

Bonham, Sherry, EMNRD

From: Bonham, Sherry, EMNRD
Sent: Wednesday, February 27, 2008 2:40 PM
To: itavarez@hec-enviro.com
Subject: DiMaggio Tank Battery 30 015 26930 POGO Producing--work plan stipulations

2RP-136

Ike,

Thank you for visiting with me this afternoon regarding the above mentioned site. As per our discussion, the remediation work plan submitted to NMOCD District 2 (OCD) dated February 14, 2008 will be accepted with the following stipulations:

1. In addition to Highlander Environmental Corporation's proposed locations to define the vertical impact on the east side of battery, it is requested that sample point "AH3" (Figure No. 3 dated 1/25/08 and drawn by RC) borehole be advanced obtaining soil samples at approximately 2' and 3' to be analyzed for TPH, BTEX and Chlorides.
2. Notify the OCD 48 hours prior to obtaining samples where analyses of soil samples obtained are to be submitted to the OCD.

Please be advised that OCD approval of this plan does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other applicable federal, state, local laws and/or regulations.

Thanks again and should you have any questions or concerns, please don't hesitate to contact me at the contact information listed below.

Respectfully,



Sherry Bonham
NMOCD District 2
1301 W Grand Avenue
Artesia, NM 88210
575.748.1283 extension 109
sherry.bonham@state.nm.us

2/27/2008



Highlander Environmental Corp.

Midland, Texas

February 14, 2008

*2RP-136
Work plan accepted
with stipulations*

Mr. Gerry Guye
Environmental Bureau
Oil Conservation Division, District 2
1301 W. Grand Ave.
Artesia, New Mexico 88210

Re: Assessment and Work Plan for the Pogo Producing Company, DiMaggio #1 Tank Battery, Located in Unit Letter J, Section 16, Township 26 South, Range 29 East, Eddy County, New Mexico.

Dear Mr. Guye:

Highlander Environmental Corp. (Highlander) was contacted by Pogo Producing Company (Pogo) to collect confirmation samples from a release that occurred at the DiMaggio #1 Tank Battery located at Unit Letter J, Section 16, Township 26 South, Range 29 East, Eddy County, New Mexico. The site location coordinates are N 32.04009° W 103.98632°. The Site is shown on Figure 1.

Background

On December 7, 2008, the oil tank over-flowed, releasing 40 barrels of oil, which was contained inside the southern end of the facility firewalls. A vacuum truck was immediately call out to the site and recovered approximately 35 barrels of oil from the ground. The impacted area measured approximately 32' x 50'. The State of New Mexico C-141 (Initial) is included in Appendix C.

Groundwater and Regulatory

According to the Ground Water Report 3, "Geology and Ground-Water Resources of Eddy County, New Mexico", there is one well in Section 16 (26.29.16.220) with a reported depth to groundwater of 125' below ground surface (bgs). One water well, listed in the New Mexico Office of the State Engineer, WATERS database in Section 26, T-26-S, R-29-E, has a reported depth to water at 85' bgs. Copies of the water level data are enclosed in Appendix A.

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene

(collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 mg/kg and 50 mg/kg for total BTEX (sum of benzene, toluene, ethylbenzene and xylene). Based upon the apparent regional depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Soil Assessment

On January 23, 2008, Highlander inspected and assessed the spill area. Prior to sampling, Pogo supervised the removal of approximately 6" of impacted soil from the spill area and backfilled with clean caliche. A total of five (5) auger holes were installed inside the tank battery berm to assess the spill area. Samples were collected to the top of a dense caliche layer. Soil samples collected were analyzed for evaluation by method 8015M, BTEX by method 8021B and chloride by method 300.0. The sample locations are shown on Figure 2. The sampling results are summarized in Table 1.

Soil Sample Results

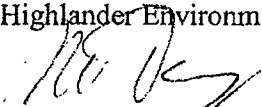
Referring to Table 1, none of the samples exceeded the RRALs for TPH or BTEX. The chloride concentrations ranged from <100 mg/kg to 1980 mg/kg. AH-3 and AH-4 showed chloride concentrations of 181 mg/kg (0.5-1.0') and <100 mg/kg (0.5-1.0'), respectively. The remaining auger holes (AH-1, AH-3 and AH-5) were not vertically defined, with bottom hole samples exceeding 1,000 mg/kg.

Work Plan

Based on the data, the hydrocarbon stained soils inside the tank battery were excavated to a depth of 0.5' below surface and hauled to disposal. These areas have been backfilled with clean material. The chloride impact at the spill has not been vertically defined. In order to define the extents, Highlander will install either boreholes or backhoe trenches to define the extents of the chloride impact. Due to accessibility, a borehole cannot be placed in the vicinity of AH-5. The west side of the tank battery has sand dunes and flow lines in the area. Two (2) sample locations are proposed on the east end of the tank battery to define the areas of AH-1 and AH-2. The proposed locations are shown on Figure 3.

Once the chlorides are defined, a closure report will be submitted for review. If you have any question or comments concerning the assessment or the proposed activities, please call me at (432) 682-4559.

Respectfully submitted,
Highlander Environmental Corp.


Ike Tavarez, P.G.
Senior Geologist

cc: Darren D. Hewston – PXP



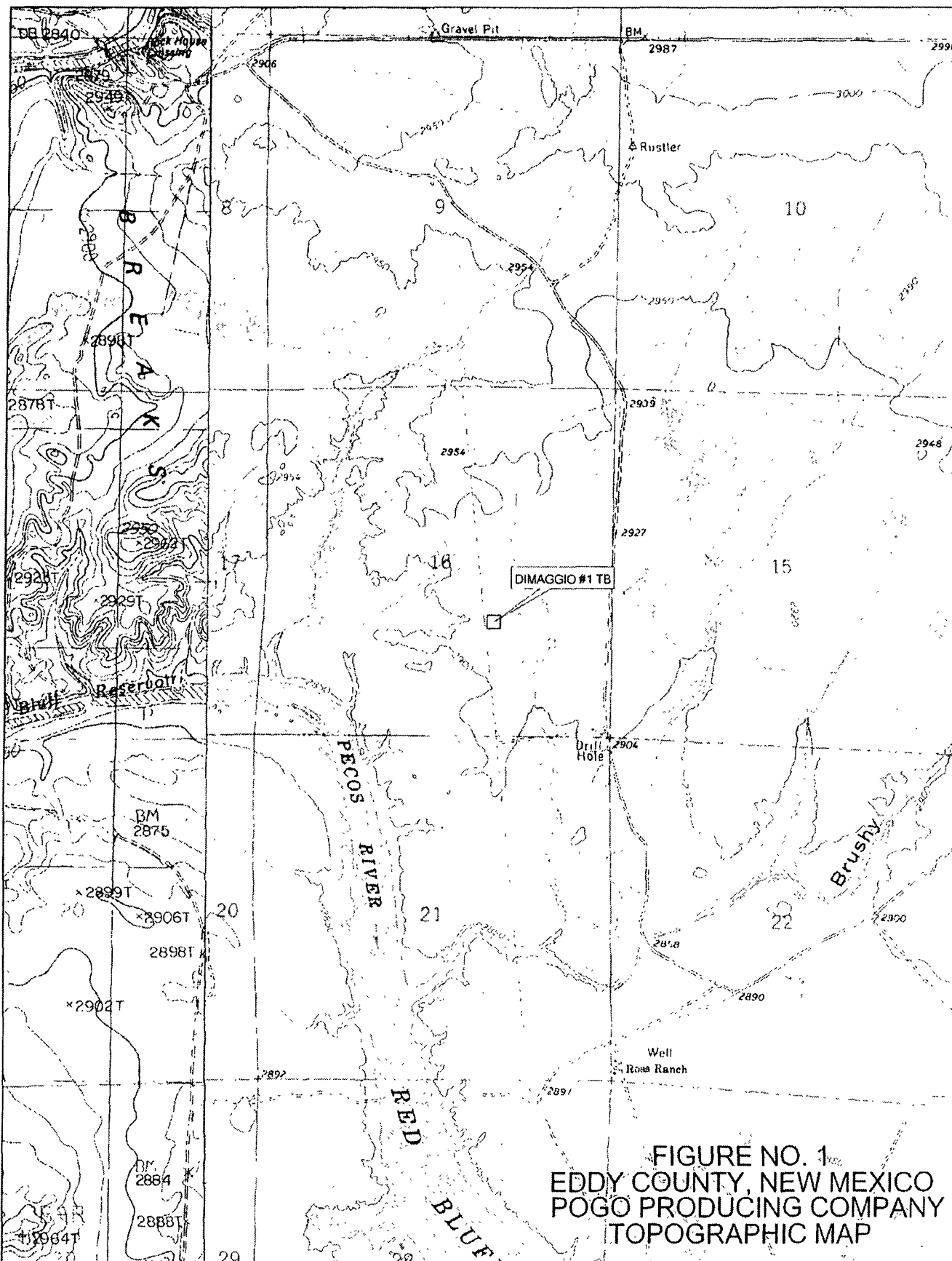


FIGURE NO. 1
 EDDY COUNTY, NEW MEXICO
 POGO PRODUCING COMPANY
 TOPOGRAPHIC MAP

DELORME

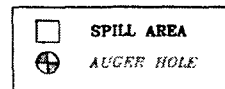
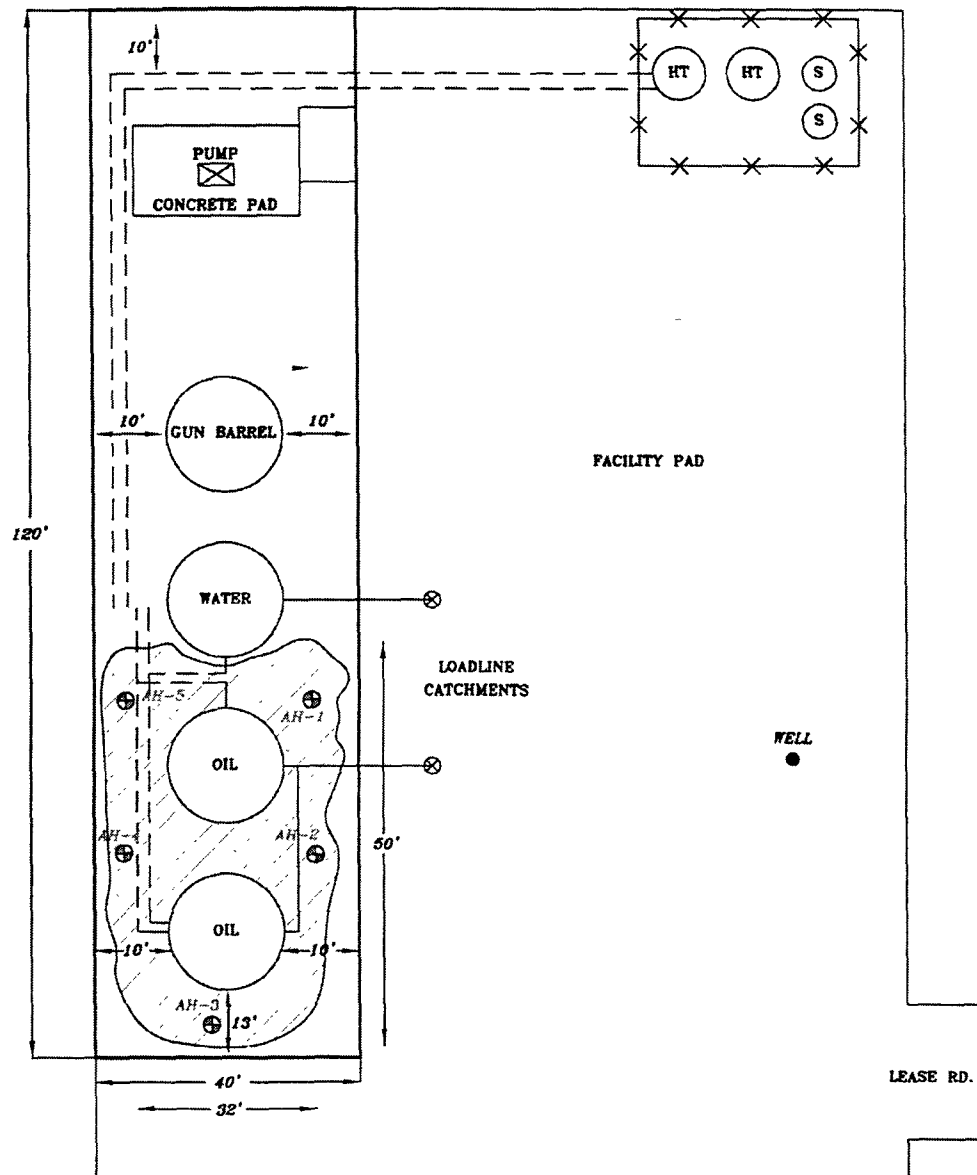
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 www.delorme.com

Scale 1 : 24,000
 1" = 2000 ft

0 200 400 600 800 1000 ft

TH
 N
 8° E

PASTURE
& SAND DUNES



NOT TO SCALE

DATE:
 1/25/08
 DWN: BT
 RC
 FILE:
 C:\POGO\33761
 DIMAGGIO #1 TB

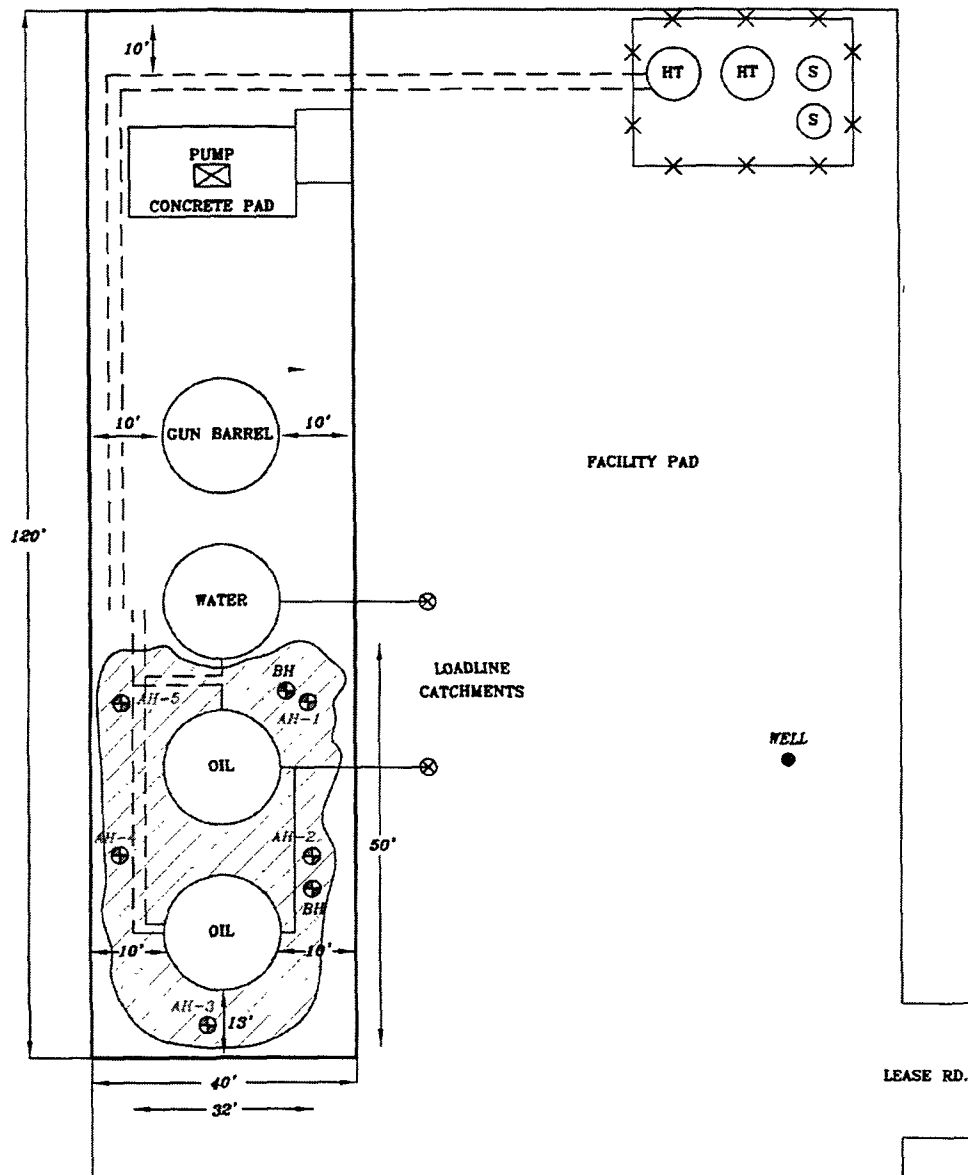
FIGURE NO. 2

EDDY COUNTY, NEW MEXICO

POGO PRODUCING COMPANY
 DIMAGGIO #1 TB

HIGHLANDER ENVIRONMENTAL CORP.
 MIDLAND, TEXAS

PASTURE
& SAND DUNES



- SPILL AREA
- AUGER HOLE
- PROPOSED BOREHOLE OR BACKHOE TRENCH

NOT TO SCALE

FIGURE NO. 3

EDDY COUNTY, NEW MEXICO

POGO PRODUCING COMPANY
DIMAGGIO #1 TB

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE:
1/25/08
DWG. BY:
RC
FILE:
C:\PROJECTS\13791
DIMAGGIO #1 TB

Table 1
Pogo Producing Company
DiMaggio #1 Tank Battery
Eddy County, New Mexico

| Sample ID | Soils Status | | Date Sampled | Sample Depth (ft) | TPH (mg/kg) | | | Benzene (mg/kg) | Toluene (mg/kg) | Ethlybenzene (mg/kg) | Xylene (mg/kg) | Chloride (mg/kg) |
|-----------|--------------|---------|--------------|-------------------|-------------|---------|---------|-----------------|-----------------|----------------------|----------------|------------------|
| | Insitu | Removed | | | C6-C12 | C12-C35 | Total | | | | | |
| AH-1 | X | | 1/23/2008 | 0.5-1.5 | 105 | 5.63 | 110.6 | <0.0200 | <0.0200 | <0.0200 | 0.444 | 1,090 |
| | | | | | | | | | | | | |
| AH-2 | X | | 1/23/2008 | 0.5-1.5 | 89.8 | 50.2 | 140 | <0.0200 | <0.0200 | <0.0200 | 0.0659 | 1,210 |
| | X | | 1/23/2008 | 1.5-2.0 | 64.2 | 3.9 | 68.1 | - | - | - | - | 952 |
| | X | | 1/23/2008 | 2.5-3.0 | - | - | - | - | - | - | - | 1,500 |
| | | | | | | | | | | | | |
| AH-3 | X | | 1/23/2008 | 0.5-1.0 | 1,930 | 3,020 | 4,950.0 | 0.897 | 9.02 | 6.08 | 23.6 | 181 |
| | | | | | | | | | | | | |
| AH-4 | X | | 1/23/2008 | 0.5-1.0 | 70.3 | 17 | 87.3 | <0.0100 | 0.019 | <0.0100 | 0.0345 | <100 |
| | | | | | | | | | | | | |
| AH-5 | X | | 1/23/2008 | 0.5-1.0 | <50.0 | 7.8 | 7.8 | <0.0100 | <0.0100 | <0.0100 | <0.0100 | 1,980 |
| | | | | | | | | | | | | |

(-) Not Analyzed

Water Well - Average Depth to Groundwater
Pogo - Damaggio #, Eddy County, New Mexico

| South | | | East | | |
|-------|----|----|------|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

| South | | | East | | |
|-------|----|----|------|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

| South | | | East | | |
|-------|----|----|------|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

| South | | | East | | |
|-------|----|----|------|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

| 26 South | | | 29 East | | |
|----------|----|----|---------|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

| South | | | East | | |
|-------|----|----|------|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

| South | | | East | | |
|-------|----|----|------|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

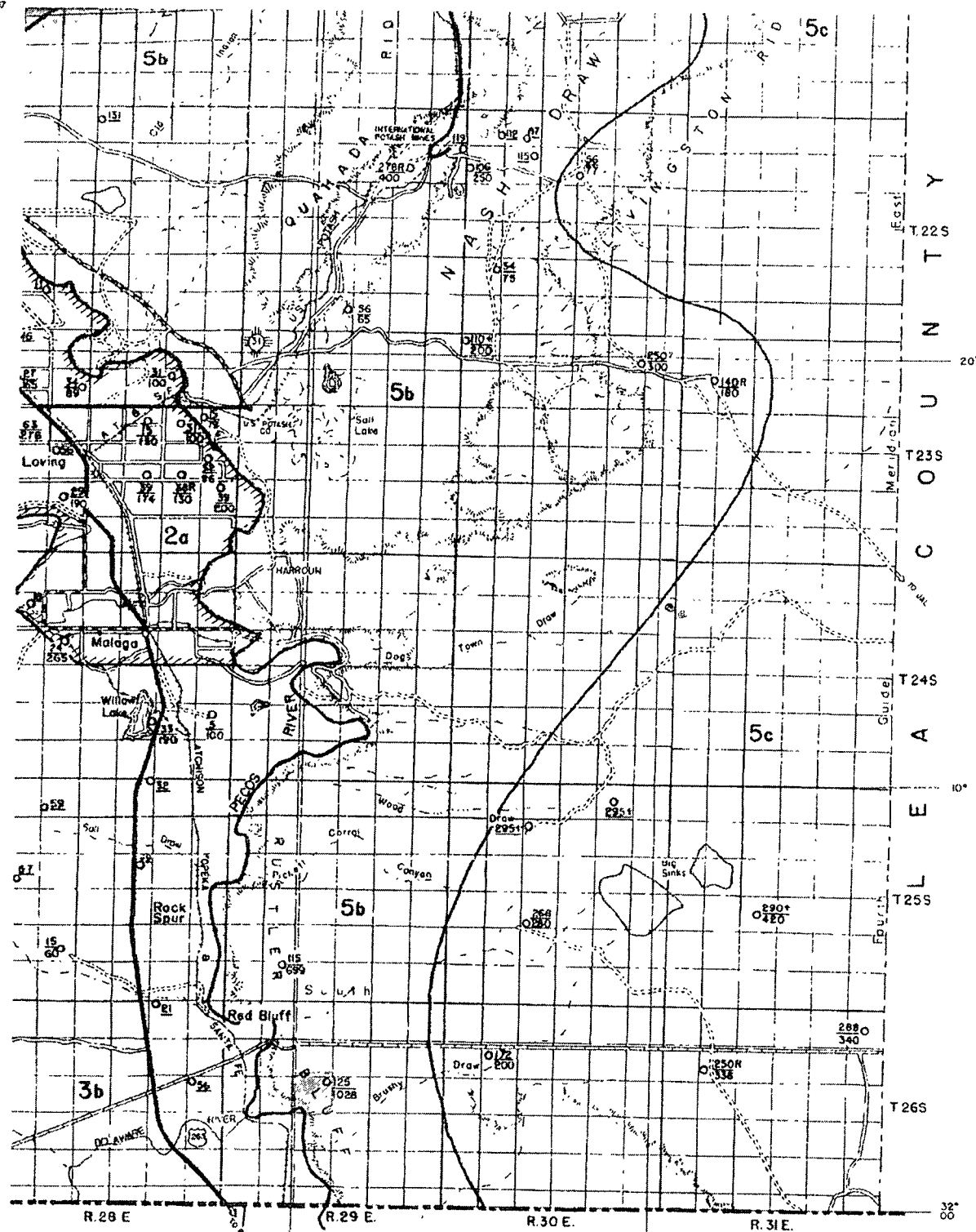
| South | | | East | | |
|-------|----|----|------|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

| South | | | East | | |
|-------|----|----|------|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

150 Average depth to groundwater (ft) - New Mexico State Engineer Well Reports

56 Groundwater Depth (ft) - Geology and Groundwater Resources of Eddy County, New Mexico (Report 3)

 Site Location



REEVES CO.

LOVING COUNTY

A

S

OF GROUND WATER

EXICO

Note Most well depths are reported Depths to water are measured except those followed by the letter R which are reported Measurements made 1947 to 1950

| LOCATION NUMBER | WATER LEVEL | | YIELD (g.p.m.) | METHOD OF LIFT | USE OF WATER | REMARKS |
|--------------------|------------------------------------|------------------------|-------------------|----------------------|--------------------|--|
| | BELOW LAND SURFACE (feet) | DATE OF MEASUREMENT | | | | |
| 26.28.13.110 | 56.0 | Dec. 15, 1948 | 3 | W | S | See analysis, Table 3. |
| 26.29.16.220 | 125.0 | Mar. 11, 1949 | - | W | S | |
| 26.30.8.110 | 172.0 | Dec. 15, 1948 | 3 E. | W | S | |
| 26.31.1.000 | 287.7 | Mar. 10, 1949 | - | W | S | Depth to water measured while pump- ing. See analysis, Table 3. East well of two. See analysis, Table 3. See analysis, Table 3. 100 ft. southwest of above well. |
| 8.310 | 250 | - | - | W | D & S | |
| 8.310a | 278.5 | Mar. 10, 1949 | - | N | N | |

See explanation at beginning of table.

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 26S Range: 29E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ☐ Non-Domestic ☐ Domestic
☒ All

AVERAGE DEPTH OF WATER REPORT 09/01/2005

| Bsn | Tws | Rng | Sec | Zone | X | Y | Wells | (Depth Water in Feet) | | |
|-----|-----|-----|-----|------|---|---|-------|-----------------------|-----|-----|
| | | | | | | | | Min | Max | Avg |
| C | 26S | 29E | 26 | | | | 1 | 85 | 85 | 85 |

Record Count: 1

District I
1625 N French Dr., Hobbs, NM 88240
District II
1301 W Grand Avenue, 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

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

162503

Release Notification and Corrective Action

30-015-26930

OPERATOR

☒ Initial Report ☐ Final Report

| | |
|---|-------------------------------------|
| Name of Company <i>Pogo Producing Co.</i> | Contact <i>PAT ELLIS</i> |
| Address <i>P.O. Box 10340 Midland, TX 79702</i> | Telephone No. <i>(432) 685-8100</i> |
| Facility Name <i>D: Maggie Tank Battery</i> | Facility Type <i>TANK BATTERY</i> |
| Surface Owner | Mineral Owner |
| Lease No. <i>NM-1800</i> | |

LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|-------------|-----------|------------|------------|---------------|------------------|---------------|----------------|-------------|
| <i>J</i> | <i>16</i> | <i>26S</i> | <i>29E</i> | <i>1650</i> | <i>South</i> | <i>1693</i> | <i>East</i> | <i>Eddy</i> |

Latitude *32 02 24.2 N* Longitude *103 59 10.9 W*

NATURE OF RELEASE

| | | |
|---|---|---------------------------------|
| Type of Release <i>Oil</i> | Volume of Release <i>40 BBLs</i> | Volume Recovered <i>35 BBLs</i> |
| Source of Release <i>TANK BATTERY</i> | Date and Hour of Occurrence | Date and Hour of Discovery |
| Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required | If YES, To Whom? <i>12-7-07 11:45 AM</i> <i>NMOC Garry Gue</i> <i>12-7-07 12:15 PM</i> <i>BLM Terry</i> <i>12-7-07 12:15 PM</i> | |
| By Whom? <i>Johnny Burnett</i> | Date and Hour <i>12-7-07 12:15 PM</i> | |
| Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | If YES, Volume Impacting the Watercourse. | |

If a Watercourse was Impacted, Describe Fully.*

NA

Describe Cause of Problem and Remedial Action Taken.*

Oil production being produced to oil tank, tank filled up and equalizing line plugged up and allowed 40 BBLs of oil to overflow.

Describe Area Affected and Cleanup Action Taken.*

Vacuum truck was called and recovered 35 BBLs of oil. Backhoe was utilized to pick up and remove saturated soil. Highlander Environmental will take soil samples and review for closure workplan.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOC marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOC acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

| | | |
|---|---|-----------------------------------|
| Signature: <i>Patrick L. Ellis</i> | OIL CONSERVATION DIVISION | |
| Printed Name: <i>PATRICK L. ELLIS</i> | Approved by District Supervisor: <i>Perry Gue</i> | |
| Title: <i>EHS Supervisor</i> | Approval Date: <i>JAN 23 2008</i> | Expiration Date: |
| E-mail Address: <i>ellis@pogoproducing.com</i> | Conditions of Approval: | Attached <input type="checkbox"/> |
| Date: <i>1-22-08</i> Phone: <i>(432) 685-8100</i> | | |

* Attach Additional Sheets If Necessary

NEG0734147671
PEB0805855585

2RP-136