

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

OIL CONS. DIV DIST. 3

JUL 24 2014

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: LENOR DYNE LLC OGRID #: 185239  
Address: P.O. BOX 502, ALBUQUERQUE, NM 87123  
Facility or well name: STATE 32-102  
API Number: 20-031-21105 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr 6 Section 32 Township 10N 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 \_\_\_\_\_ Volume: 800 bbl Dimensions: L 20' x W 10' x D 6'

3. ☐ Below-grade tank: Subsection I of 19  
Volume: \_\_\_\_\_ bbl Ty: Missing Closure Plan. Operator elected to haul drying pad cuttings to landfill.  
Tank Construction material: \_\_\_\_\_  
☐ Secondary containment with leak detec. ☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other \_\_\_\_\_  
Liner type: Thickness \_\_\_\_\_ mil ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
DATE: 9/4/2014 (505) 334-6178 Ext. 122

**DENIED**

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.  
**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

<p>Within 100 feet of a wetland.</p> <p>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p><b><u>Temporary Pit Non-low chloride drilling fluid</u></b></p>	
<p>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).</p> <p>- Topographic map; Visual inspection (certification) of the proposed site</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</p> <p>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>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;</p> <p>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 300 feet of a wetland.</p> <p>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p><b><u>Permanent Pit or Multi-Well Fluid Management Pit</u></b></p>	
<p>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).</p> <p>- Topographic map; Visual inspection (certification) of the proposed site</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</p> <p>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>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.</p> <p>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 500 feet of a wetland.</p> <p>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</p>	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within an unstable area. • - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

17.  
**Operator Application Certification:**  
 I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Don L. Munson Title: owner, owner of the  
 Signature: [Signature] Date: 7/10/14  
 e-mail address: DMUNSON426@GMAIL.COM Telephone: 505-414-2548

18.  
**OCD Approval:** ☐ Permit Application (including conditions (see attachment))  
**OCD Representative Signature:** \_\_\_\_\_ **Approval Date:** \_\_\_\_\_  
**Title:** \_\_\_\_\_ **er:** \_\_\_\_\_

DENIED

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: \_\_\_\_\_

DISTRICT I  
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II  
1301 W. Grand Ave., Artesia, N.M. 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV  
1220 South St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code		3 Pool Name	
4 Property Code		5 Property Name STATE 32			6 Well Number 102
7 OGRID No.		8 Operator Name ENERDYNE, LLC			9 Elevation 6499

10 Surface Location

UL or lot no. C	Section 32	Township 20-N	Range 9-W	Lot 10	Feet from the 1340	North/South line NORTH	Feet from the 2000	East/West line EAST	County McKINLEY
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11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot 10	Feet from the	North/South line	Feet from the	East/West line	County
12 Dedicated Acres		13 Joint or Infill		14 Consolidation Code		15 Order No.			

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

16	DTR. CORNER FD. STONE		SEC. CORNER FD. STONE W/ 5/8" REBAR		17
S 87-58-06 W 2671.39' (M)		1340'		2000'	
LAT: 35.92350° N. (NAD 83) LONG: 107.81299° W. (NAD 83)		N 00-13-19 E 2641.57' (M)		32	
		DTR. CORNER FD. STONE		18	
				SURVEYOR CERTIFICATION	
				I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.	
				Date of Survey Signature and Seal of Surveyor Certificate Number	

OPERATOR CERTIFICATION

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

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

Printed Name \_\_\_\_\_

18 SURVEYOR CERTIFICATION

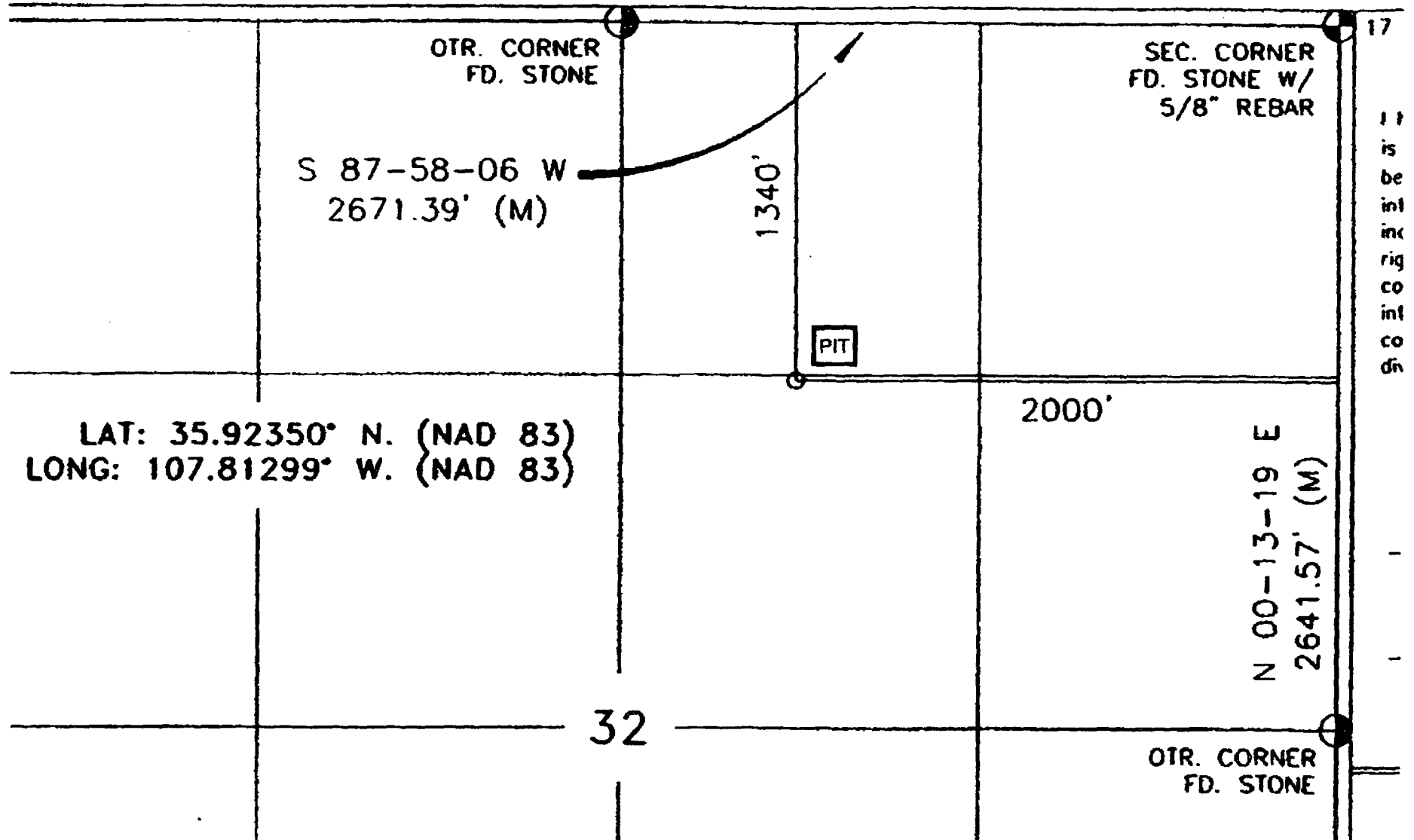
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey \_\_\_\_\_

Signature and Seal of Surveyor \_\_\_\_\_

Certificate Number \_\_\_\_\_

OR A NON-STANDARD UNIT HAS BEEN APPROVED BY IT

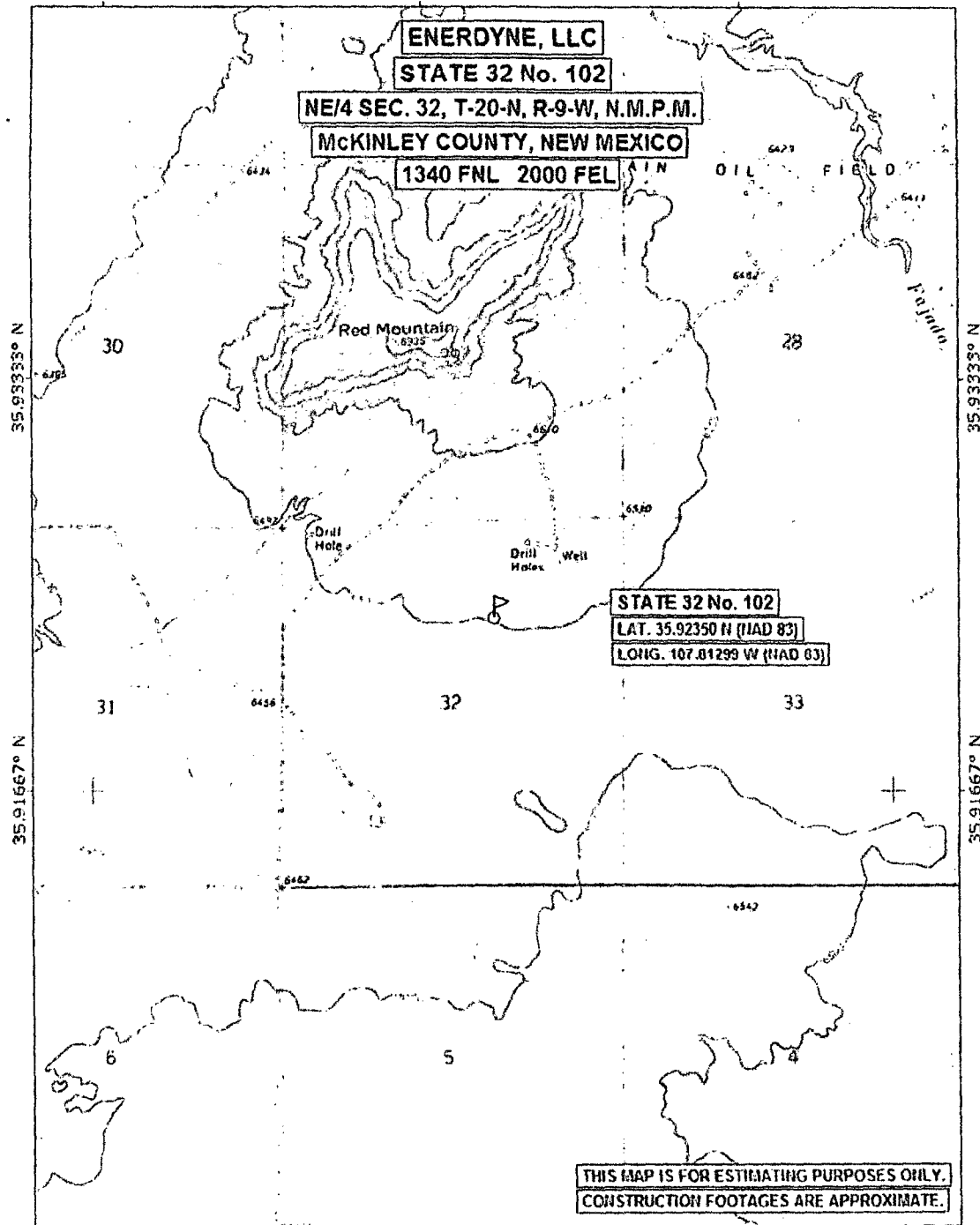




107.83333° W

107.81667° W

WGS84 107.80000° W



107.83333° W

107.81667° W

WGS84 107.80000° W



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Hydrogeological report for ENDY 102 &

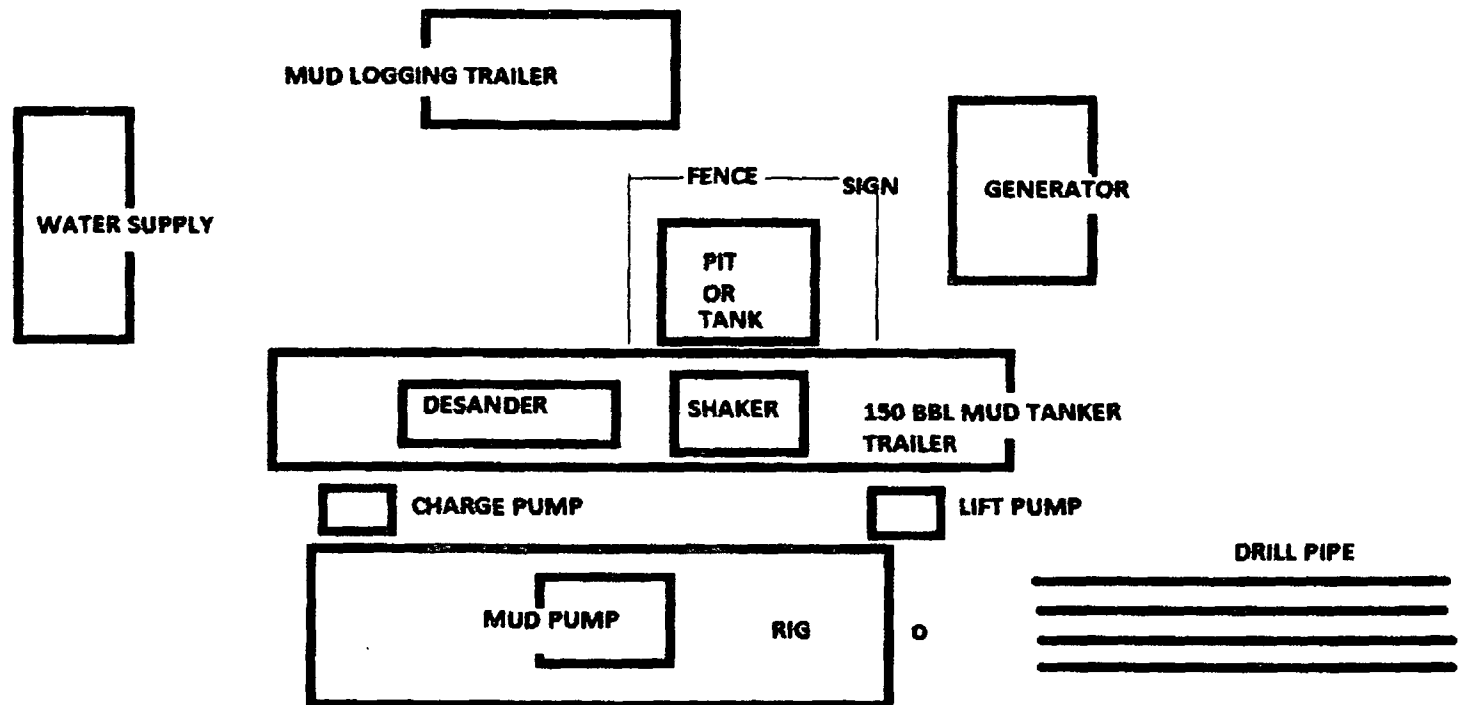
Administrative Request for Temporary Below-grade Drilling Pit

Enerdyne LLC has an approved C-101 and C-102 for the ENDY 102 ( 30-031-21105), a 1150' test of the Blackeye Mesa Verde sandstone, located in Section 32, T20N, R9W, McKinley County, property code 37210, a New Mexico state lease. The well will be drilled through the Menefee Formation which occurs from surface to a depth of approximately 1600'. The Menefee Formation, in this region of the Chaco Slope, is a series of thin shale, sandstone and coal, which are meandering. Typical sandstones are discontinuous and lenticular. Eleven wells have been drilled in Section 32, however non report ground water depth. Nor has any ground water information been found through various government agencies. Enerdyne has drilled seventeen wells from 450' to 1700' in depth, within a mile of the ENDY 102, and has not had ground water shows above 210'. As a result, ground water depth is unknown for this location. In an effort to comply with the temporary pit rule, Enerdyne would like to present the following procedure, for OCD approval to determine if ground water exists at any depth above 120' which is the approved depth of surface casing for the ENDY 102: Enerdyne shall drill a 8.75" hole to a depth of 65' using fresh water. The hole will be allowed to stand open for one hour to determine ground water entry. After this determination, drilling will continue to a depth of 125', at which depth the hole will again be allowed to stand open for one hour to determine any entry of ground water. Enerdyne will then set surface casing and cement. All drill cuttings and cement shall be contained on the surface. Enerdyne shall simultaneously notify the OCD as to the results of any ground water encountered.

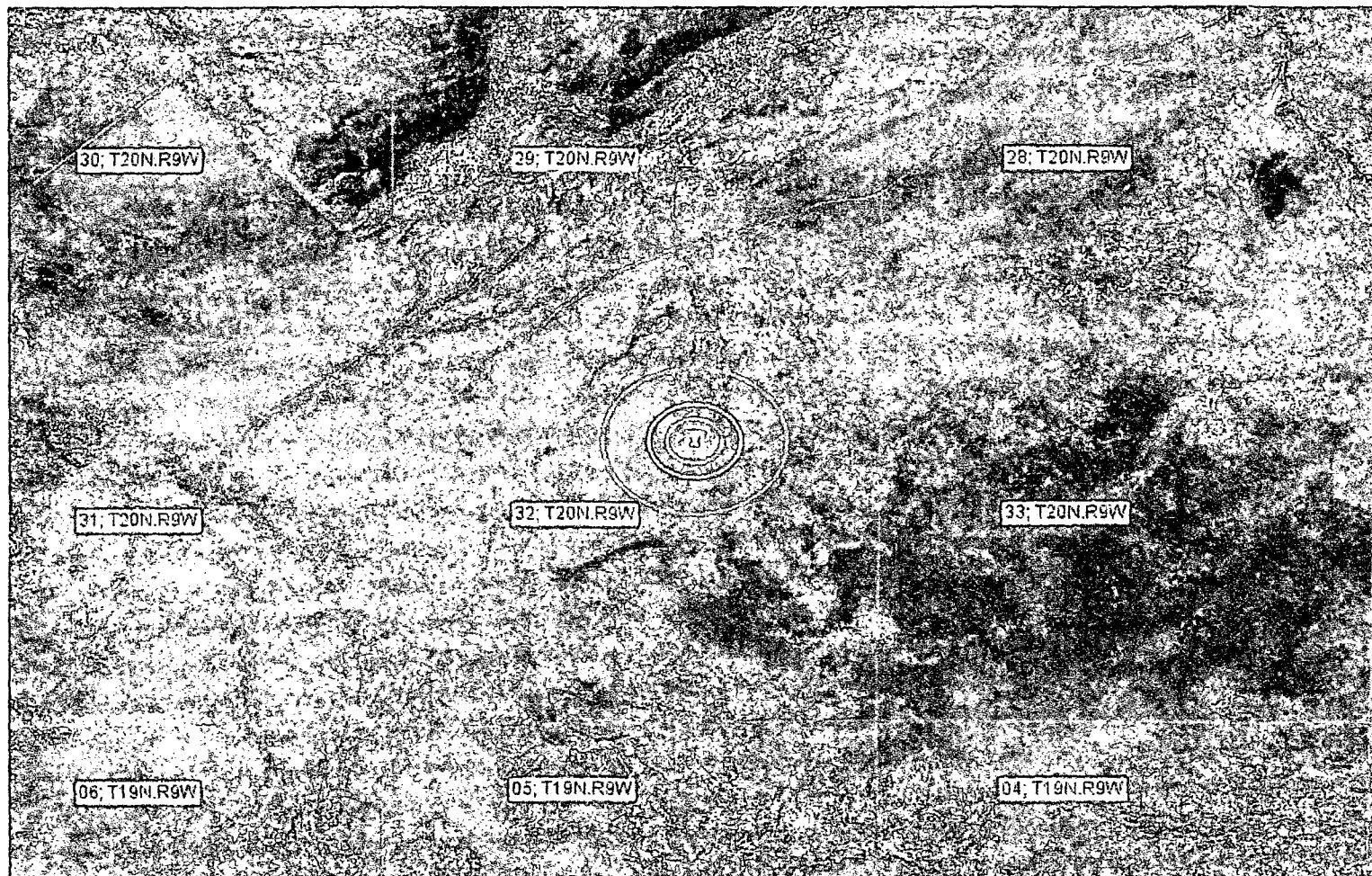
It is Enerdyne's desire to build a 10'W x <sup>20' 6"</sup>~~10' 6"~~ x <sup>6'</sup>~~5'~~ below-grade lined pit to store and dispose of drill cuttings. However, if ground water is encountered during the surface casing procedure, cuttings will be stored on the surface and removed to a disposal facility. The appropriate sections of the C-144, or if required, form C144 CLEZ shall be completed and attached to the OCD ground water notification.

THIS REQUEST IS ALSO SUPPORTED BY THE  
LOCAL TOPOGRAPHY WHEN USING THE  
ELEVATIONS OF THE BOTTOMS OF THE FATADA  
WASH & OTHER WASH OR ALLAYS SURROUNDING  
THE SUBJECT LOCATION. NO GROUND WATER  
IS PRESENT FOR 60' TO 100' FROM THE SURROUNDING  
ELEVATION OF 6499'.

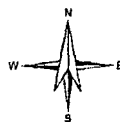
## ENDY 102 CLOSED-LOOP SYSTEM DESIGN AND CONSTRUCTION







0 1000 2000ft



Petroleum Recovery  
Research Center

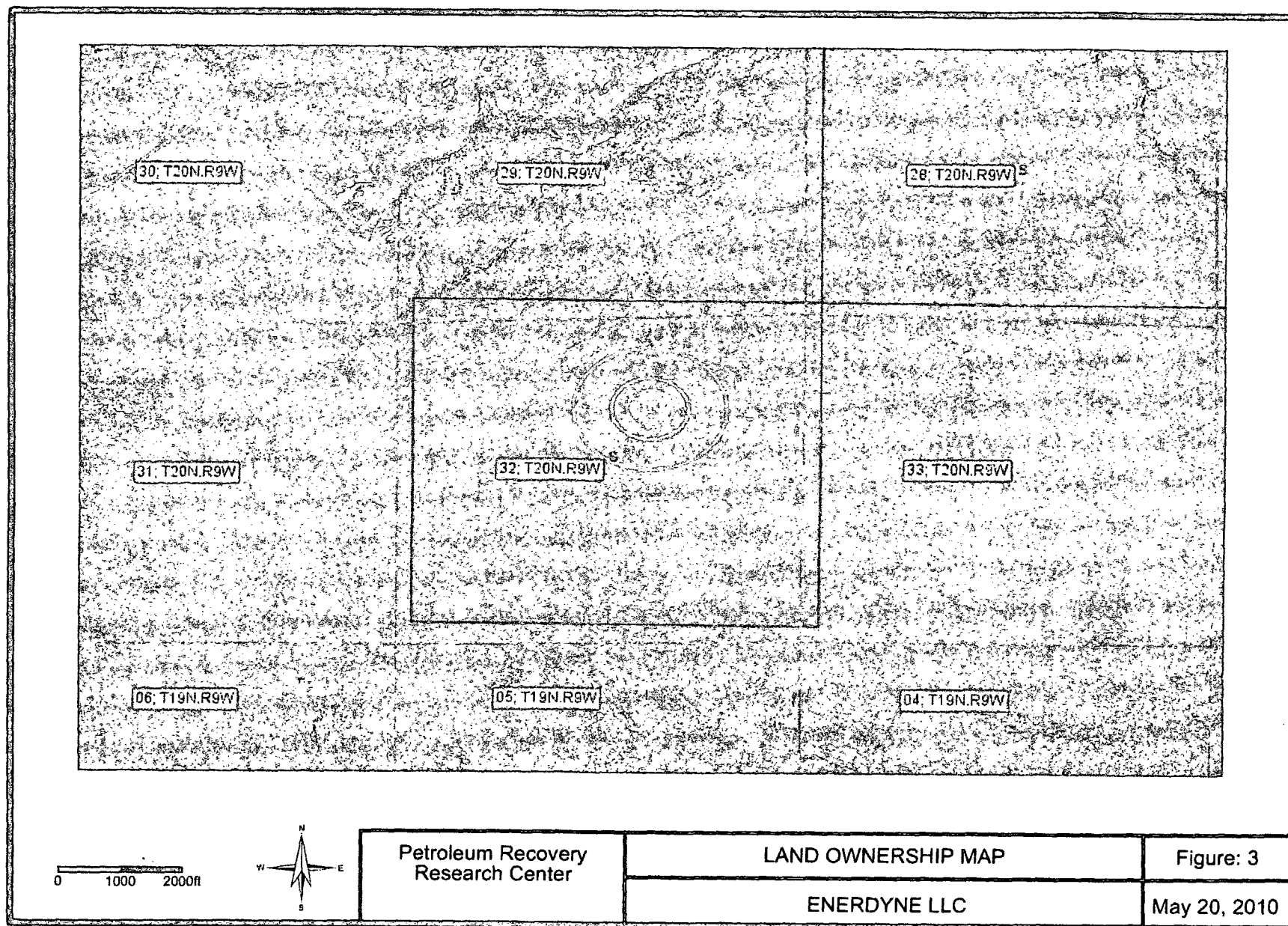
AREIAL PHOTO

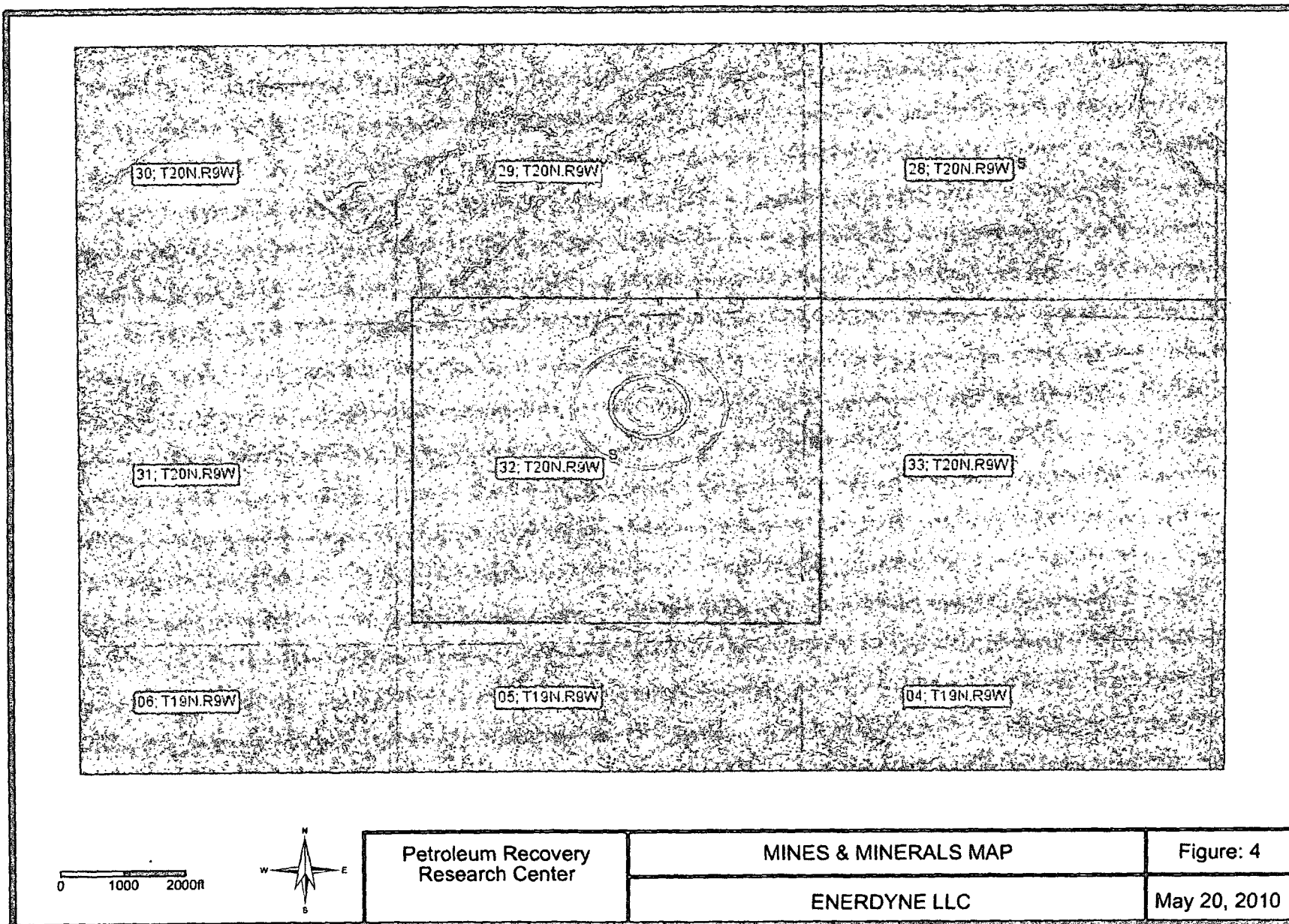
Figure: 2

ENERDYNE LLC

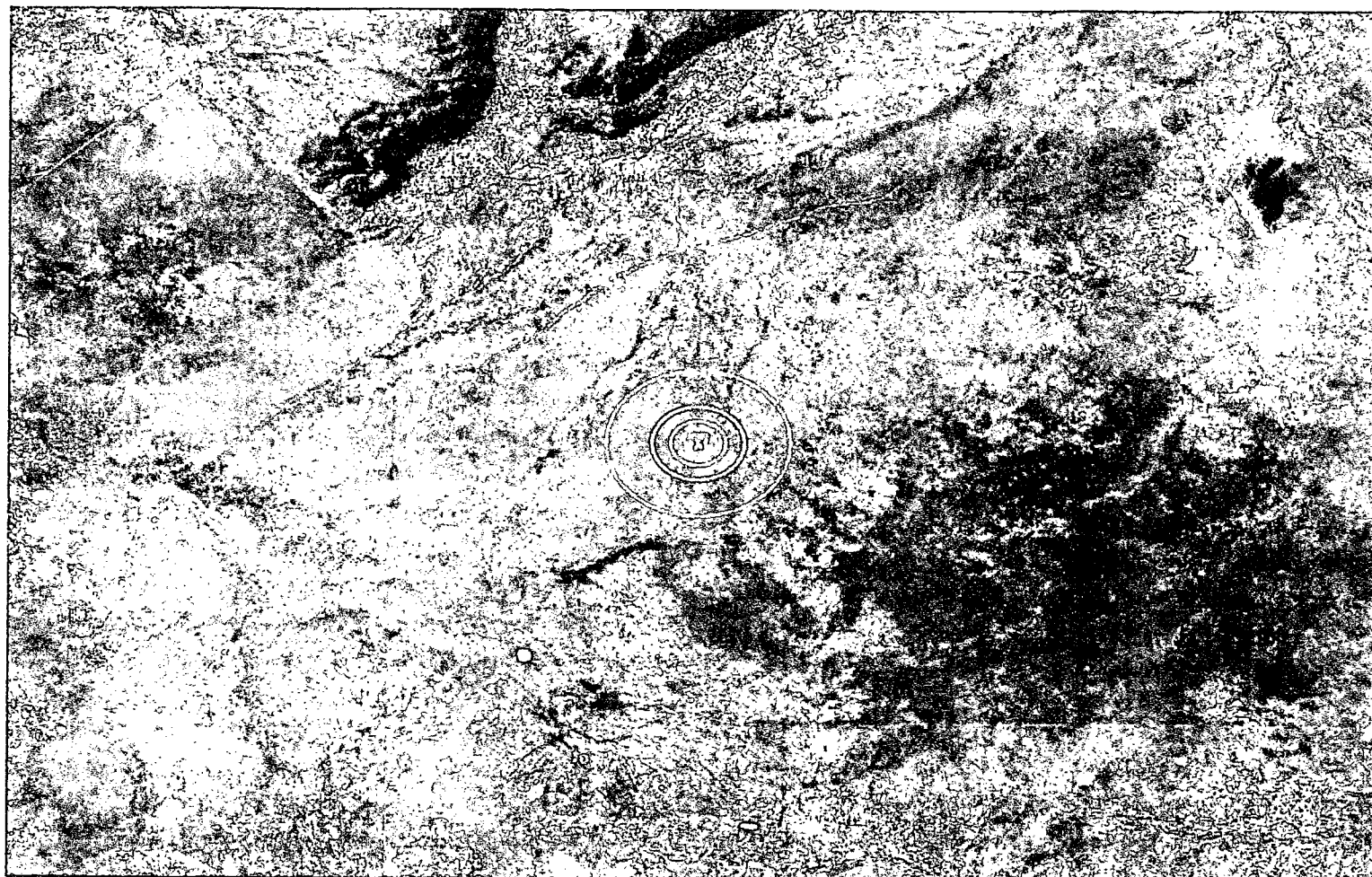
May 20, 2010

ENDY 102

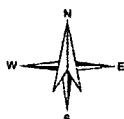








0 1000 2000ft



Petroleum Recovery  
Research Center

SURFACE WATER MAP

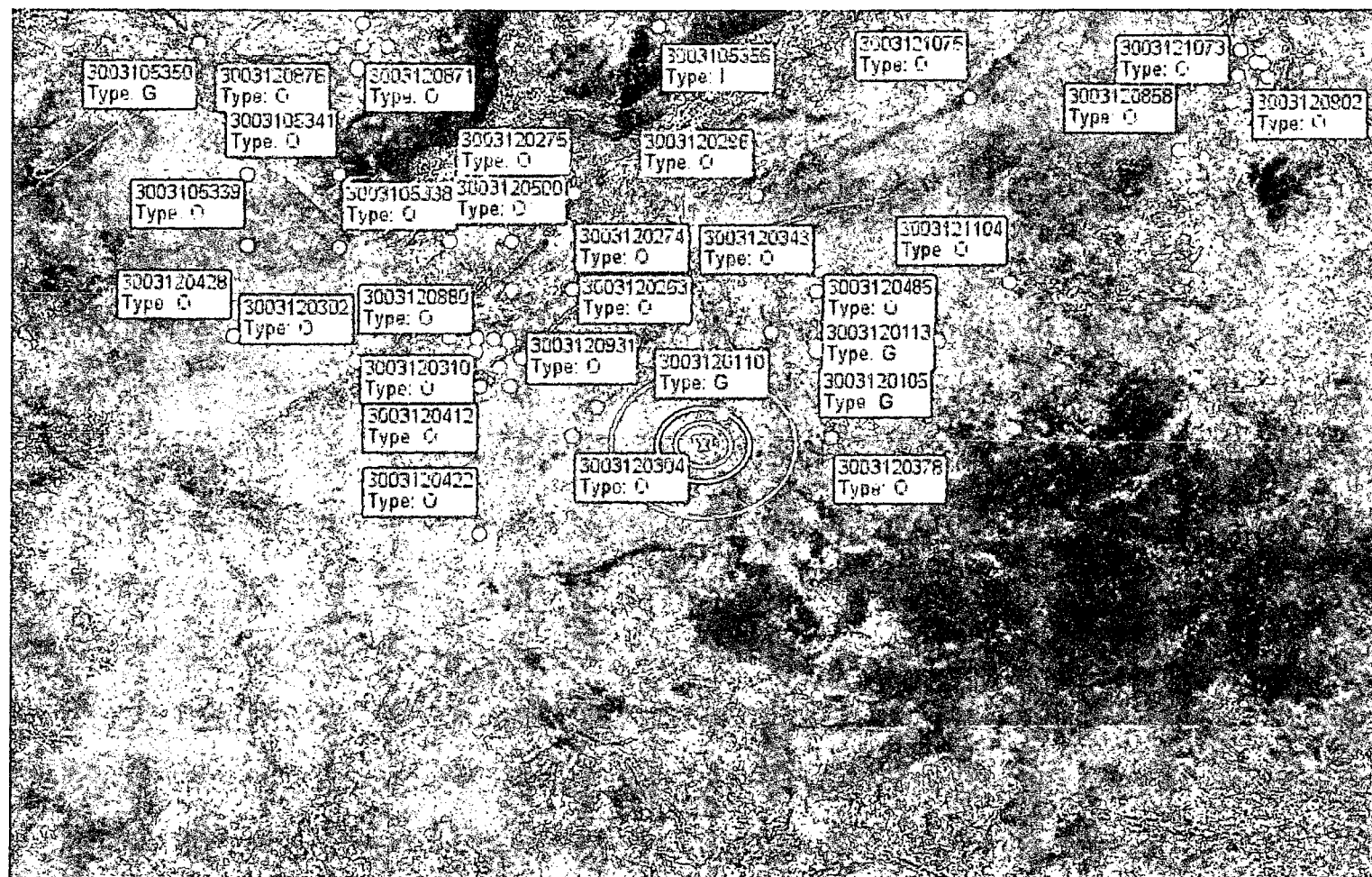
Figure: 5

ENERDYNE LLC

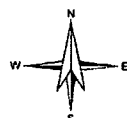
May 20, 2010

ENDY 102





0 1000 2000ft



Petroleum Recovery  
Research Center

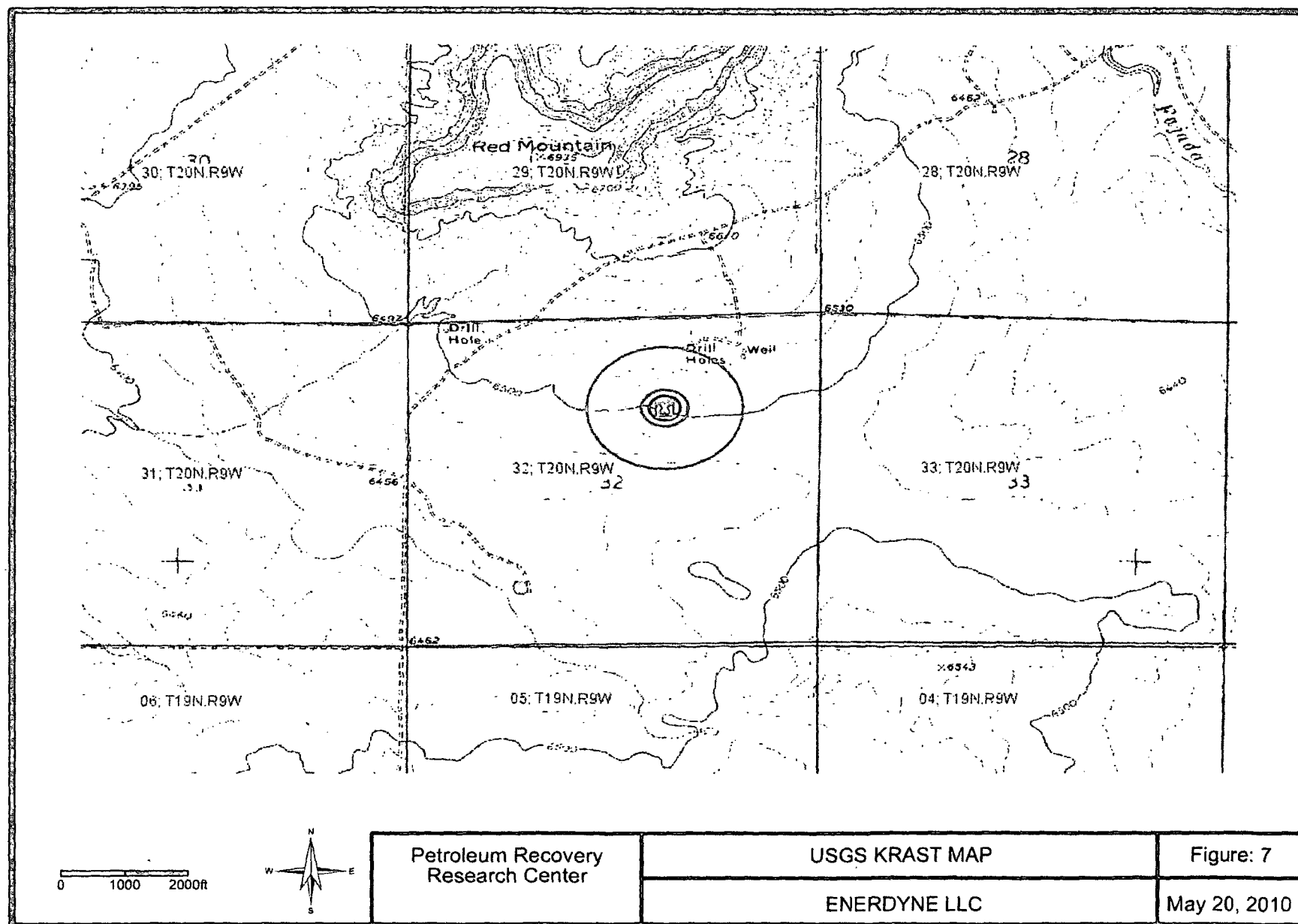
DRILL HOLE MAP

Figure: 6

ENERDYNE LLC

May 20, 2010

ENDY 102



ENDY 102

# Legend

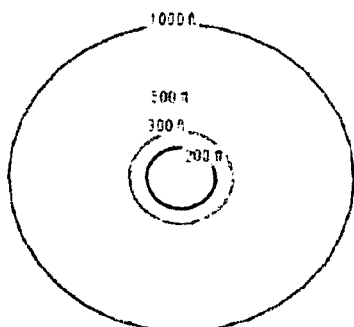
Petroleum Recovery Research Center  
Pit Rule Web Mapping Portal  
<http://pitrule.source3.com>

September 23, 2009

## Site Marker



## Distance Radii



## Land Ownership

- ☐ Not Classified
- ☐ BLM, Bureau of Land Management
- ☐ BOR, Bureau of Reclamation
- ☐ DOA, 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




LEGEND for PRRCs PitRule Web Mapping Portal (<http://pitrule.source3.com>)

## Mines and Minerals











### Potash Boundaries

-  POT MID ISLAND
-  POT NORTH ISLAND
-  POT SOUTH ISLAND
-  POTASH MAIN
-  MIPP 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>
- ☐ Kbm, 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
- ☐ Kdm, 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
- ☐ Kml, Cretaceous-Mancos Shale, Lower Part
- ☐ Kmm, Cretaceous-Mulatto Tongue of Mancos Shale
- ☐ Kmr, Cretaceous-Rio Salado Tongue of the Mancos Shale
- ☐ Kms, Cretaceous-Satan Tongue of Mancos Shale
- ☐ Kmu, Cretaceous-Mancos Shale, Upper Part
- ☐ Kmv, Cretaceous-Mesaverde Group

*continued on next page*

## NM Geology - continued

- ☐ Knu, Cretaceous-Mesaverde Group
- ☐ Knf, 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-Urmejo 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
- ☐ Pgq, Paleozoic-Grayburg and Queen Formations; sandstones, gypsum, anhydrite, dolomite, and red mudstone
- ☐ 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
- ☐ Psy, 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
- ☐ SO(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)m, Triassic-Moenkopi 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, Maciniento 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 volcaniclastic 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
- ☐ Xno, Precambrian-Lower Proterozoic metamorphic rocks; dominantly mafic
- ☐ Xns, Precambrian-Lower Proterozoic metasedimentary rocks
- ☐ Xnu, 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**

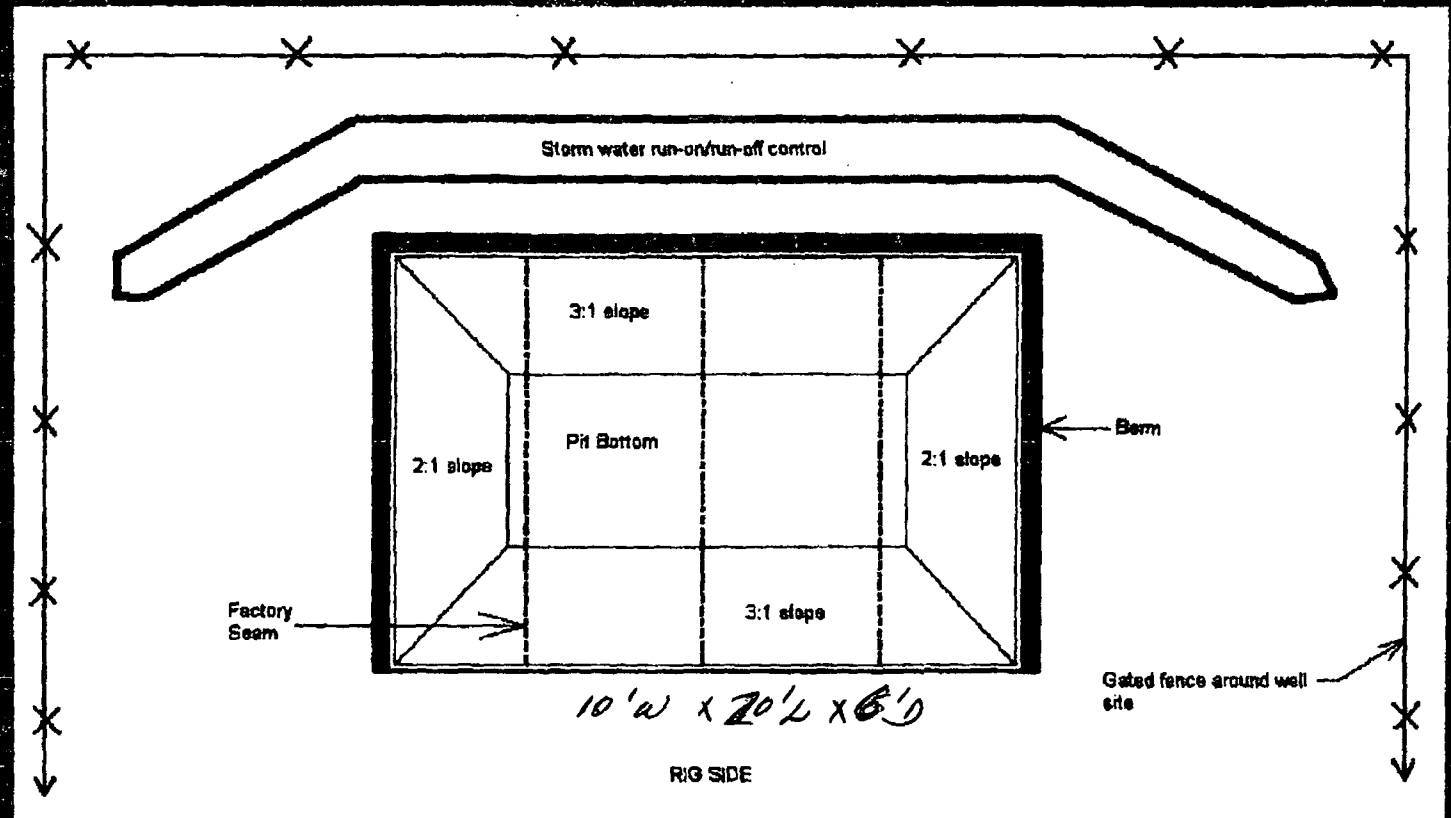
### **PIT DESIGN AND CONSTRUCTION**

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.

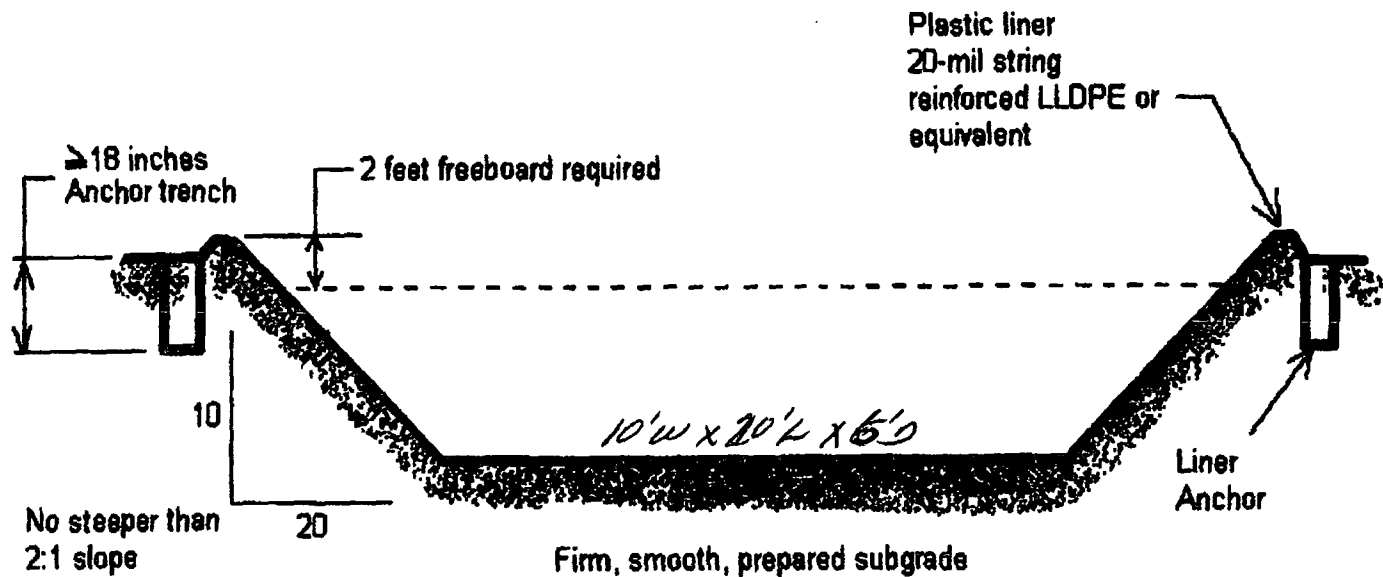
#### **General Plan**

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 unitizing 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





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# *New Mexico Office of the State Engineer*

## **Wells with Well Log Information**

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No wells found.

**Basin/County Search:**

**Basin:** San Juan

**County:** McKinley

**PLSS Search:**

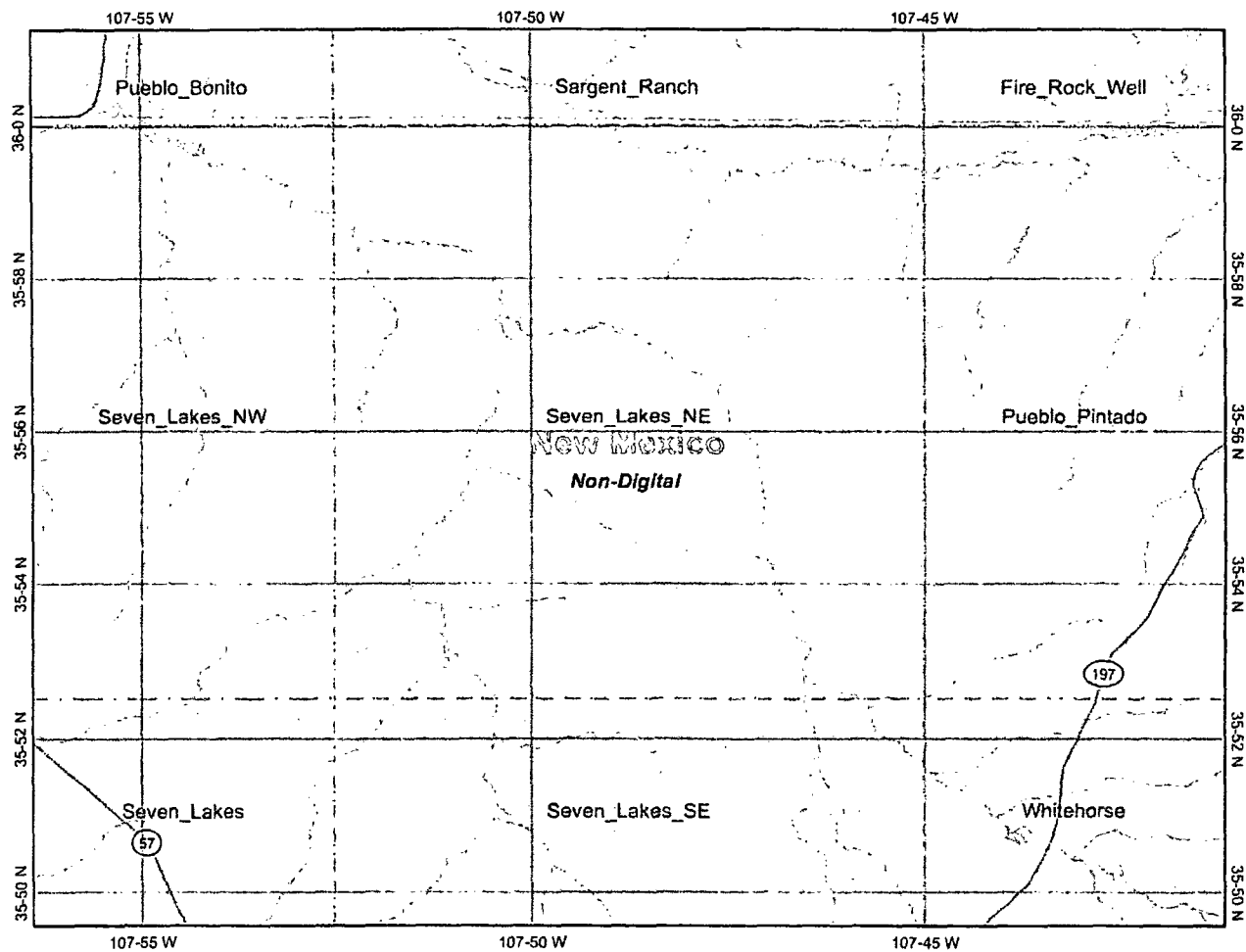
**Q4:** NE

**Section(s):** 32

**Township:** 20N

**Range:** 09W

# WET LAND MAP



## Legend

- Interstate
- Major Roads
- 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



Scale: 1:151,664

Map center: 35°55' N, 107°48' W

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.



## 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