Enerdyne LLC shall close the burial trench in compliance with Rule 19.15.17.13(D).

Enerdyne LLC will not commence construction or closure operations without obtaining approval of the closure plan with an approved OCD permit application pursuant to Rule 19.15.17.13(D)(1).

Enerdyne LLC, with this application, has demonstrated compliance with the siting criteria as allowed within Rule 19.15.17.13(D)(2).

Enerdyne LLC will stabilize or solidify the burial trench contents to a capacity to support the final 4' of cover which shall meet a paint filter test (EPA SW-846, Method 9095) of the proposed burial trench pursuant to Rule 19.15.17.13(D)(4). Mix ratio shall be determined by the OCD.

Enerdyne LLC has collected a five point composite sample of the contents to be placed in the proposed burial trench which do not appear to be higher than allowed listed in Table II of Rule 19.15.17.13 and in compliance with Rule 19.15.17.13(D)(5).

Enerdyne LLC shall collect a five point composite earth sample located under the drying pad liner pursuant to Rule 19.15-17.13(D)(9)(a).

Enerdyne LLC shall fold the outer edges of the proposed burial trench liner to overlap the contents, prior to installing a geomembrane liner cover pursuant to Rule 19.15.17.13(D)(8)(a).

Enerdyne LLC shall notify the surface owner ( State of New Mexico ) via certified mail 72 hours prior to any drying pad or burial trench closure operation pursuant to Rule 19.15.17.13 (E)(1).

Enerdyne LLC shall notify the Aztec, OCD office, via email, 72 hours prior to any burial trench closure pursuant to Rule 19.15.17.13(E)(2).

Enerdyne LLC shall cover the contents of the proposed burial trench with a geomembrane liner consisting of 20 mil string reinforced LLDPE liner or equivalent approved by the OCD., Pursuant to Rule 19.15.17.13(D)(8)(b).

Enerdyne LLC shall backfill and cover the proposed burial trench with uncontaminated, earthen materials and construct a soil cover prescribed by the OCD to insure 1 foot of top soil on top and a minimum of 3' of additional earthen material to achieve a the minimum 4' of cover.

Enerdyne LLC shall report the exact location of the burial trench on form C-105 pursuant to Rule 19.15.17.13(F)(2).

Enerdyne LLC shall place a steel marker over the burial trench pursuant to Rule 19.15.17.13(F)(3).

Enerdyne LLC shall reclaim and re-vegetate the drying pad and burial trench locations pursuant to Rule 19.15.17.13 (H) with re-vegetation operations conducted upon the removal of all drilling equipment.

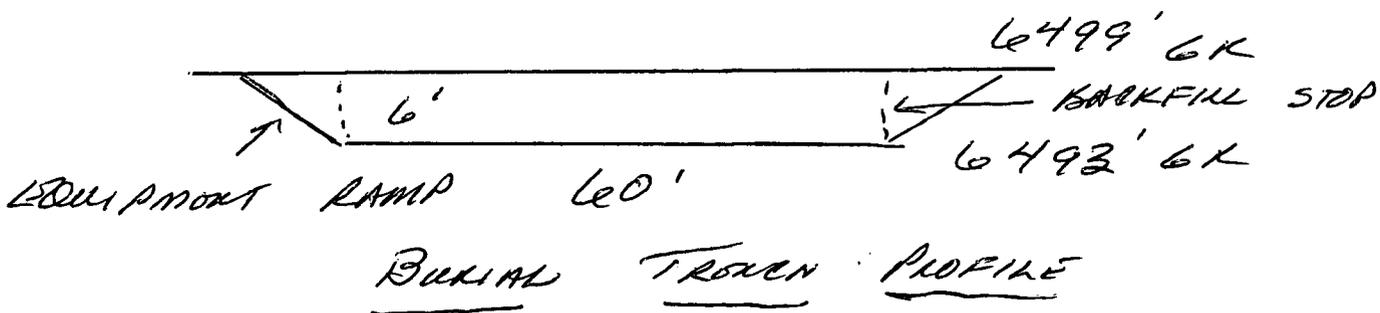
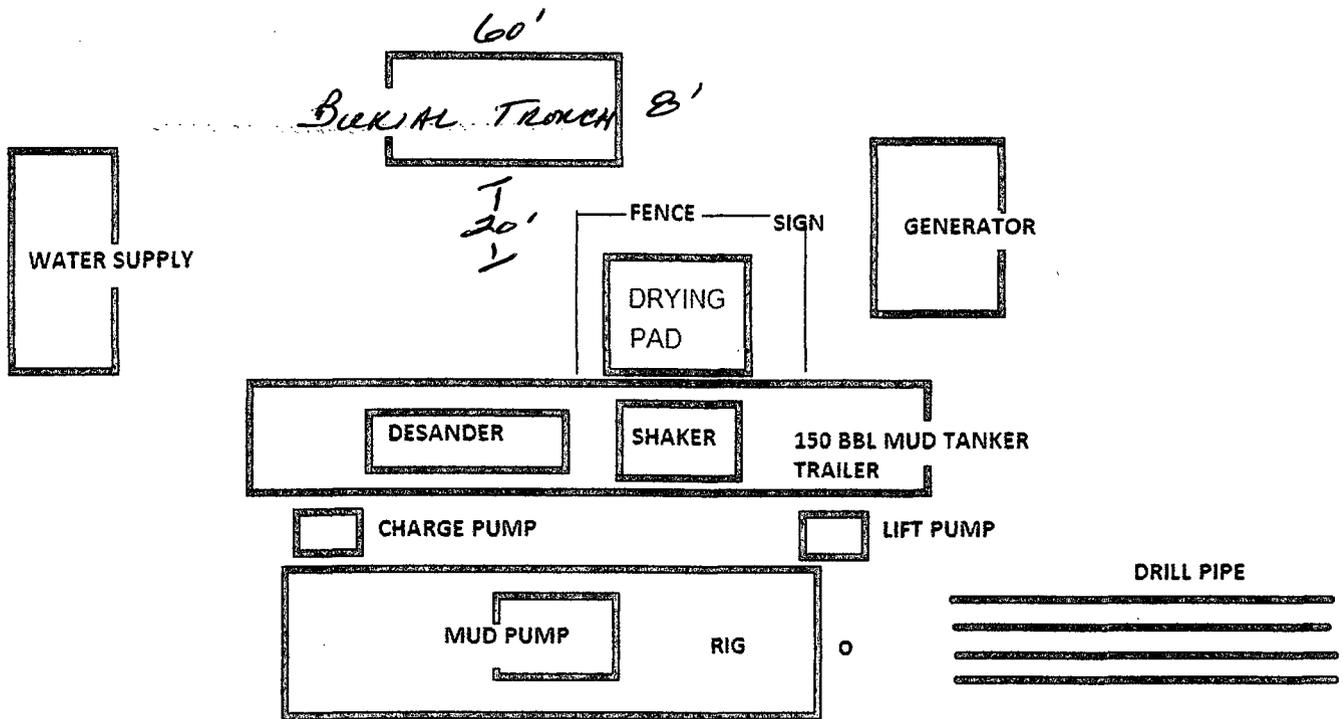
Enerdyne LLC shall within 60 days of closure of the proposed burial trench report on form C-144 documenting the closure including any additional soil sampling results where applicable to Rule 19.15.17.13(F).

Enerdyne LLC shall reclaim the onsite burial location pursuant to Rule 19.15.17.13(H).





# ENDY 102 CLOSED-LOOP SYSTEM DESIGN AND CONSTRUCTION



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Enerdyne LLC

Client Sample ID: STATE 32-102

Project: Enerdyne Endy State 32-102

Collection Date: 6/18/2014 2:30:00 PM

Lab ID: 1406908-001

Matrix: SOLID

Received Date: 6/19/2014 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	92	9.8		mg/Kg	1	6/24/2014 9:13:12 PM	13803
Surr: DNOP	109	57.9-140		%REC	1	6/24/2014 9:13:12 PM	13803
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/20/2014 3:56:42 PM	13793
Surr: BFB	96.0	80-120		%REC	1	6/20/2014 3:56:42 PM	13793
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.049		mg/Kg	1	6/20/2014 3:56:42 PM	13793
Toluene	ND	0.049		mg/Kg	1	6/20/2014 3:56:42 PM	13793
Ethylbenzene	ND	0.049		mg/Kg	1	6/20/2014 3:56:42 PM	13793
Xylenes, Total	ND	0.098		mg/Kg	1	6/20/2014 3:56:42 PM	13793
Surr: 4-Bromofluorobenzene	109	80-120		%REC	1	6/20/2014 3:56:42 PM	13793
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	3600	150		mg/Kg	100	6/26/2014 4:31:39 AM	13810
<b>EPA METHOD 418.1: TPH</b>							Analyst: <b>BCN</b>
Petroleum Hydrocarbons, TR	110	20		mg/Kg	1	6/23/2014	13804

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406908

30-Jun-14

Client: Enerdyne LLC  
Project: Enerdyne Endy State 32-102

Sample ID	MB-13810	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	13810	RunNo:	19436					
Prep Date:	6/20/2014	Analysis Date:	6/20/2014	SeqNo:	562237	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-13810	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	13810	RunNo:	19436					
Prep Date:	6/20/2014	Analysis Date:	6/20/2014	SeqNo:	562238	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.1	90	110			

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406908

30-Jun-14

Client: Enerdyne LLC  
Project: Enerdyne Endy State 32-102

Sample ID	<b>MB-13804</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 418.1: TPH</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13804</b>	RunNo:	<b>19397</b>					
Prep Date:	<b>6/20/2014</b>	Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561304</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	<b>LCS-13804</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 418.1: TPH</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13804</b>	RunNo:	<b>19397</b>					
Prep Date:	<b>6/20/2014</b>	Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561305</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	99	20	100.0	0	99.3	80	120			

Sample ID	<b>LCSD-13804</b>	SampType:	<b>LCSD</b>	TestCode:	<b>EPA Method 418.1: TPH</b>					
Client ID:	<b>LCSS02</b>	Batch ID:	<b>13804</b>	RunNo:	<b>19397</b>					
Prep Date:	<b>6/20/2014</b>	Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561306</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	99	20	100.0	0	99.3	80	120	0	20	

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
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- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406908

30-Jun-14

Client: Enerdyne LLC  
Project: Enerdyne Endy State 32-102

Sample ID	MB-13803	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	13803	RunNo:	19402					
Prep Date:	6/20/2014	Analysis Date:	6/20/2014	SeqNo:	561328	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.3		10.00		83.4	57.9	140			

Sample ID	LCS-13803	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	13803	RunNo:	19402					
Prep Date:	6/20/2014	Analysis Date:	6/20/2014	SeqNo:	561594	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	100	60.8	145			
Surr: DNOP	3.4		5.000		68.9	57.9	140			

Sample ID	1406908-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	STATE 32-102	Batch ID:	13803	RunNo:	19464					
Prep Date:	6/20/2014	Analysis Date:	6/24/2014	SeqNo:	563845	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	170	10	49.90	91.79	164	40.1	152			S
Surr: DNOP	5.9		4.990		118	57.9	140			

Sample ID	1406908-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	STATE 32-102	Batch ID:	13803	RunNo:	19464					
Prep Date:	6/20/2014	Analysis Date:	6/24/2014	SeqNo:	563846	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	170	9.9	49.31	91.79	164	40.1	152	0.532	32.1	S
Surr: DNOP	4.8		4.931		96.5	57.9	140	0	0	

## Qualifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406908

30-Jun-14

**Client:** Enerdyne LLC  
**Project:** Enerdyne Endy State 32-102

Sample ID	<b>MB-13793 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R19405</b>	RunNo:	<b>19405</b>					
Prep Date:		Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561885</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		96.1	80	120			

Sample ID	<b>LCS-13793 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R19405</b>	RunNo:	<b>19405</b>					
Prep Date:		Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561886</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		95.2	80	120			

Sample ID	<b>MB-13793</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13793</b>	RunNo:	<b>19405</b>					
Prep Date:	<b>6/19/2014</b>	Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561895</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	960		1000		96.1	80	120			

Sample ID	<b>LCS-13793</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13793</b>	RunNo:	<b>19405</b>					
Prep Date:	<b>6/19/2014</b>	Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561896</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.1	71.7	134			
Surr: BFB	950		1000		95.2	80	120			

Sample ID	<b>1406908-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>STATE 32-102</b>	Batch ID:	<b>13793</b>	RunNo:	<b>19405</b>					
Prep Date:	<b>6/19/2014</b>	Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561903</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.9	24.56	0	103	71.8	132			
Surr: BFB	1000		982.3		105	80	120			

Sample ID	<b>1406908-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>STATE 32-102</b>	Batch ID:	<b>13793</b>	RunNo:	<b>19405</b>					
Prep Date:	<b>6/19/2014</b>	Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561904</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.9	24.58	0	103	71.8	132	0.212	20	
Surr: BFB	1100		983.3		108	80	120	0	0	

**Qualifiers:**

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- E Value above quantitation range
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- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1406908

30-Jun-14

**Client:** Enerdyne LLC  
**Project:** Enerdyne Endy State 32-102

Sample ID	<b>MB-13793 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R19405</b>	RunNo:	<b>19405</b>					
Prep Date:		Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561907</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		114	80	120			

Sample ID	<b>LCS-13793 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R19405</b>	RunNo:	<b>19405</b>					
Prep Date:		Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561908</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

Sample ID	<b>MB-13793</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13793</b>	RunNo:	<b>19405</b>					
Prep Date:	<b>6/19/2014</b>	Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561917</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		114	80	120			

Sample ID	<b>LCS-13793</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13793</b>	RunNo:	<b>19405</b>					
Prep Date:	<b>6/19/2014</b>	Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561918</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.050	1.000	0	95.6	80	120			
Toluene	0.93	0.050	1.000	0	92.8	80	120			
Ethylbenzene	0.93	0.050	1.000	0	92.5	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.8	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

Sample ID	<b>1406908-001A MS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>STATE 32-102</b>	Batch ID:	<b>13793</b>	RunNo:	<b>19405</b>					
Prep Date:	<b>6/19/2014</b>	Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561920</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.049	0.9852	0	104	77.4	142			
Toluene	1.0	0.049	0.9852	0.02075	101	77	132			
Ethylbenzene	1.0	0.049	0.9852	0	104	77.6	134			
Xylenes, Total	3.2	0.099	2.956	0.06224	106	77.4	132			

**Qualifiers:**

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- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406908

30-Jun-14

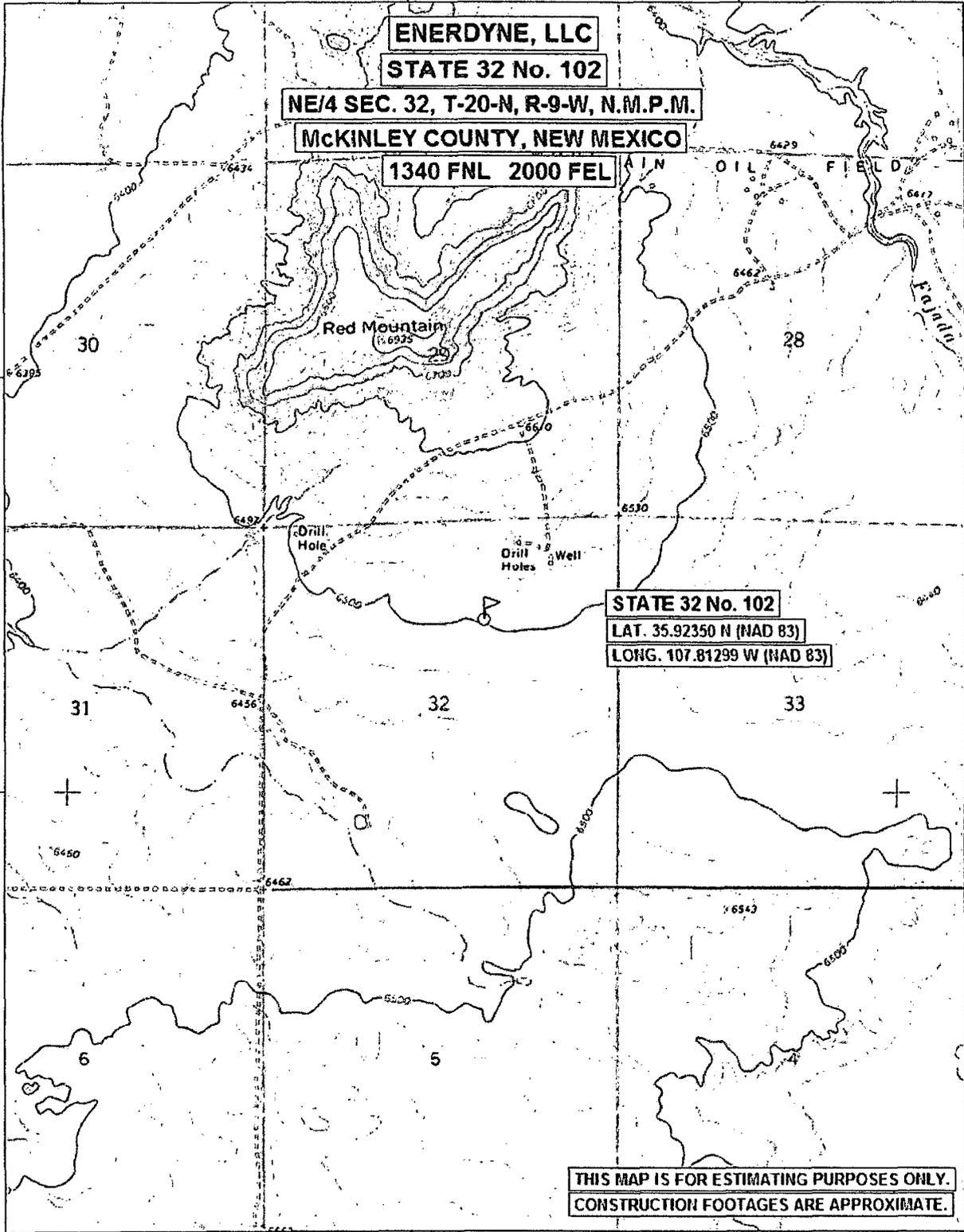
**Client:** Enerdyne LLC  
**Project:** Enerdyne Endy State 32-102

Sample ID	1406908-001A MS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	STATE 32-102	Batch ID:	13793	RunNo:	19405					
Prep Date:	6/19/2014	Analysis Date:	6/20/2014	SeqNo:	561920	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		0.9852		111	80	120			

Sample ID	1406908-001A MSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	STATE 32-102	Batch ID:	13793	RunNo:	19405					
Prep Date:	6/19/2014	Analysis Date:	6/20/2014	SeqNo:	561921	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.049	0.9852	0	101	77.4	142	2.96	20	
Toluene	0.99	0.049	0.9852	0.02075	98.4	77	132	2.75	20	
Ethylbenzene	1.0	0.049	0.9852	0	101	77.6	134	2.56	20	
Xylenes, Total	3.1	0.099	2.956	0.06224	104	77.4	132	2.25	20	
Surr: 4-Bromofluorobenzene	1.2		0.9852		119	80	120	0	0	

## Qualifiers:

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- S Spike Recovery outside accepted recovery limits
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- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



IN AN 10"

## ENERDYNE LLC

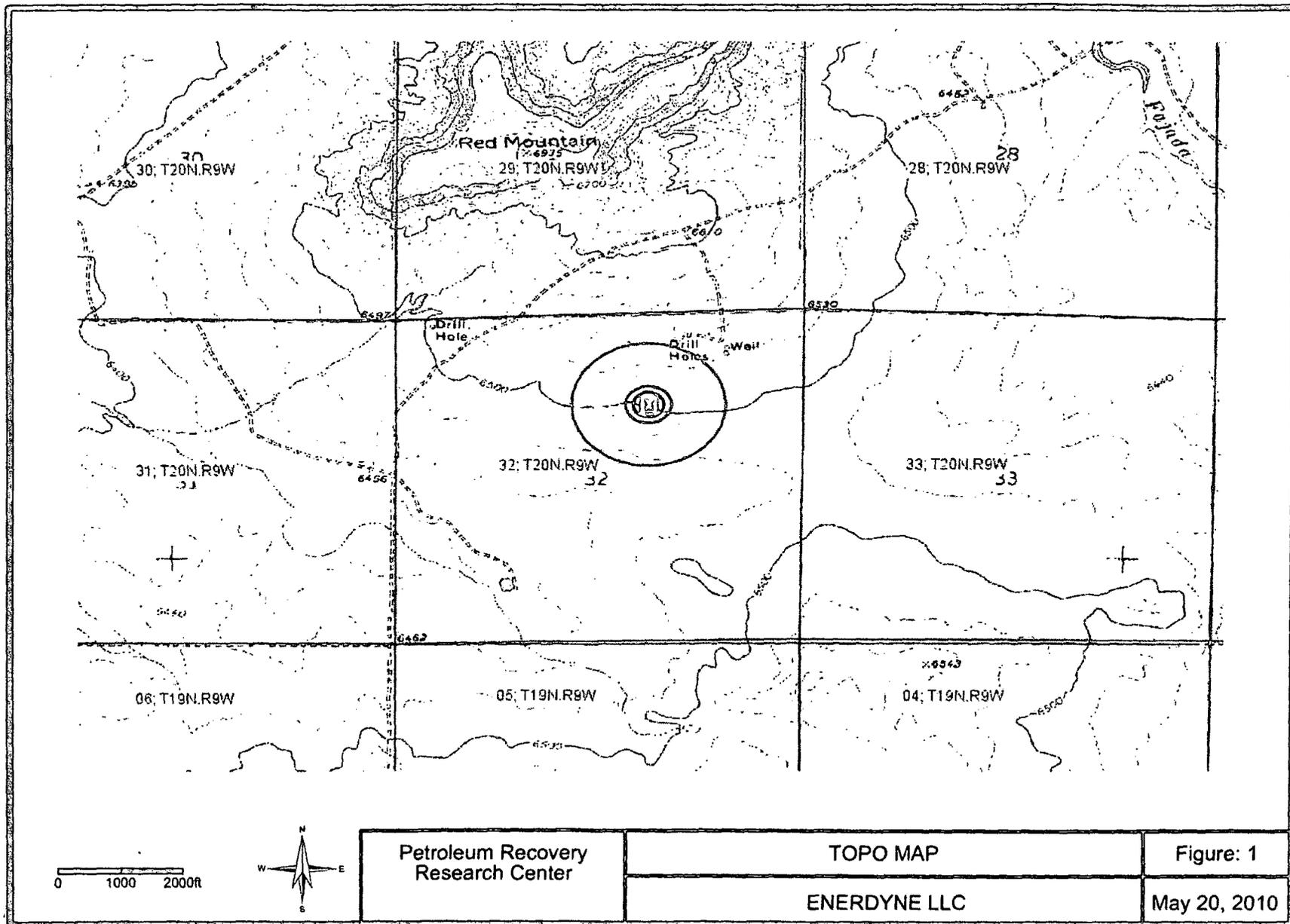
### Maintenance and Operating Plan

In accordance with Rule 19 1517 the following information described the operation and maintenance of temporary pits on Enerdyne locations. This is the standard procedure for all temporary pits. A separate plan will be submitted for any temporary pit which does not conform to this plan.

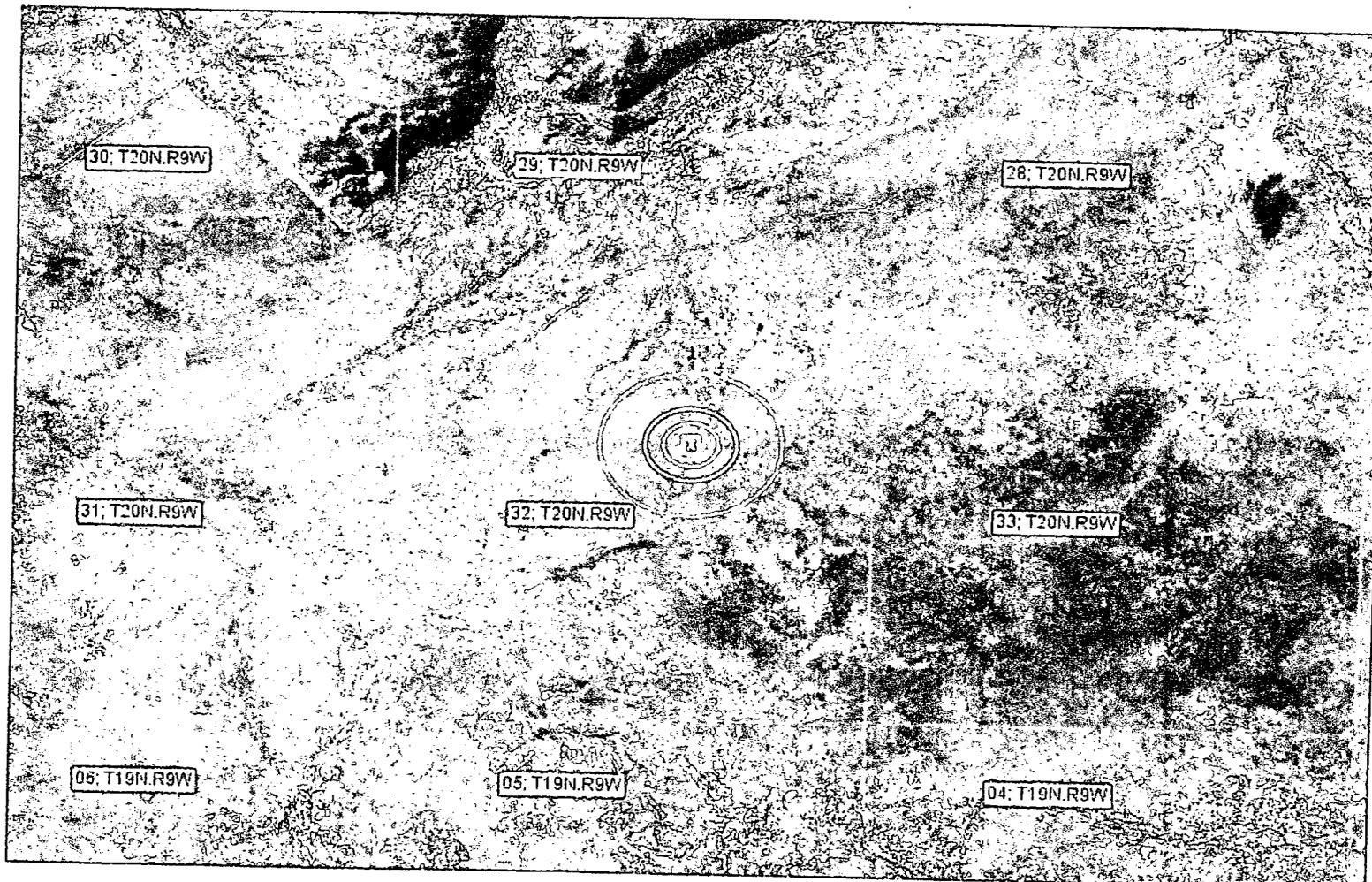
#### General Plan

1. Enerdyne will operate and maintain a temporary pit to contain liquids and solids and prevent contamination of fresh water and protect public health and environment
2. Enerdyne will conserve drilling fluids by transferring liquids to pits ahead of the rigs whenever possible. All other drilling fluids will be disposed at Basin Disposal, Inc. Permit # NM-01-005
3. Enerdyne will not discharge or store any hazardous waste in any temporary pit
4. If any pit liners integrity is compromised or if any penetration of the liner occurs above the liquids surface, then Enerdyne shall notify the Aztec Division office by phone or email within 48 hours of the discovery and repair the damage or replace the liner
5. If a leak develops below the liquid's level, Enerdyne shall remove all liquids above the damaged liner within 48 hours and repair the damage or replace the liner. Enerdyne shall notify the Aztec Division office by phone or email within 48 hours of the discovery for leaks less than 25 barrels. Enerdyne shall notify the Aztec division office as required pursuant to Subsection B of 19 153 116 NMAC shall be reported within twenty-four (24) hours of discovery of leaks greater than 25 barrels. In addition, immediate verbal notification pursuant to Subsection B, Paragraph (1) and Subparagraph (d) of 19 15 3 116 NMAC shall be reported to the division's Environmental Bureau Chief
6. The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides.
7. The pit shall be protected from run-off by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some cases
8. Enerdyne shall immediately remove any visible layer or oil from the surface of temporary pit after cessation of a drilling or workover operation. Oil removal equipment will be utilized to contain and remove oil from the pit's surface. Oil removal equipment will be stored on-site until closure of pit
9. Only fluids generated during the drilling or workover process may be discharged into a temporary pit
10. Enerdyne will maintain the temporary pit free of miscellaneous solid waste or debris
11. During drilling or workover operations, Enerdyne will inspect the temporary pit at least once daily to ensure compliance with this plan. Inspections will be logged. Enerdyne will file this log with the Aztec Division office upon closure of the pit
12. After drilling or workover operations, Enerdyne will inspect the temporary pit weekly so long as liquids remain in the temporary pit. A log of the inspections will be stored and will be filed

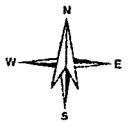
- with the Aztec Division office upon closure of the pit
13. Enerdyne shall maintain at least two feet of freeboard for a temporary pit
  14. Enerdyne shall remove all free liquids from a temporary pit within 30 days from the date the operator releases the drilling or workover rig



ENDY 102



0 1000 2000ft



Petroleum Recovery  
Research Center

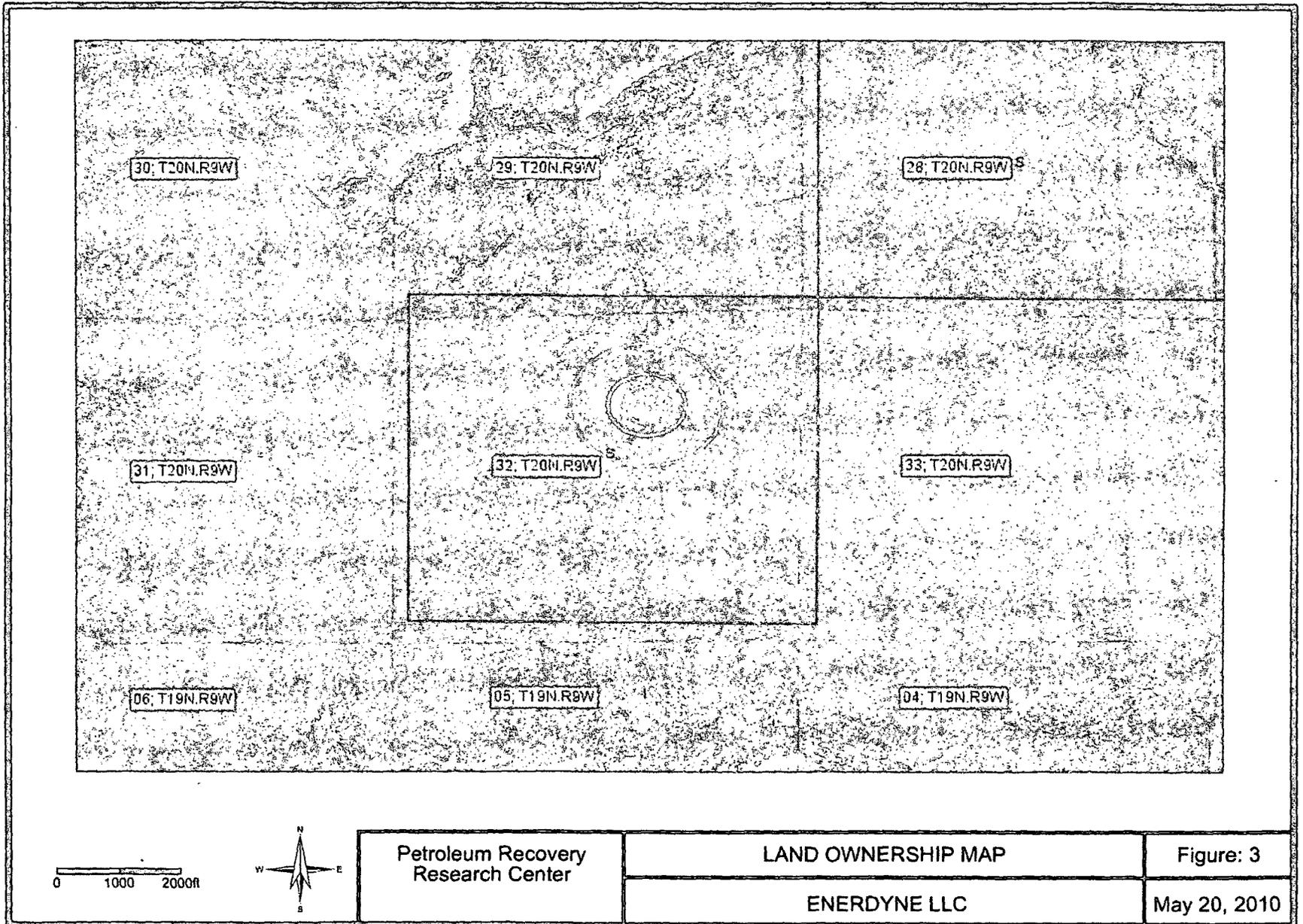
AREIAL PHOTO

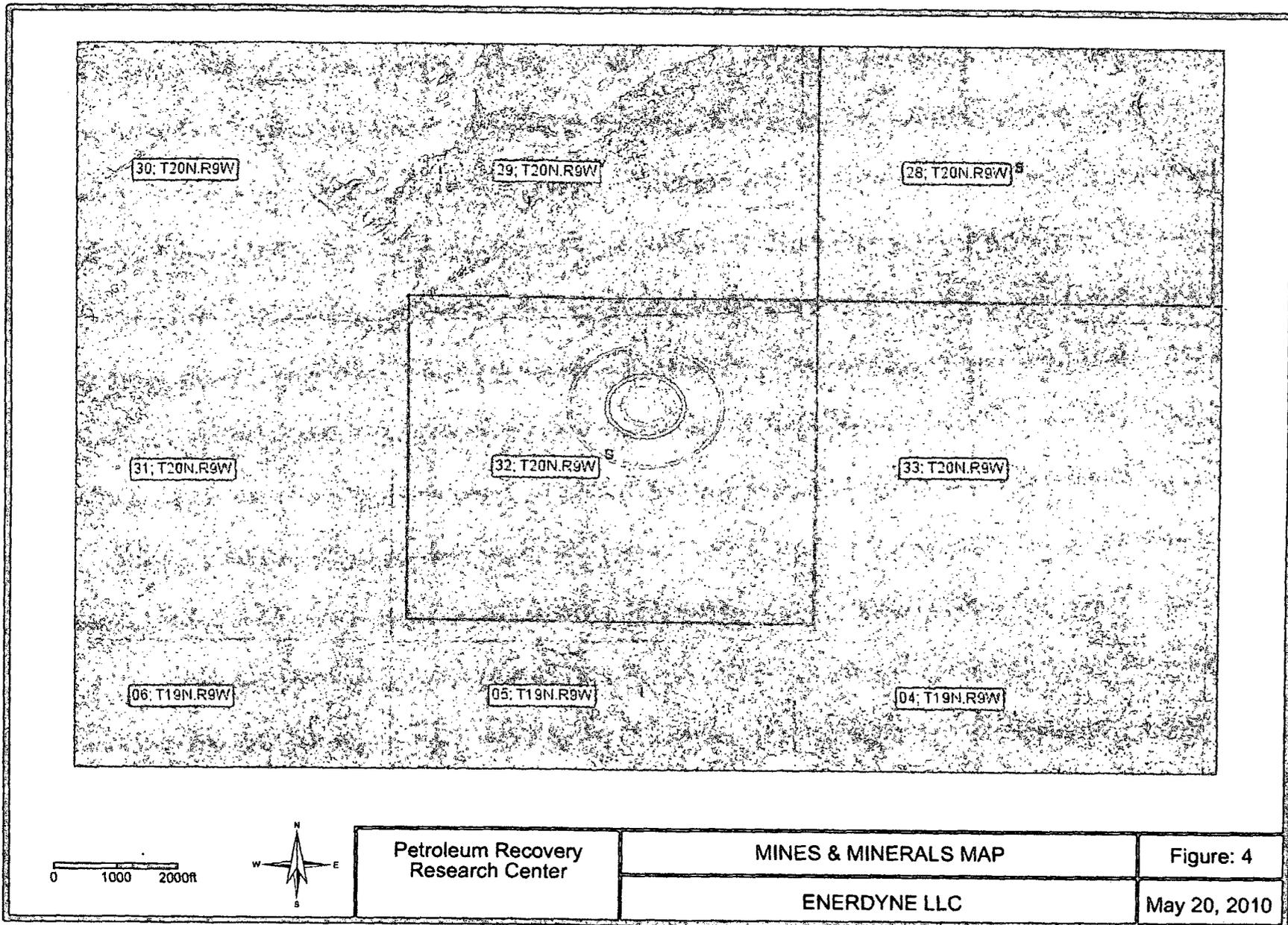
Figure: 2

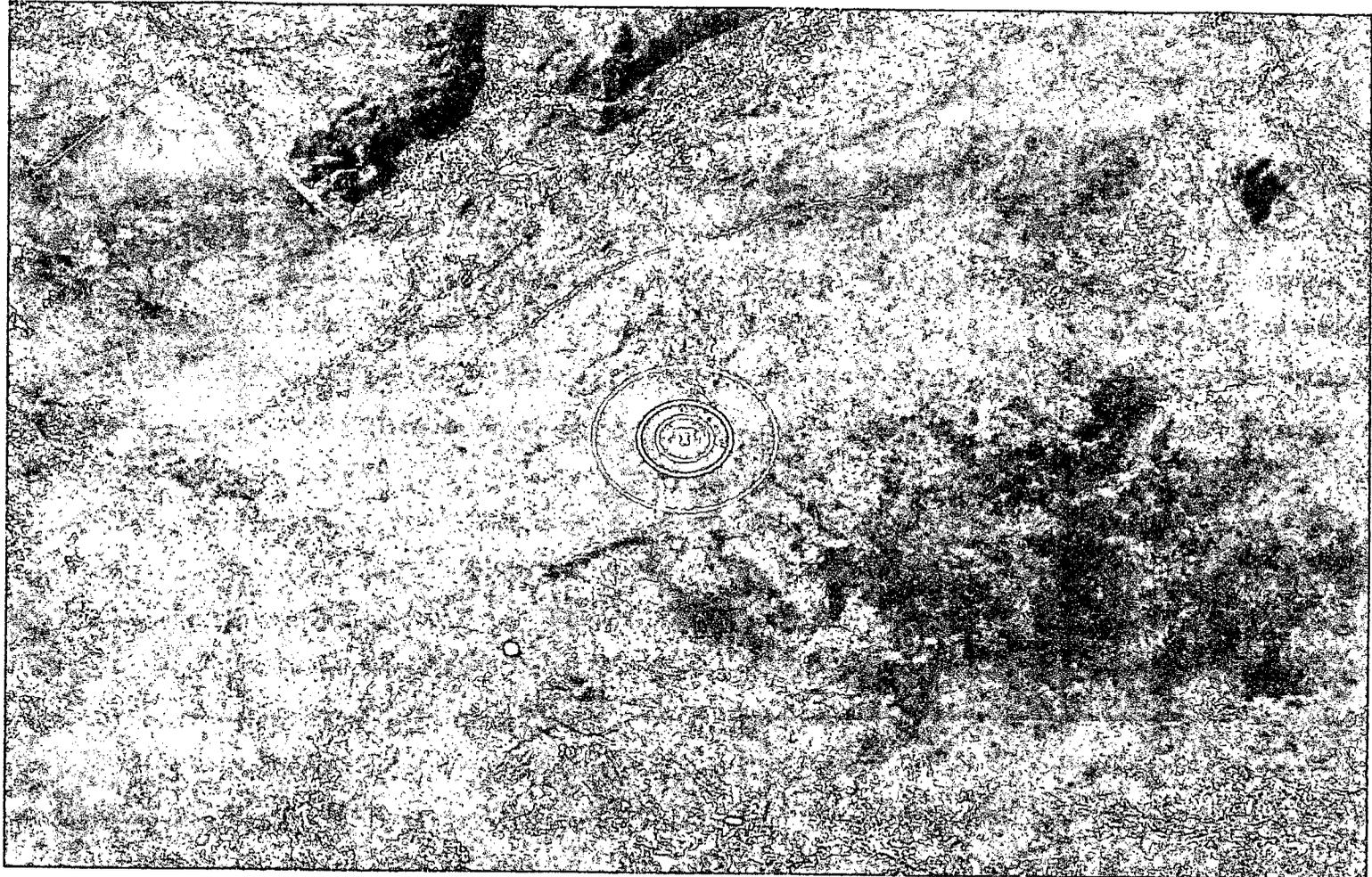
ENERDYNE LLC

May 20, 2010

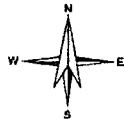
ENDY 102







0 1000 2000ft



Petroleum Recovery  
Research Center

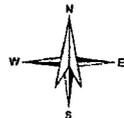
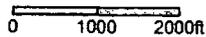
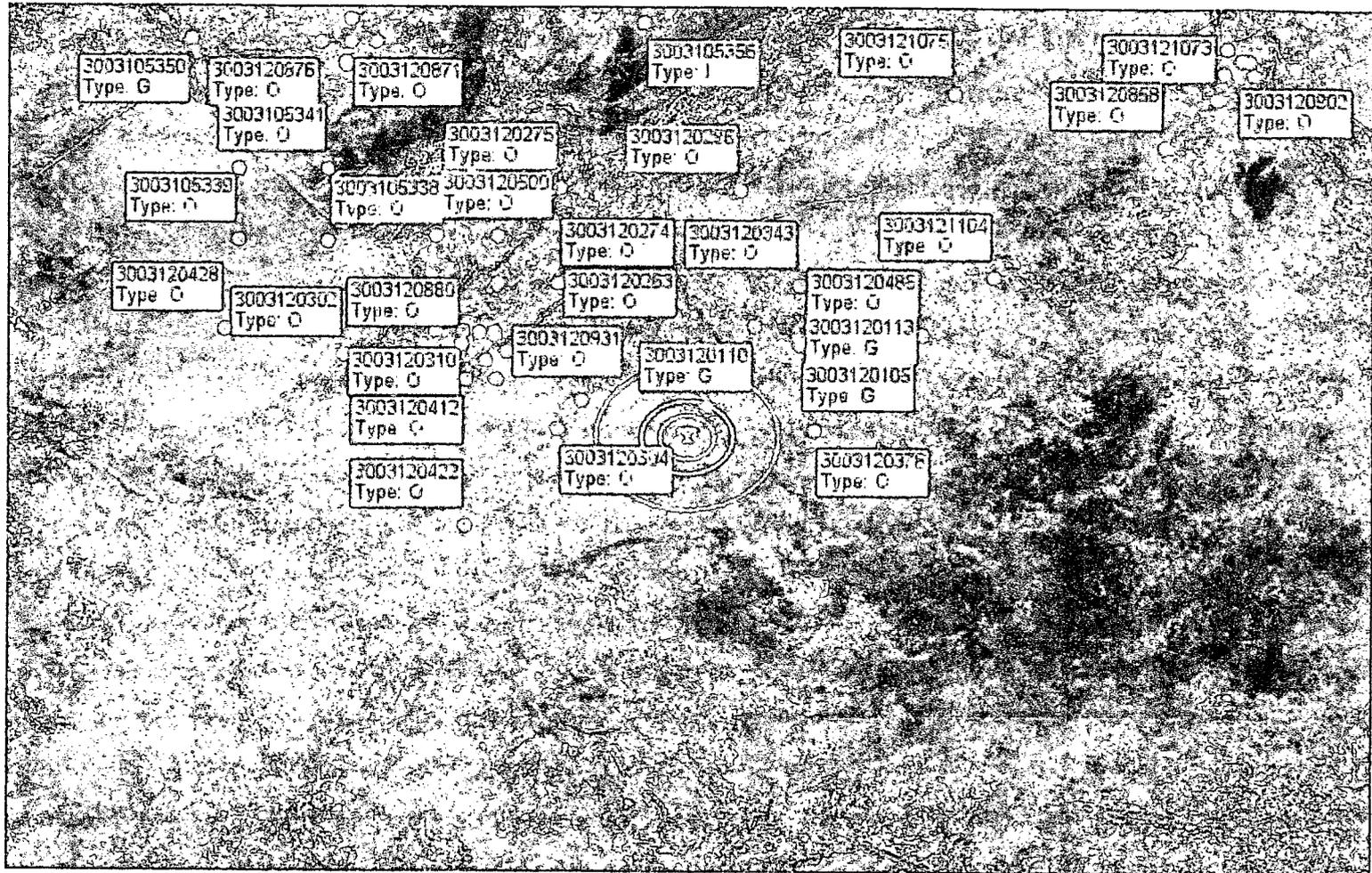
SURFACE WATER MAP

Figure: 5

ENERDYNE LLC

May 20, 2010

ENDY 102



Petroleum Recovery  
Research Center

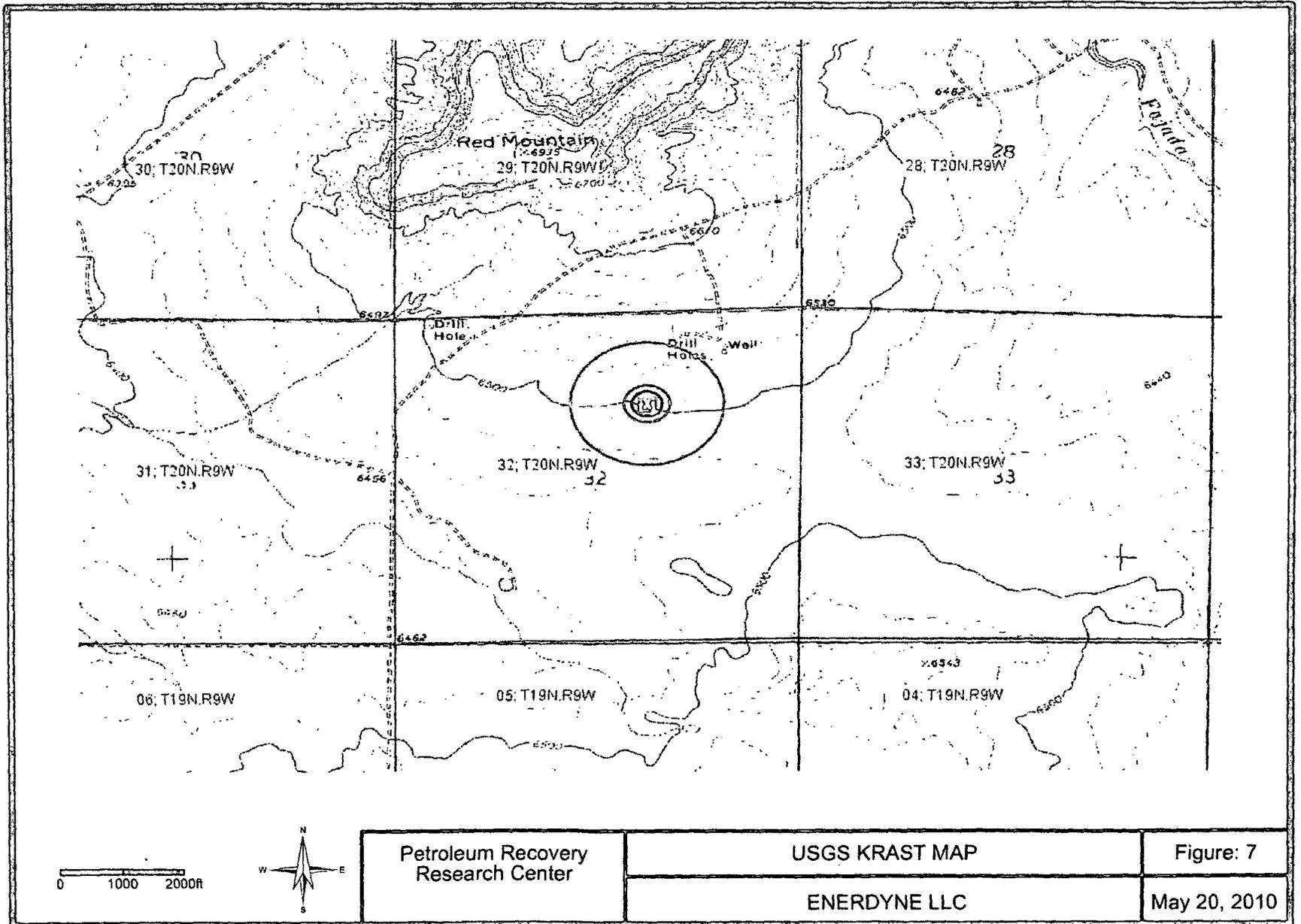
DRILL HOLE MAP

Figure: 6

ENERDYNE LLC

May 20, 2010

ENDY 102



ENDY 102

# Legend

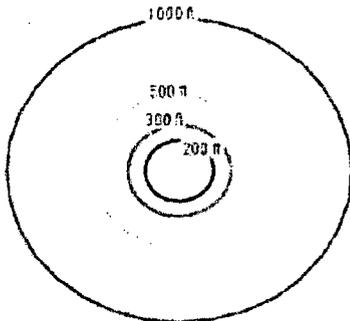
Petroleum Recovery Research Center  
Pit Rule Web Mapping Portal  
<http://pitrule.source3.com>

September 23, 2009

## Site Marker



## Distance Radii



## Land Ownership

- Not Classified
- BLM, Bureau of Land Management
- BOR, Bureau of Reclamation
- DDA, Department of Agriculture
- DOD, Department of Defense
- DOE, Department of Energy
- FS, U.S. Forest Service
- FWS, US Fish and Wildlife Service
- I, Indian/Tribal
- NPS, National Park Service
- Private
- State of New Mexico
- SGF, NM State Game and Fish
- SP, NM State Park
- UCNP, Valles Caldera National Preserve

## 100 - year Floodplain (partial coverage)

- 100-year Floodplain

## Mines and Minerals

### Potash Boundaries

-  POT MID ISLAND
-  POT NORTH ISLAND
-  POT SOUTH ISLAND
-  POTASH MAIN
-  HIPP SITE

### Coal Boundaries

-  Active Mining
-  Bond Released
-  Reclamation Only

### MILS = Mineral Industry Location System

-  MINERAL LOC
-  PLACER
-  PROC PLANT
-  PROSPECT
-  SURF-UNDERG
-  SURFACE
-  UNDERGROUND
-  UNDERWATER
-  UNKNOWN
-  WELL

## Political Boundaries

-  Township Range Section
-  State boundary
-  Urban Areas (2000 Census)
  - Cities
-  Interstate
-  US Highway
-  State Highway
-  Local Road

## Surface Water

- Stream/River
- Perennial Stream
- Intermittent Stream
- Lake/Pond
- Reservoir
- Playa
- Swamp/Marsh
- Estuary
- Sink/Rise
- Spring/Seep

## Statewide Wells

- OSE
- USGS (gwelev/date)
- USGS (DTW/date)
- Oil/Gas (API/Type)

### NOTES

- API = American Petroleum Institute well number
- DTW = depth to water in feet below ground surface
- gwelev = ground water elevation in feet relative to mean sea level
- OSE = NM Office of the State Engineer
- USGS = US Geological Survey

## Karst – use for unstable areas

- Fissures and voids present to a depth of 250 ft (75 m) or more in areas of subsidence from piping in thick, unconsolidated material
- Fissures, tubes and caves generally less than 1,000 ft (300 m) long; 50 ft (15 m) or less vertical extent; in gently dipping to flat-lying beds of carbonate rock
- Fissures, tubes and caves generally less than 1,000 ft (300 m) long; 50 ft (15 m) or less vertical extent; in moderately to steeply dipping beds of carbonate rock
- Fissures, tubes, and caves generally absent; where present in small isolated areas, less than 50 ft (15 m) long; less than 50 ft (15 m) vertical extent; in gently dipping to flat-lying beds of carbonate rock
- Fissures, tubes, and caves over 1,000 ft (300 m) long; 50 ft (15 m) to over 250 ft (75 m) vertical extent; in gently dipping to flat-lying beds of carbonate rock
- Fissures, tubes, and caves over 1,000 ft (300 m) long; 50 ft (15 m) to over 250 ft (75 m) vertical extent; in gently dipping to flat-lying beds of gypsum
- Fissures, tubes, and caves over 1,000 ft (300 m) long; 50 ft (15 m) to over 250 ft (75 m) vertical extent; in moderately to steeply dipping beds of carbonate rock
- Fissures, tubes, and tunnels present to a depth of 250 ft (75m) or more in lava
- Fissures, tubes, and tunnels present to a depth of 50 ft. (15 m) in lava
- no karst

# NM GEOLOGY

- not specified
- D, Paleozoic-Percha Shale
- J, Jurassic Rocks, undivided
- Je, Jurassic-Entrada Sandstone
- Jm, Jurassic-Morrison Formation
- Jmsu, Jurassic-Morrison Formation and upper San Rafael Group
- Jsr, Jurassic-San Rafael Group
- Jz, Jurassic-Zuni Sandstone
- Jze, Jurassic-Zuni and Entrada Sandstone; undivided
- K, Cretaceous rocks, undivided
- Ka, (Null)
- Kbn, Cretaceous-Mancos Formation and Beartooth Quartzite
- Kc, Cretaceous-Carlile Shale
- Kcc, Cretaceous-Crevasse Canyon Formation; coal-bearing and sandstone units
- Kch, Cretaceous-Cliff House Sandstone
- Kd, Cretaceous-Dakota Sandstone
- Kdg, Cretaceous-Dakota Group
- Kdn, Cretaceous-Intertongued Dakota-Mancos sequence
- Kdr, Cretaceous-Dakota Sandstone and Rio Salado Tongue of the Mancos Shale
- Kg, Cretaceous-Gallup Sandstone
- Kgc, Cretaceous-Dakota Sandstone and Rio Salado Tongue of the Mancos Shale; undivided
- Kgy, Cretaceous-Graneros Shale and Greenhorn Formation
- Kgh, Cretaceous-Greenhorn Formation
- Kgr, Cretaceous-Graneros Shale
- Ki, Uppermost Cretaceous intrusive rocks
- Kkf, Cretaceous-Kirtland and Fruitland Formations
- Kl, Lower Cretaceous, undivided
- Kls, Cretaceous-Lewis Shale
- Klv, Cretaceous-La Ventana Tongue of the Cliff House Sandstone
- Km, Cretaceous-Manco Shale
- Kma, Cretaceous-Moreno Hill Formation and Atarque Sandstone
- Kmc, Cretaceous-McRae Formation
- Kmf, Menefee Formation; mudstone, shale, and sandstone
- Kmg, Cretaceous-Gallup Sandstone and underlying D-Cross Tongue of the Mancos Shale
- Km1, Cretaceous-Mancos Shale, Lower Part
- Km2, Cretaceous-Mulatto Tongue of Mancos Shale
- Kmr, Cretaceous-Rio Salado Tongue of the Mancos Shale
- Kms, Cretaceous-Satan Tongue of Mancos Shale
- Kmw, Cretaceous-Mancos Shale, Upper Part
- Knv, Cretaceous-Mesaverde Group

*continued on next page*

## NM Geology - continued

- Kmv, Cretaceous-Mesaverde Group
- Kmf, Cretaceous-Fort Hays Limestone Member of Niobrara Formation
- Kpc, Cretaceous-Pictured Cliffs Sandstone
- Kpg, Cretaceous-Pescado Tongue of the Manco Shale and Gallup Sandstone
- Kph, Cretaceous-Hosta Tongue of Point Lookout Sandstone
- Kpl, Point Lookout Sandstone
- Kpn, Cretaceous-Pierre Shale and Niobrara Formation
- Kth, Cretaceous-Tres Hermanos Formation
- Ku, Upper Cretaceous; undivided
- Kut, Cretaceous-Vermejo Formation and Trinidad Sandstone
- M(c), Mississippian through Cambrian
- M, Paleozoic-Mississippian rocks, undivided
- MD, Paleozoic-Mississippian and Devonian rocks; undivided
- O(c), Ordovician and Cambrian
- O(c)p, Ordovician-Cambrian plutonic rocks
- P(p), Permian and Pennsylvanian; undivided
- P(p)lc, Permian-Lead Camp Formation
- P(p)m, Permian-Maderia Formation
- P(p)ne, Permian-Maderia Formation; exotic blocks
- P(p)ps, Permian-Panther Seep Formation
- P(p)s, Permian-Sandia Formation
- P(p)sc, Permian-Sangre de Cristo Formation
- P, Paleozoic-Permian Rocks, undivided
- Pa, Paleozoic-Abo Formation; red beds
- Pal, Paleozoic-Lower part of Abo Formation
- Pat, Permian-Artesia Group; shelf facies forming south-southeast trending outcrop
- Pau, Paleozoic-Upper Part of Abo Formation
- Pay, Paleozoic-Abo and Yeso Formations
- Pb, Paleozoic-Bursum Formation; shale, arkose, and limestone
- Pbc, <Null>
- Pc, Paleozoic-Castile Formation; anhydrite sequence
- Pcc, Paleozoic-Cherry Canyon Formation; sandstone, limestone, shale
- Pco, Paleozoic-Cutoff Shale
- Pcp, <Null>
- Pct, Paleozoic-Cutler Formation
- Pg, Paleozoic-Glorieta Sandstone; high-silica quartz sandstone
- Pgg, Paleozoic-Grayburg and Queen Formations; sandstones, gypsum, anhydrite, dolomite, and red mustone
- Ph, Paleozoic-Hueco Formation
- Playa, Playa Deposits
- Pqm, Paleozoic-Quartermaster Formation; red sandstone and siltstone; Upper Permian
- Pqr, Paleozoic-Quartermaster and Rustler Formations; Upper Permian

*continued on next page*

## NM Geology - continued

- Pqr, Paleozoic-Quartermaster and Rustler Formations; Upper Permian
- Pr, Paleozoic-Ruster Formation; siltstone, gypsum, sandstone, and dolomite; Upper Permian
- Psa, Paleozoic-San Andres Formation; limestone and dolomite with minor shale
- Psg, Paleozoic-San Andres Limestone and Glorieta Sandstone
- Psl, Paleozoic-Salado Formation; evaporite sequence; Upper Permian
- Psr, Paleozoic-Seven Rivers Formation; gypsum, anhydrite, salt, dolomite, and siltstone
- Pty, Paleozoic-Yates and Tansill Formations; sandstones, siltstones, limestone, dolomite, and anhydrite
- Pvp, Paleozoic-Victoria Peak Limestone
- Py, Paleozoic-Yeso Formation; sandstones, siltstones, anhydrite, gypsum, halite, and dolomite
- Pys, Paleozoic-Yeso, Glorieta and San Andres Formations, undivided
- Pz, Paleozoic rocks, undivided
- QTb, Basaltic and andesitic volcanics interbedded with Pleistocene and Pliocene sedimentary units.
- QTg, Gila Group
- QTp, Older piedmont alluvial deposits and shallow basin fill
- QTs, Upper Santa Fe Group
- QTsf, Upper Santa Fe Group, undivided
- QTt, Quaternary-Travertine
- Qa, Quaternary Alluvium
- Qa/QTs,
- Qa/QTsf,
- Qb, Quaternary-Basalt and andesite flows and local vent deposits
- Qbo, Quaternary-Basalt or basaltic andesite; middle and lower Pleistocene
- Qbt, Quaternary-Bandalier Tuff; Jemez Mountains area only
- Qd, Quaternary-Glacial deposits; till and outwash; upper and middle Pleistocene
- Qe, Quaternary-Eolian Deposits
- Qe/QTs,
- Qe/QTsf,
- Qe/Qa, <Null>
- Qe/Qp, Quaternary-Eolian Piedmont Deposits
- Qe/Qpl,
- Qe/Tnb,
- Qeg, Quaternary-Gypsiferous eolian deposits
- Ql, Quaternary-Landslide deposits and colluvium
- Ql/QTs, <Null>
- Qoa, Quaternary-Older Alluvial Deposits
- Qoa/To, Quaternary-Older Alluvial Deposits/Ogalalla
- Qp, Quaternary-Piedmont Alluvial Deposits
- Qp/QTs,
- Qp/QTsf,
- Qp/Tsf,
- Qpl, Quaternary-Lacustrine and Playa Deposits

*continued on next page*

## NM Geology - continued

- Qr, Quaternary-Silicic volcanic rocks
- Qv, Quaternary-Basaltic volcanoes; tuff rings, cinders, and proximal lavas
- Qvr, Quaternary-Valles Rhyolite; Jemez Mountains area only
- SD(c), Silurian through Cambrian
- SO, Paleozoic-Silurian and Ordovician rocks, undivided
- T(r), Triassic Rocks, undivided; continental red beds
- T(r)b, Triassic-Bull Canyon
- T(r)c, Triassic-Chinle Group
- T(r)cu, Triassic-Upper Chinle Group
- T(r)g, Triassic-Garita Creek Formation
- T(r)n, Triassic-Noenkopi Formation
- T(r)r, Triassic-Redonda Formation
- T(r)rp, Triassic-Rock Point Formation; Chinle Group
- T(r)s, Triassic-Santa Rosa Formation
- T(r)t, Triassic-Trujillo Formation
- TKa, Animas Formation
- TKav, Andestic Volcanics
- TKi, Paleogene and Upper Cretaceous intrusive rocks
- TKpr, Poison Canyon and Raton Formations; undivided
- TKr, Raton Formation
- Tc, Tertiary-Chuska Sandstone
- Tfl, Tertiary-Fence Lake Formation
- Thb, Hinsdale Basalt
- Ti, Tertiary intrusive rocks; undifferentiated
- Tif, Middle Tertiary felsic shallow-intrusive rocks
- Tla, Lower Tertiary, andesite and basaltic andesite flows, and associated volcanic units
- Tli, Tertiary-intrusive rocks and intermediate to felsic dikes and plugs
- Tlp, Tertiary-Los Pinos Formation of Lower Santa Fe Group
- Tlrf, Tertiary-Lower Oligocene silicic (or felsic) flows, domes, and associated pyroclastic rocks and intrusions
- Tlrp, Tertiary-Lower Oligocene silicic pyroclastic rocks
- Tlv, Tertiary-Lower Oligocene and Eocene volcanic rocks, undifferentiated
- Tmb, Basalt and andesite flows; Miocene
- Tn, Nacimiento Formation
- Tnb, Basalt and andesite flows; Neogene
- Tnr, Tertiary-Silicic to intermediate volcanic rocks
- Tnv, Tertiary-Neogene volcanic rocks
- To, Tertiary-Ogallala Formation
- Toa, Tertiary-Ojo Alamo Formation
- Tos, Tertiary-sedimentary and volcanoclastic rocks
- Tpb, Basalt and andesite flows; Pliocene

*continued on next page*

## NM Geology - continued

- Tpc, Tertiary-Poison Canyon Formation
- Tps, Tertiary-Paleogene sedimentary units
- Tsf, Tertiary-Lower and Middle Santa Fe Group
- Tsj, Tertiary-San Jose Formation
- Tual, Tertiary-Upper Oligocene andesites and basaltic andesites
- Tuau, Tertiary-Lower Miocene and uppermost Oligocene basaltic andesites
- Tui, Tertiary-Miocene to Oligocene silicic to intermediate intrusive rocks; dikes, stocks, plugs, and diatremes
- Tuin, Upper and Middle Tertiary mafic intrusive rocks
- Turf, Tertiary-Upper Oligocene silicic (or felsic) flows and masses and associated pyroclastic rocks
- Turp, Tertiary-Upper Oligocene rhyolitic pyroclastic rocks
- Tus, Upper Tertiary sedimentary units
- Tuv, Tertiary-Volcanic and some volcanoclastic rocks; undifferentiated
- Tv, Middle Tertiary volcanic rocks; undifferentiated
- Water
- X, Precambrian-Lower Proterozoic rocks; undivided
- Xm, Precambrian-Lower Proterozoic metasedimentary rocks
- Xmo, Precambrian-Lower Proterozoic metamorphic rocks; dominantly mafic
- Xms, Precambrian-Lower Proterozoic metasedimentary rocks
- Xmu, Precambrian-Lower Proterozoic metamorphic rocks, undivided
- Xp, Precambrian-Lower Proterozoic plutonic rocks
- YXp, Precambrian-Middle and Lower Proterozoic plutonic rocks, undivided
- Yp, Precambrian-Middle Proterozoic plutonic rocks
- Ys, Precambrian-Middle Proterozoic sedimentary rocks
- ds, Quaternary-Disturbed Ground

*end of geology legend*

## **ENERDYNE LLC**

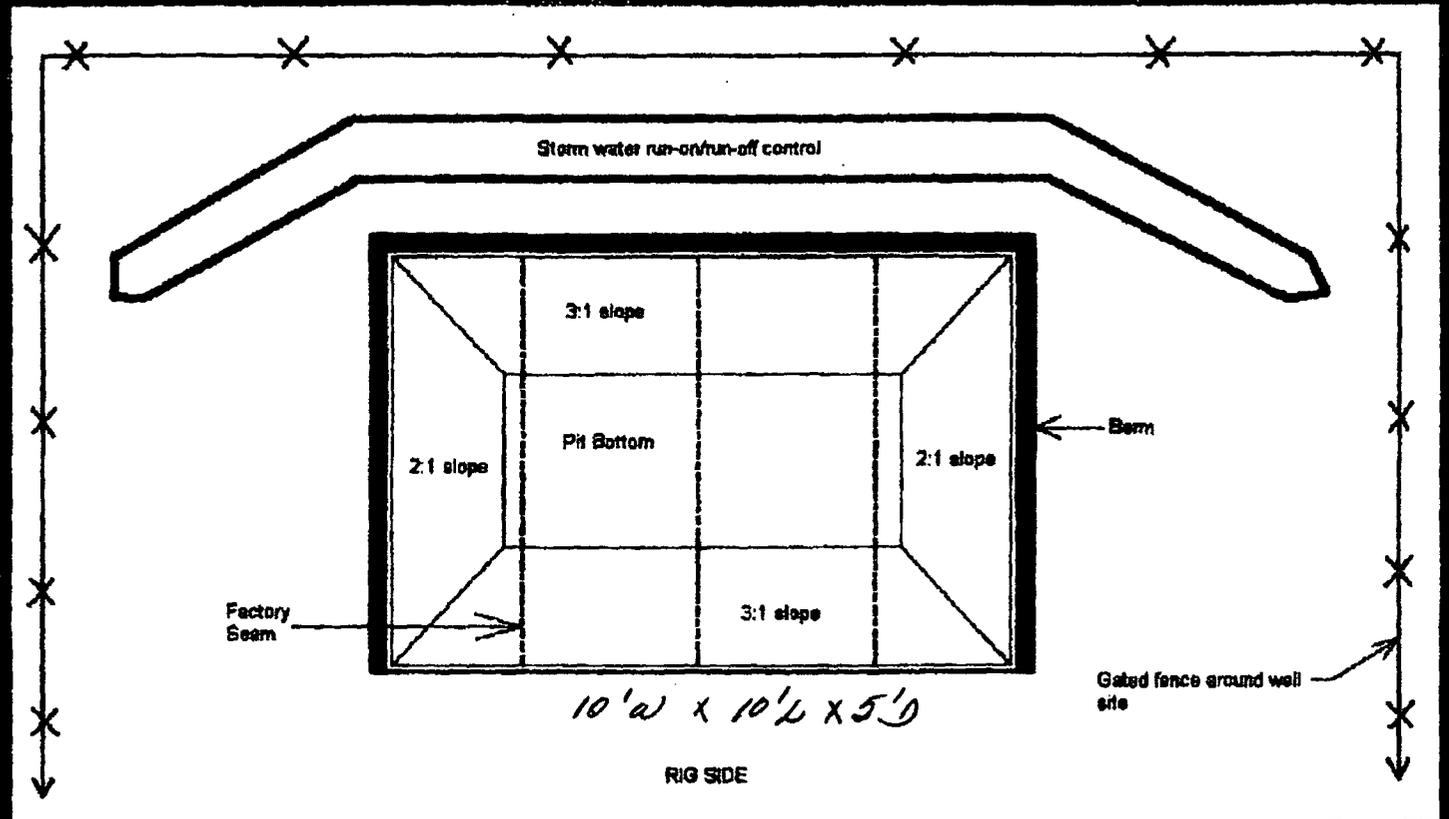
### **PIT DESIGN AND CONSTRUCTION**

In accordance with Rule 19 15 17 the following information describes the design and construction for temporary pits on Enerdyne's locations; this is Enerdyne's standard procedure for all temporary pits. A separate plan will be submitted for any temporary pit which does not conform to this plan.

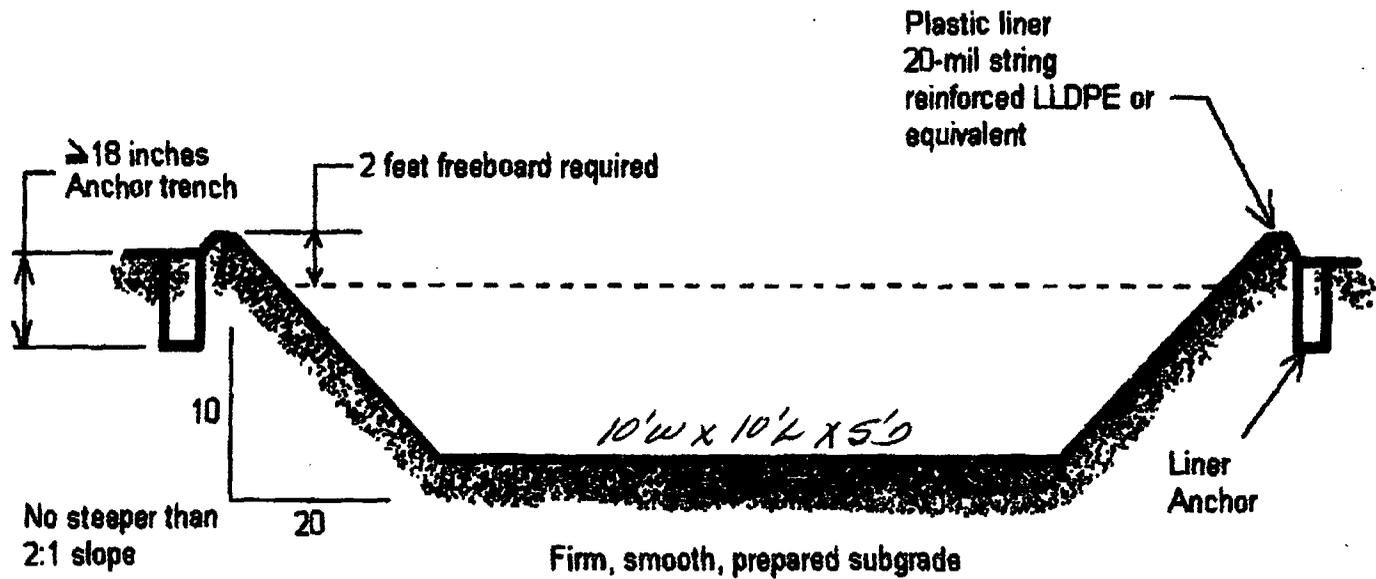
#### **General Plan**

1. Enerdyne will design and construct a temporary pit to contain liquids and solids and prevent contamination of fresh water and protect public health and environment
2. Prior to constructing the pit, topsoil will be stockpiled in the construction zone for later use in restoration
3. Enerdyne will post a well sign, not less than 12" by 24", on the well site prior to construction of the temporary pit. The sign will list the operator on record as the operator, the location of the well by unit letter, section, township rang, and emergency telephone numbers
4. Enerdyne shall construct all new fences utilizing 48" high four strands of barbed wire evenly spaced between one and four feet. T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post. Temporary pits will be fenced at all times excluding drilling or overwork operations, when the front side of the fence will be temporarily removed for operational purposes
5. Enerdyne shall construct the temporary pit so that the foundation and interior slopes are firm and free of rocks, debris, sharp edges or irregularities to prevent liner failure
6. Enerdyne shall construct the pit so that the slopes are no steeper than two horizontal feet to one vertical foot
7. Pit walls will be walked down by a tractor following construction
8. All temporary pits will be lined with a 20-mil, string reinforced, LLDPE liner, complying with EPA SW-846 method 9090A requirements
9. Geotextile will be installed beneath the liner when rocks, debris, sharp edges or irregularities cannot be avoided -
10. All liners will be anchored in the bottom of a compacted earth-filled trench at least 18 inches deep
11. Enerdyne will minimize liner seams and orient them up and down, not across a slope. Factory seams will be used.
12. The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or a manifold system
13. The pit shall be protected from run-off by constructing and maintaining diversion ditched around the location or around the perimeter of the pit in some cases
14. The volume of the pit shall not exceed 10 acre-feet, including freeboard
15. Enerdyne will not allow freestanding liquids to remain on the unlined portion of temporary blow pit

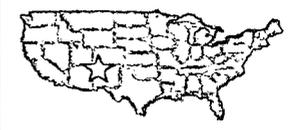
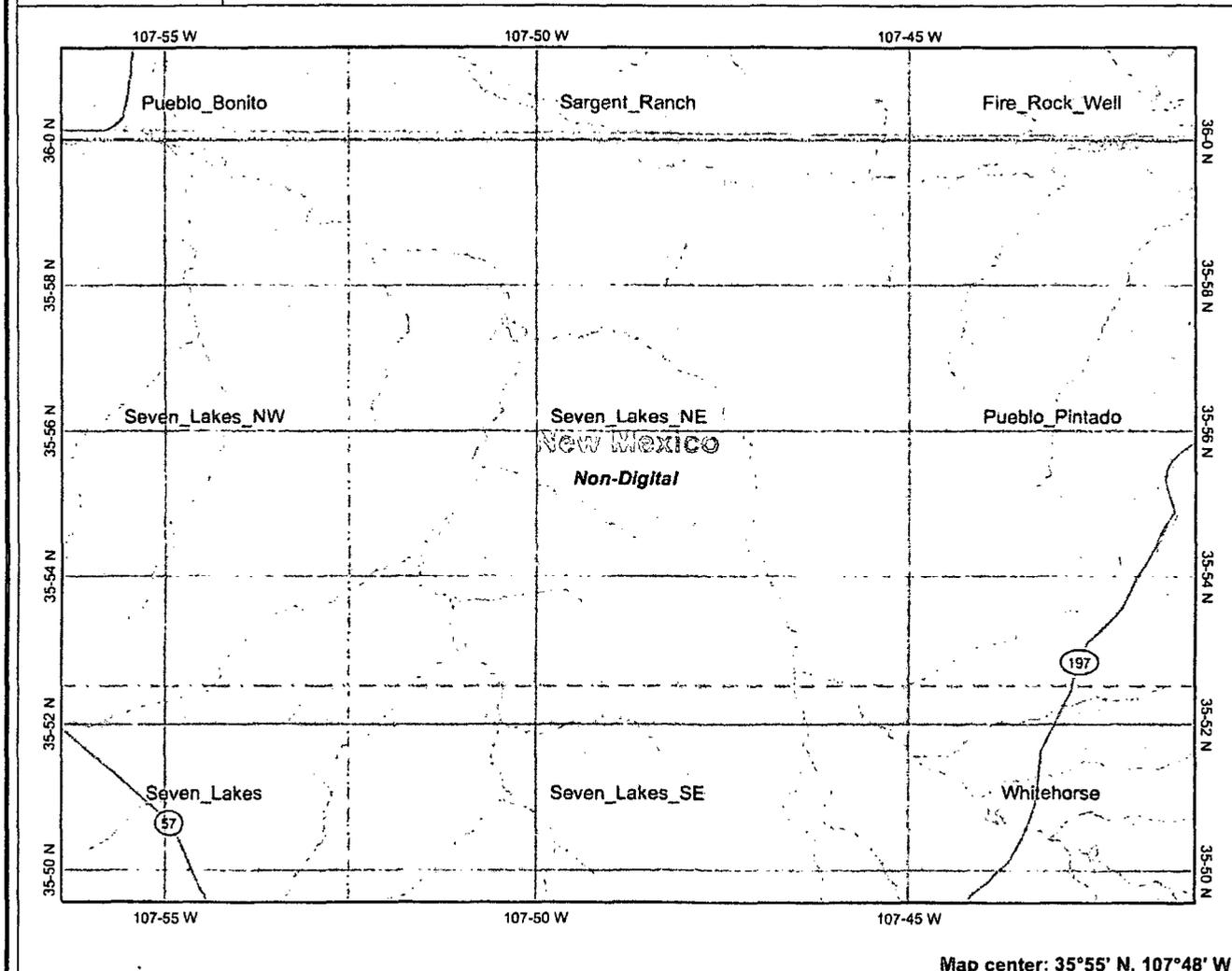
# TEMPORARY PIT DESIGN AND CONSTRUCTION



# TEMPORARY PIT DESIGN AND CONSTRUCTION



# WET LAND MAP



## Legend

- Interstate
- Major Road
- Other Road
- Interstate
- State highway
- US highway
- Cities
- USGS Quad Index 24K
- Lower 48 Available Wetland Data**
- Non-Digital
- Digital
- No Data
- Scan
- NHD Waterbodies**
- LAKE/POND
- RESERVOIR
- STREAM/RIVER
- NHD Streams
- Counties 100K
- Urban Areas 300K
- States 100K
- South America
- North America

Map center: 35°55' N, 107°48' W



Scale: 1:151,664

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

## Kelly, Jonathan, EMNRD

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**From:** Kelly, Jonathan, EMNRD  
**Sent:** Friday, October 17, 2014 8:00 AM  
**To:** dhanosh426@gmail.com  
**Cc:** Smith, Cory, EMNRD; Powell, Brandon, EMNRD  
**Subject:** Burial Trench on State 32 #102

Don,

This email is notification that the Burial Trench Permit # 12260 has been approved with the following Conditions of Approval.

- Provide updated Center of Design Coordinates of the Burial Trench at time of closure on an updated C-102 with Pad diagram to be included with the C-144 Closure Permit.
- Include on the Pad Diagram the distance in feet from the well head to the Center of Design.
- Closure will be witnessed by NMOCD, please contact the NMOCD Aztec Office to schedule.

If you have any questions regarding the above, please do not hesitate to contact us.

Thank you,

Jonathan D. Kelly  
Compliance Officer  
Oil Conservation Division  
Energy, Minerals, & Natural Resources  
1000 Rio Brazos, Aztec, NM 87410  
(505)334-6178 ext 122  
[jonathan.kelly@state.nm.us](mailto:jonathan.kelly@state.nm.us)