TETRA TECH

February 25, 2021

Dylan Rose-Coss
Environmental Specialist
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Report
EOG Resources
Shinnery Federal #1
Unit Letter K, Section 13, Township 18 South, Range 32 East
Lea County, New Mexico.

Mr. Rose-Coss;

Tetra Tech, Inc. (Tetra Tech) was contacted by EOG Resources (EOG) to assess and remediate a release that occurred at Shinnery Federal #001 (Site) (API No. 30-025-30247). The release footprint is located in the Public Land Survey System (PLSS) Unit Letter K, Section 13, Township 18 South, Range 32 East, in Lea County, New Mexico (Site). The site coordinates are 32.7444º, -103.7217º, as shown Figures 1 and 2.

Background

According to the State of New Mexico, there are two open C-141 Initial Reports associated with the Site. The first release was discovered on February 28, 2014 and was due to an equipment malfunction – 3-inches polyline separated causing the release of 20 barrels (bbls.) of produced water affecting the field located 100 yards south of the well. No free fluids were recovered. The initial C-141 report form was submitted to the New Mexico Oil Conservation District (NMOCD) on March 05, 2014. The release was subsequently assigned the Remediation Permit (RP) number 1RP-3161.

In addition, a second C-141 Initial Report is related to a release discovered on September 9, 2015. The release occurred due to a 3-inches polyline came apart at a fussed weld. The release consisted of 120 bbls. of produced water. No Free Fluids were recovered. The initial C-141 report form was submitted to the New Mexico Oil Conservation District (NMOCD) on September 09, 2015. The release was subsequently assigned the Remediation Permit (RP) number 1RP-3849 and the Incident ID NJXK152544337. The location of this release was the same as a former release associated with the Shinnery Federal #1 that occurred on February 28, 2014.

Site Characterization

A site characterization was performed and no watercourse, sinkholes, residences,

Tetra Tech
901 West Wall St, Suite 100, Midland, TX 79701
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

TETRA TECH

residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, playa lakes, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances. The site is in a low karst potential area. The nearest well is listed in the USGS National Water Information Database website in Section 22, approximately 2.14 miles southwest of the site, and has a reported depth to groundwater of 429.49 feet below ground surface (bgs.). However, since there are no wells within 0.5 mile radious of the Site, the most stringest recommended remedial action levels (RRAL) will apply. The site characterization data is shown in Appendix B.

Regulatory

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, updated August 14, 2018. 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 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the site characterization, the proposed RRAL for TPH is 100 mg/kg (GRO+DRO+MRO). Additionally, based on the site characterization, the proposed RRAL for chlorides is 600 mg/kg.

Soil Assessment and Analytical Results

CH2M HILL Engineers, Inc (CH2M) submitted a work plan to the NMOCD. During the assessment the release extent was horizontally delineated, impacted soils from the horizontal release footprint were excavated, a 20-millimeter (mm) liner was placed within the excavation and covered with clean fill. Approximately 712 cubic yards (yd^3) of impacted soil were removed from the excavation and disposed of at the Lea Land Landfill in Carlsbad, NM. Approximately 1,008 yd^3 of clean fill from Canvas Ranch were placed over top of the liner. All remedial efforts were performed by Watson Construction and overseen by CH2M. Details of remedial activities were reported to the NMOCD in a report dated August 19, 2015 that was submitted. Remedial closure for the Shinnery Federal #1 (1RP-3161) was not granted by the NMOCD since the vertical extent of soil impacts had not been fully assessed. CH2M work plan is included in Appendix C.

During the second release at the Site (1RP-3849), which occurred on September 9, 2015, soils impacted were localized to the area in and around the previous Shinnery Federal #1 lined and backfilled excavation and affected the near site North Young Fed 12-1. Due to the volume of the release (120 bbls.) the horizontal extent of impacted soils extended beyond previously delineated area. A work plan was submitted by CH2M on September 21, 2015 and approved by the NMOCD on September 28, 2015 (See Appendix C). The work plan detailed the horizontal and vertical delineation, excavation, and subsequent backfilling and lining of the newly impacted area. From October 1, 2015 to December 18, 2015 CH2M performed soil sampling around the edge of the visibility impacted area, impacted soils were excavated from on top of an around the previously lined area to and extent of approximately 100 feet (ft.) by 100 ft., additional excavation from top to approximately 5 ft bgs was performed in the area where the liner was removed, and two (2) soil borings were advanced in order to assess the vertical extent of chloride impacts in the area.

The analytical data obtained from the soil samples collected by CH2M and submitted to TraceAnalysis, Inc (TraceAnalysis) in Lubbock, TX. Indicated that the horizontal extent of chloride

TETRA TECH

concentrations had been delineated to below RRAL. Consulting responsibilities were transferred to GHD Services, Inc (GHD) prior to installation of a replacement liner and backfilling excavation.

From February 29 and April 25, 2016 additional soil sampling to confirm the horizontal extent of chloride impacts was performed GHD on behalf of EOG. A total of eight (8) soil samples were collected using a hand auger at a depth of approximately 4.5 ft. bgs. The samples were submitted to Hall Environmental Analysis Laboratory (HEAL) of Albuquerque, NM for analysis of chloride by EPA Method 300. The results of the samples indicated that the horizontal extent of the chloride was assessed except for the southern end of the site. Three additional soil samples were collected in this area on April 25 and analyzed for chloride by EPA Method by HEAL. The results of these samples were below the laboratory reporting limit. The impacted soil located at the southern portion of the excavation was excavated on May 20, 2016. Laboratory analytical results from February and April 2016 sampling indicate that chloride concentrations in the samples that were submitted were below RRAL for chloride. Based on this, the release extent as successfully delineated horizontally and vertically.

On May 31, 2016 GHD submitted an assessment summary report to the NMOCD where recommended the placement of a 20-mil polyethylene liner in the bottom of the excavation at a depth of 4.5 to 5 ft, bgs., backfilling of the excavation with clean fill material and wheel compacting to grade and fertilizing and reseeding of the disturbed area with a BLM-approved seed mix. The Assessment Summary Report was approved by the NMOCD. Report is included in Appendix C.

Current Site Conditions

To evaluate current conditions at the Site and to confirm that the excavated area was backfilled and reseeded, Tetra Tech personnel conducted a review of historical aerial imagery. The formerly impacted area was identified from the description in the C-141 Initial Reports, the site detail map included, and the work plans submitted. On February 1, 2021, Tetra Tech, Inc (Tetra Tech) performed a site investigation on behalf of EOG to confirm that remediation activities were performed. During field inspection, it is confirmed that the formerly impacted surface areas were restored to the conditions that existed prior to the release in accordance with 19.15.29.13 NMAC. Photographic documentation is included on Appendix D.

Conclusion

Based on the work plans and assessment summary report previously submitted, and the Site Visit by Tetra Tech which confirmed remediation activities were performed, EOG requests closure of this spill issue. If you have any questions or comments concerning the assessment or remediation activities for this site, please call at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Paula Tocora Alonso

Paula Tocora Alonso
Environmental Engineer I
Tetra Tech, Inc
cc: James Kennedy – EOG

ATTACHMENT A
C-141 Forms

HOBBS OCD

APR 30 2014

RECEIVED

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

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company – EOG Resources, Inc.	Contact – Ryan Kainer
Address – 5509 Champions Drive, Midland, TX 79706	Telephone No. (432) 686-3662
Facility Name – Shinnery Fed #1	Facility Type – Gas Well

Surface Owner –BLM	Mineral Owner –BLM	API No. 30-025-30247

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	13	18S	32E	1980	South	1980	West	Lea

Latitude 32.7444 **Longitude** -103.7217

NATURE OF RELEASE

Type of Release – Produced Water	Volume of Release - 20 bbls	Volume Recovered – 0 bbls
Source of Release – 3" Poly line ruptured	Date and Hour of Occurrence: 2/28/2014, 4:00 PM	Date and Hour of Discovery 2/28/2014, 4:00PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Jennifer Van Curen (BLM)	
By Whom? Ryan Kainer	Date and Hour 3/5/2014	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

NA

JRL 5/1/14
DEPTH TO WATER = 50'

Describe Cause of Problem and Remedial Action Taken.*
Approximately 20 bbls of produced water was released from equipment malfunction (3" poly water line seperated). All released fluids are located off the location and within the field (100 yards south of well).

Describe Area Affected and Cleanup Action Taken.*

EOG propose to delineate the impacted area, vertically and horizontally by collecting soil samples and having them analyzed for TPH, BTEX, and Chlorides. The impacted area will be excavated, stockpiled on poly-plastic, and transported to an approved disposal facility. Clean material will be backfilled within the excavated area to normal grade and seeded with BLM seed mix type II.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD 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, NMOCD 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:	OIL CONSERVATION DIVISION
Printed Name: Ryan Kainer	Approved by Environmental Specialist:
Title: Sr. Safety & Environmental Rep.	Approval Date: 7-9-14 Expiration Date: 9-12-14
E-mail Address: ryan_kainer@eogresources.com	Conditions of Approval: Site Supervision required
Date: 3/05/2014 Phone: 432-686-3662	Attached ☐ 7-14-3161

* Attach Additional Sheets If Necessary

Delineate & remediate site as per NMOCD guidelines. Submit final C-141 by 9-12-14

ogrid 7377
API 30-025-30247 043007
p 1014 19 043148

JUL 10 2014

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP-3161
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	55 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP-3161
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: James Kennedy Title: Environmental Specialist

Signature: James F. Kennedy Date: 2/25/2021

email: James.Kennedy@eogresources.com Telephone: 432-258-4346

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP-3161
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: James Kennedy Title: Environmental Specialist

Signature: James F. Kennedy Date: 2/25/2021

email: James.Kennedy@eogresources.com Telephone: 432-258-4346

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Brittany Hall Date: 1/4/2023

Printed Name: Brittany Hall Title: Environmental Specialist

RECEIVED
By OCD District 1 at 12:38 pm, Sep 11, 2015

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

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

Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company EOG Resources, Inc.	Contact Zane Kurtz
Address 5509 Champions Drive, Midland, TX 79706	Telephone No. 432-425-2023
Facility Name **Polyline from North Young Fed 12 -1 near Shinnery Federal #1**	Facility Type **Oil and Gas Well**

Surface Owner **BLM**	Mineral Owner **BLM/EOG**	API No. **30-025-30247**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	13	18S	32E	1980	South	1980	West	Lea

Latitude 32.7444 **Longitude** -103.7217

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release **120 bbls**	Volume Recovered **0 bbls**
Source of Release 3" poly line rupture	Date and Hour of Occurrence 9-9-2015 / 1200	Date and Hour of Discovery 9-9-2015 / 1500
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Shelly Tucker/ BLM 575-361-0084	
By Whom? Zane Kurtz, EOG, 432-425-2023	Date and Hour 9-9-2015 @1625	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
3" poly line came apart at a fussed weld. Released about 120 bbls of produced water. Zero was recovered. Occurred where we had a previous release and installed a poly liner at 4 ft to prevent future releases. 3rd party consultant will go out and delineate spill area and collect samples. Samples will be submitted and a work plan will be submitted to go out and excavate impacted soil and properly remove and dispose of impacted soil. Then area will be backfilled with clean material to normal grade. Hopefully all released fluid was captured in poly line we installed previously.

Describe Area Affected and Cleanup Action Taken.*

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD 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, NMOCD 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: Zane Kurtz 9-9-15

Printed Name: Zane Kurtz

Title: Sr. Safety and Environmental Rep., EOG Resources, Inc.

E-mail Address: zane_kurtz@eogresources.com

Date: 9-9-2015 Phone: 432-425-2023

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 09/11/2015 Expiration Date: 11/11/2015

Conditions of Approval:
Discrete site samples required. Delineate and remediate per NMOCD guidelines.
Geotagged photos of remediation required.
Ensure BLM concurrence/approval.

Attached ☐
1RP 3849
nJXK1525445337
pJXK1525445461

* Attach Additional Sheets If Necessary

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP-3849
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

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Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
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Are the lateral extents of the release 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?	☐ Yes ☒ No
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Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

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- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
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- ☒ Laboratory data including chain of custody

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Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP-3849
Facility ID	
Application ID	

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Printed Name: James Kennedy Title: Environmental Specialist

Signature: James F. Kennedy Date: 2/25/2021

email: James.Kennedy@eogresources.com Telephone: 432-258-4346

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP-3849
Facility ID	
Application ID	

Closure

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Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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Printed Name: James Kennedy Title: Environmental Specialist

Signature: James F. Kennedy Date: 2/25/2021

email: James.Kennedy@eogresources.com Telephone: 432-258-4346

OCD Only

Received by: _____ Date: _____

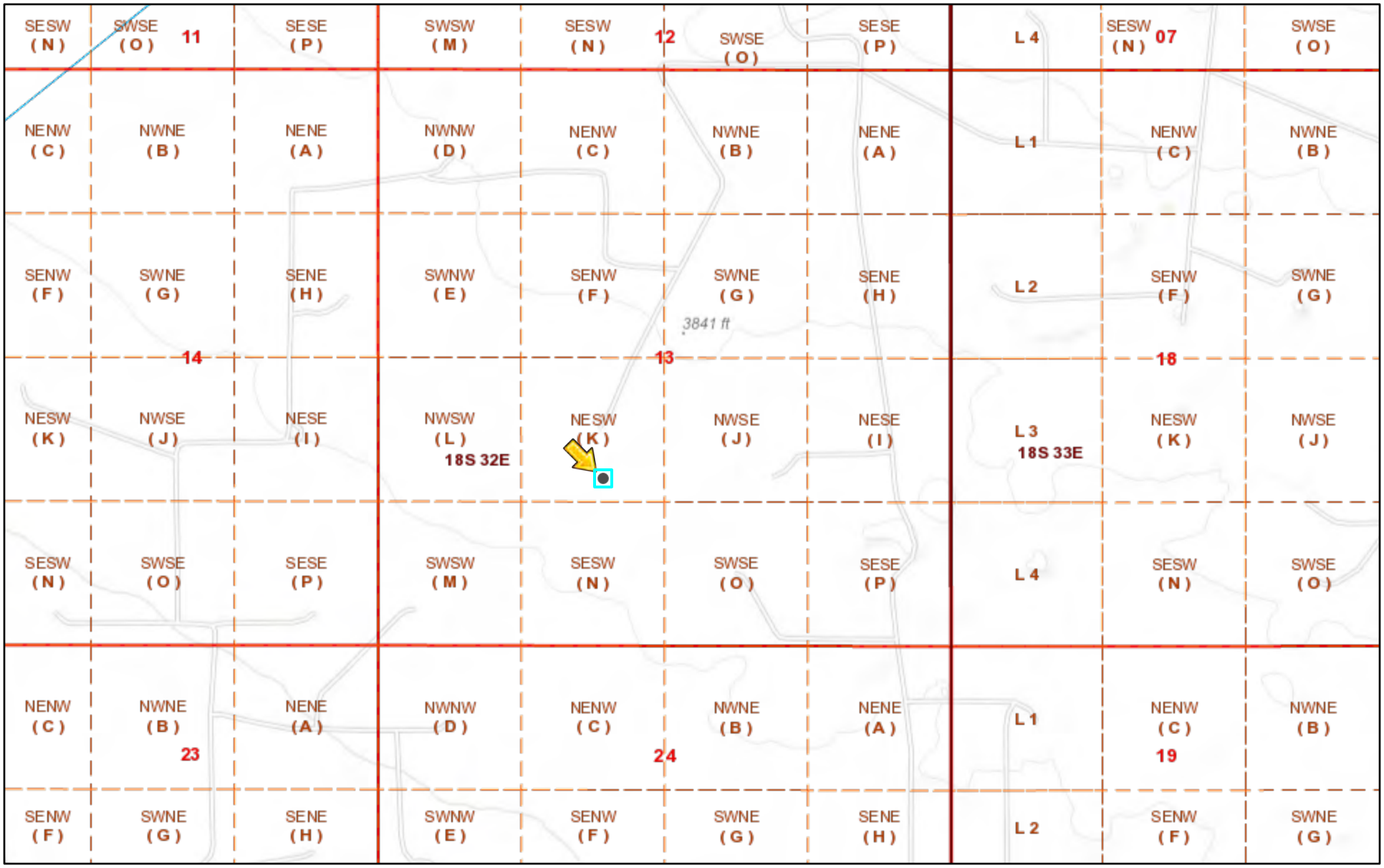
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Brittany Hall Date: 1/4/2023

Printed Name: Brittany Hall Title: Environmental Specialist

ATTACHMENT B
Site Characterization Data

Shinnery Federal #1



2/23/2021, 11:41:41 AM

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Override 1

OCD District Offices

PLSS First Division

PLSS Second Division

PLSS Townships

OSE Water-bodies

PLJV Probable Playas

OSE Streams

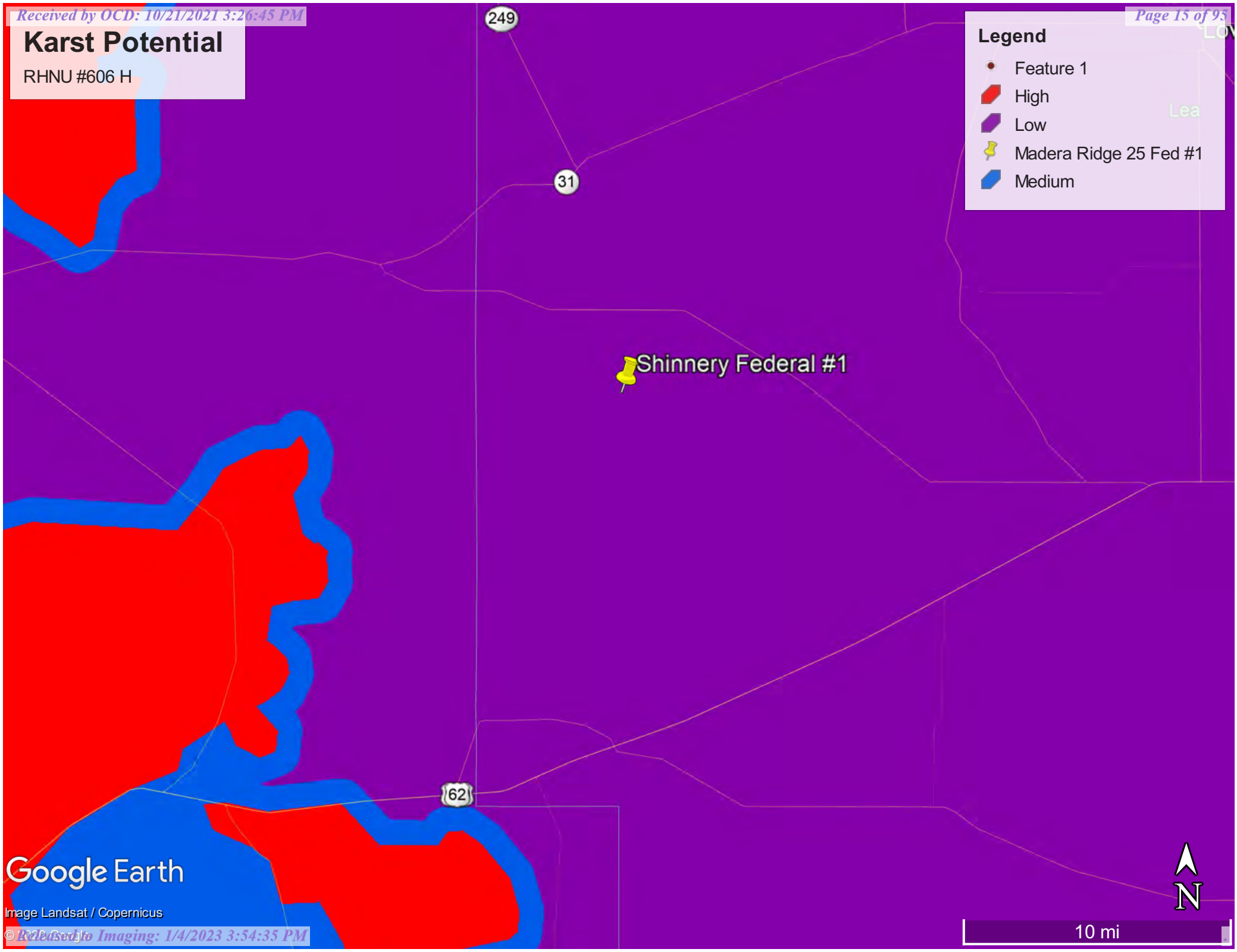
Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin,

New Mexico Oil Conservation Division

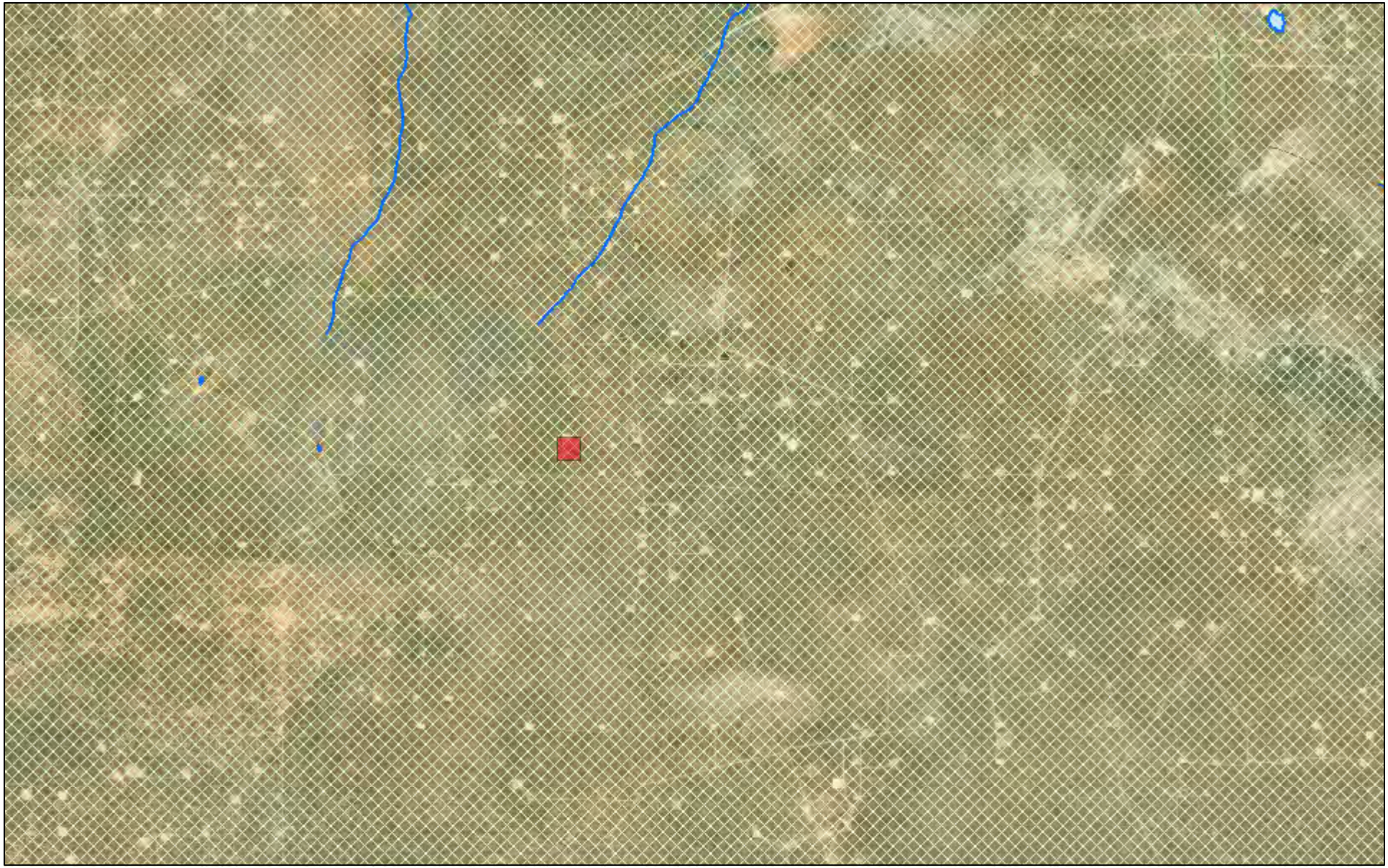
NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75: New Mexico Oil Conservation Division

Karst Potential

RHNU #606 H



New Mexico NFHL Data



February 23, 2021

1:72,224

0 0.5 1 2 mi

0 1 2 4 km

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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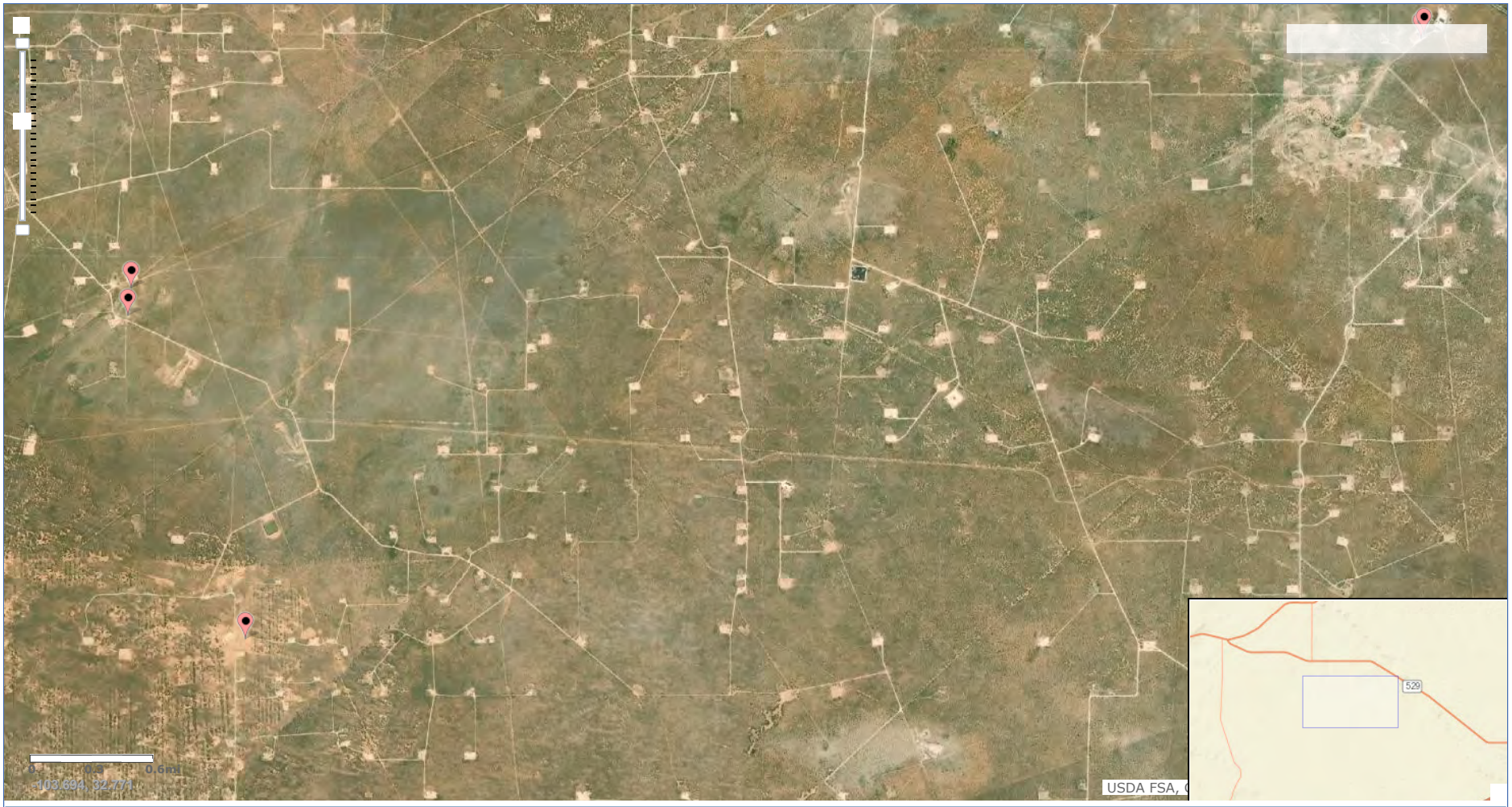

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- Full News

Groundwater levels for New Mexico

Click to hide state-specific text

* IMPORTANT: Next Generation Station Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 324342103451501

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 324342103451501 18S.32E.22.32322

Lea County, New Mexico
Latitude 32°43'42", Longitude 103°45'15" NAD27
Land-surface elevation 3,761 feet above NAVD88
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1968-03-18		D	62610		3327.83	NGVD29	1	Z			A
1968-03-18		D	62611		3329.40	NAVD88	1	Z			A
1968-03-18		D	72019	431.60			1	Z			A
1971-04-06		D	62610		3325.02	NGVD29	1	Z			A
1971-04-06		D	62611		3326.59	NAVD88	1	Z			A
1971-04-06		D	72019	434.41			1	Z			A
1976-05-21		D	62610		3331.54	NGVD29	1	Z			A
1976-05-21		D	62611		3333.11	NAVD88	1	Z			A
1976-05-21		D	72019	427.89			1	Z			A
1981-03-12		D	62610		3331.19	NGVD29	1	Z			A
1981-03-12		D	62611		3332.76	NAVD88	1	Z			A
1981-03-12		D	72019	428.24			1	Z			A
1986-03-25		D	62610		3329.94	NGVD29	1	Z			A
1986-03-25		D	62611		3331.51	NAVD88	1	Z			A
1986-03-25		D	72019	429.49			1	Z			A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
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Title: Groundwater for New Mexico: Water Levels
URL: https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: New Mexico Water Data Maintainer
Page Last Modified: 2021-02-23 17:49:42 EST
0.4 0.35 nadww02

ATTACHMENT C
Assessments Documentation

HOBBS OCD

APR 30 2014

RECEIVED

RECEIVED

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

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company – EOG Resources, Inc.	Contact – Ryan Kainer
Address – 5509 Champions Drive, Midland, TX 79706	Telephone No. (432) 686-3662
Facility Name – Shinnery Fed #1	Facility Type – Gas Well

Surface Owner –BLM	Mineral Owner –BLM	API No. 30-025-30247

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	13	18S	32E	1980	South	1980	West	Lea

Latitude 32.7444 Longitude -103.7217

NATURE OF RELEASE

Type of Release – Produced Water	Volume of Release - 20 bbls	Volume Recovered – 0 bbls
Source of Release – 3" Poly line ruptured	Date and Hour of Occurrence: 2/28/2014, 4:00 PM	Date and Hour of Discovery 2/28/2014, 4:00PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Jennifer Van Curen (BLM)	
By Whom? Ryan Kainer	Date and Hour 3/5/2014	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

NA

JLRL 5/1/14
DEPTH TO WATER = 50'

Describe Cause of Problem and Remedial Action Taken.*
Approximately 20 bbls of produced water was released from equipment malfunction (3" poly water line seperated). All released fluids are located off the location and within the field (100 yards south of well).

Describe Area Affected and Cleanup Action Taken.*

EOG propose to delineate the impacted area, vertically and horizontally by collecting soil samples and having them analyzed for TPH, BTEX, and Chlorides. The impacted area will be excavated, stockpiled on poly-plastic, and transported to an approved disposal facility. Clean material will be backfilled within the excavated area to normal grade and seeded with BLM seed mix type II.

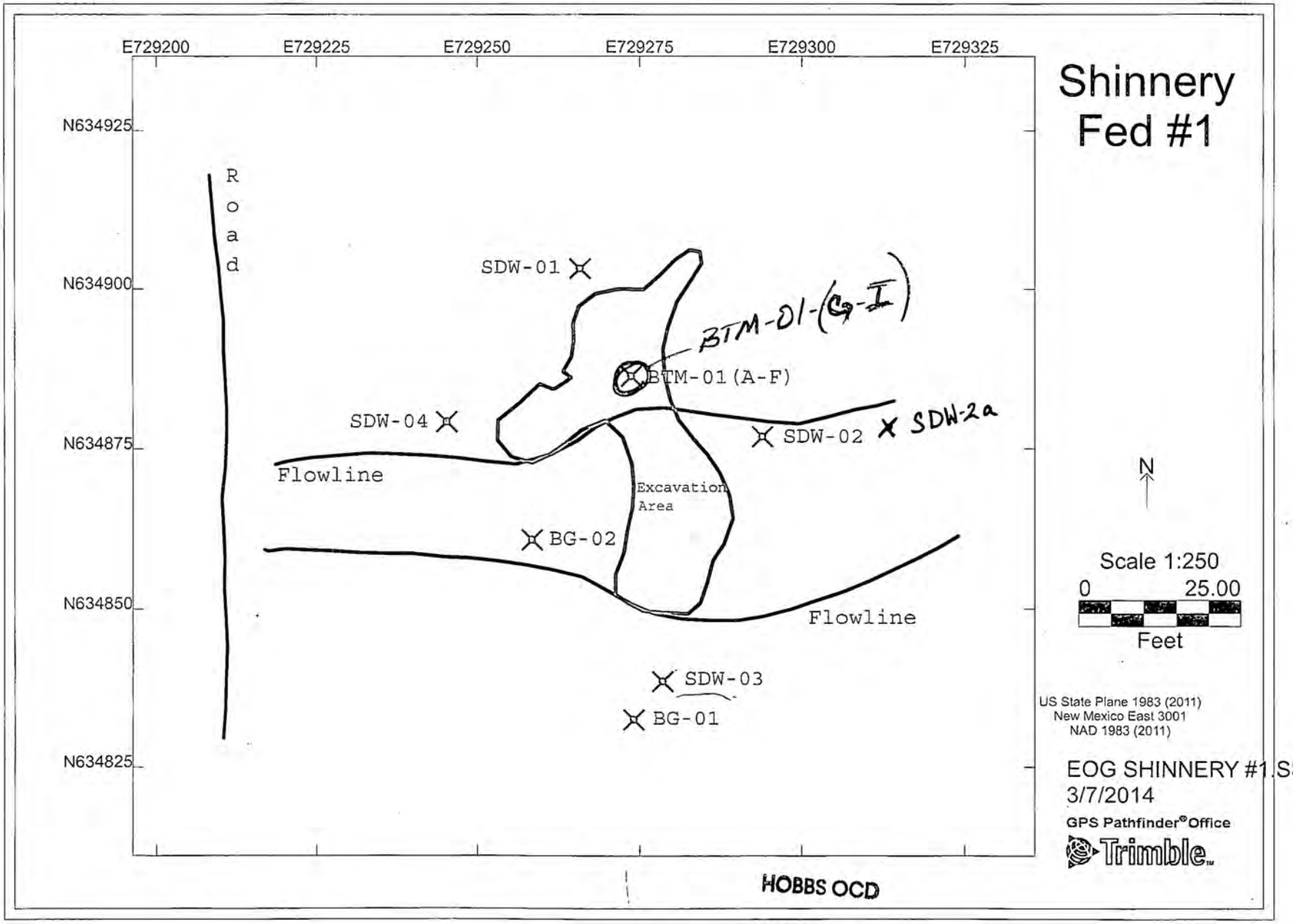
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD 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, NMOCD 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:	OIL CONSERVATION DIVISION
Printed Name: Ryan Kainer	Approved by Environmental Specialist:
Title: Sr. Safety & Environmental Rep.	Approval Date: 7-9-14 Expiration Date: 9-12-14
E-mail Address: ryan_kainer@eogresources.com	Conditions of Approval: Site Sampling report Attached ☐ 7-14-3161
Date: 3/05/2014 Phone: 432-686-3662	Delineate & remediate site as per NMOCD guidelines. Submit final C-141 by 9-12-14

* Attach Additional Sheets If Necessary

ogrid 7377
RT01419 043007
p t01419 043148

JUL 10 2014



HOBBS OCD

APR 30 2014

RECEIVED

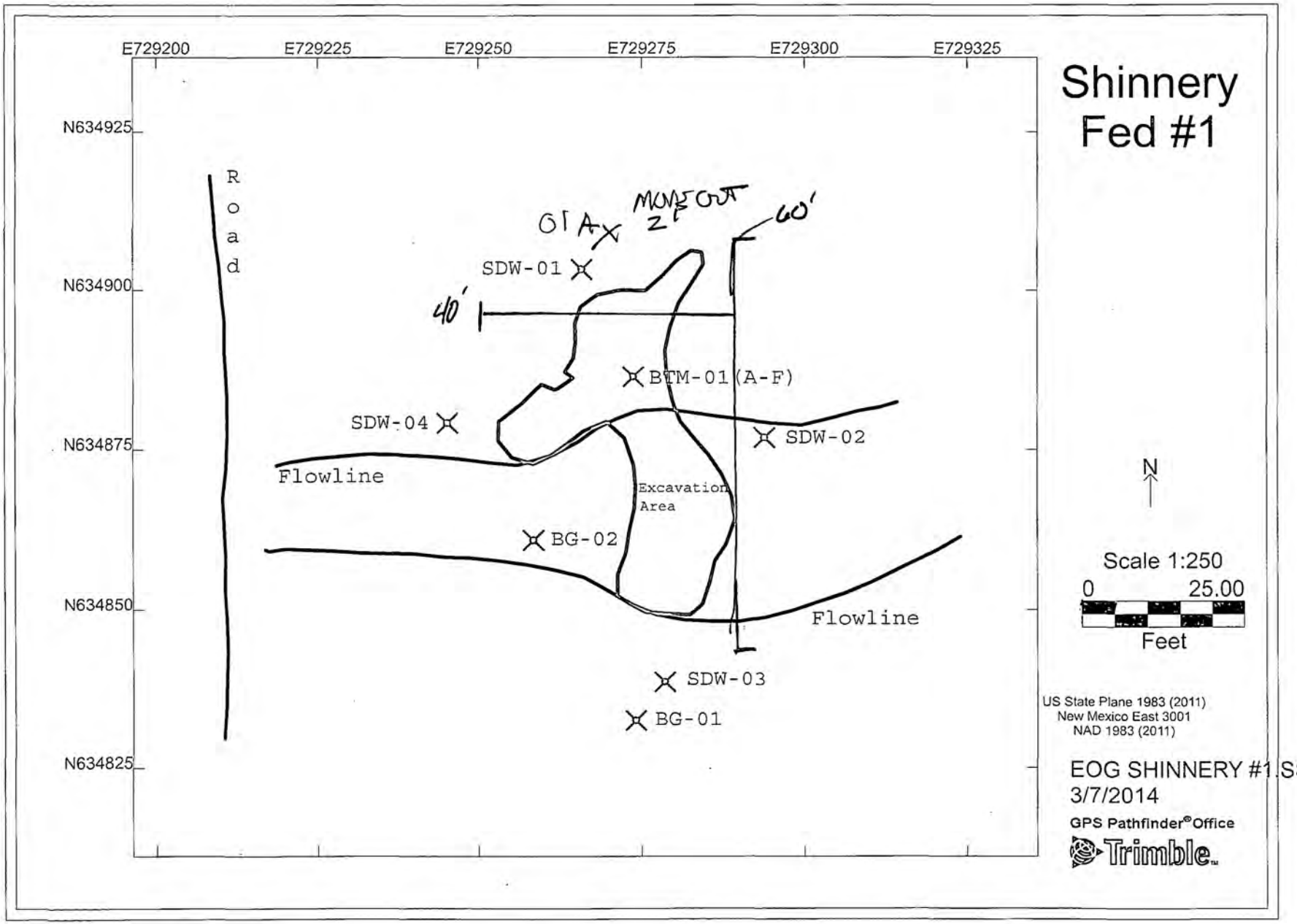


TABLE I
SOIL ANALYTICAL SUMMARY
EOG RESOURCES INC.
SHINNERY FED #1
LEA COUNTY, NEW MEXICO

Sample ID	Depth	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH			Chlorides (mg/kg)
								DRO (mg/kg)	(mg/kg)	Total (GRO/DRO) (mg/kg)	
NMOCD Recommended Remediation Action Levels (Total Ranking Score = 10)											
			10 mg/kg	--- mg/kg	--- mg/kg	--- mg/kg	50 mg/kg	--- mg/kg	--- mg/kg	1000 mg/kg	1,000 mg/kg
Horizontal Delineation Soil Samples											
SDW-01	Surface - 6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	907
SDW-02	Surface - 6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	88.4	<4.00	88.4	3200
SDW-02a	Surface - 6"	4/17/2014	NA	NA	NA	NA	NA	NA	NA	NA	58
SDW-03	Surface - 6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	53
SDW-04	Surface - 6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	<25.0
Vertical Delineation Soil Samples											
BTM-01-A	1'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	51.4	<4.00	51	4,040
BTM-01-B	2'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	1,440
BTM-01-C	3'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	6,280
BTM-01-D	4'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	11,100
BTM-01-E	5'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	10,300
BTM-01-F	6'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	9,790
BTM-01-G	10'	4/17/2014	NA	NA	NA	NA	NA	NA	NA	NA	7,260
BTM-01-H	15'	4/17/2014	NA	NA	NA	NA	NA	NA	NA	NA	3,290
BTM-01-I	18'	4/17/2014	NA	NA	NA	NA	NA	NA	NA	NA	4,650
Back Ground Soil Samples											
BG-01	Surface - 6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	154
BG-02	Surface - 6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	4,250

Notes:

1. BDL - Below Detection Limits
2. NA - Not Analyzed
3. Bold concentrations above lab reporting limits.

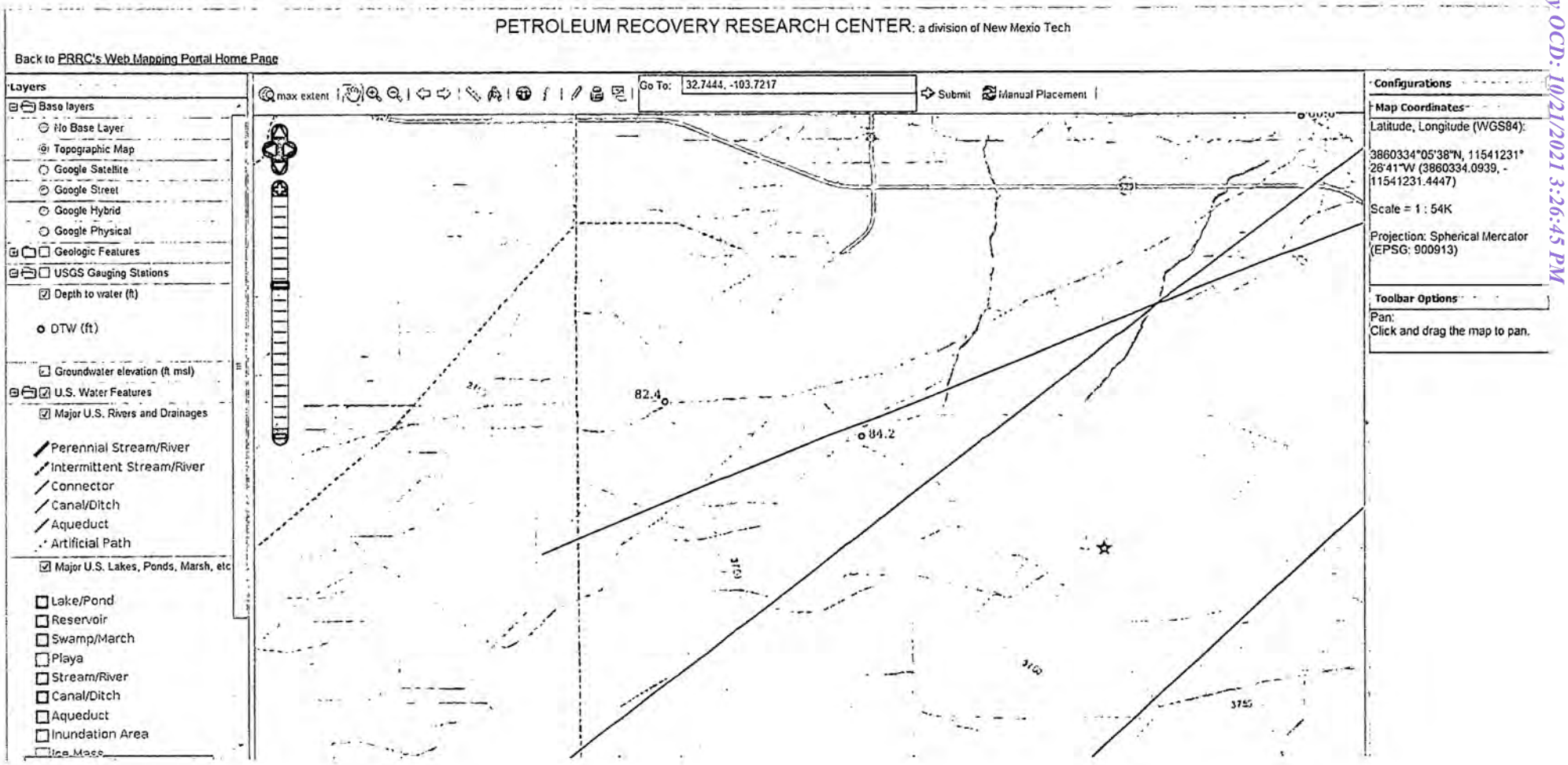
TABLE I
SOIL ANALYTICAL SUMMARY
EOG RESOURCES INC.
SHINNERY FED #1
LEA COUNTY, NEW MEXICO

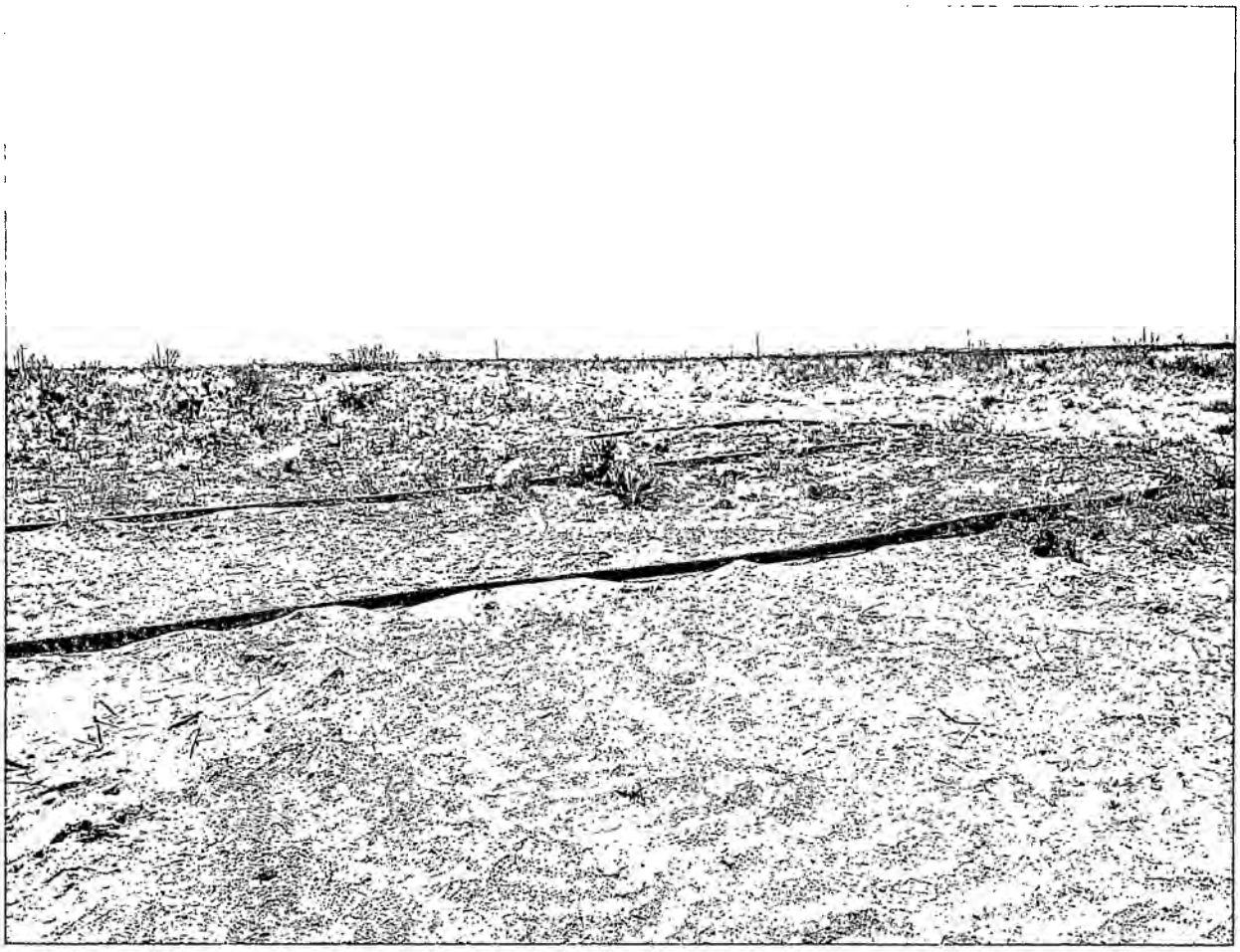
Sample ID	Depth	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH			Chlorides (mg/kg)
								DRO (mg/kg)	GRO (mg/kg)	Total (GRO/DRO) (mg/kg)	
NMOCD Recommended Remediation Action Levels (Total Ranking Score = 10)											
			10 mg/kg	--- mg/kg	--- mg/kg	--- mg/kg	50 mg/kg	--- mg/kg	--- mg/kg	1000 mg/kg	500 mg/kg
Horizontal Delineation Soil Samples											
SDW-01	Surface	3/6/14	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	907
SDW-02	Surface	3/6/14	<0.02	<0.02	<0.02	<0.02	<0.02	**88.4**	<4.00	**88.4**	3,200
SDW-03	Surface	3/6/14	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	53
SDW-04	Surface	3/6/14	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	<25.0
Vertical Delineation Soil Samples											
BTM-01-A	1'	3/6/14	<0.02	<0.02	<0.02	<0.02	<0.02	**51.4**	<4.00	**51**	4,040
BTM-01-B	2'	3/6/14	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	1,440
BTM-01-C	3'	3/6/14	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	6,280
BTM-01-D	4'	3/6/14	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	11,100
BTM-01-E	5'	3/6/14	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	10,300
BTM-01-F	6'	3/6/14	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	9,790
Back Ground Soil Samples											
BG-01	Surface - 6"	3/6/14	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	154
BG-02	Surface - 6"	3/6/14	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	4,250

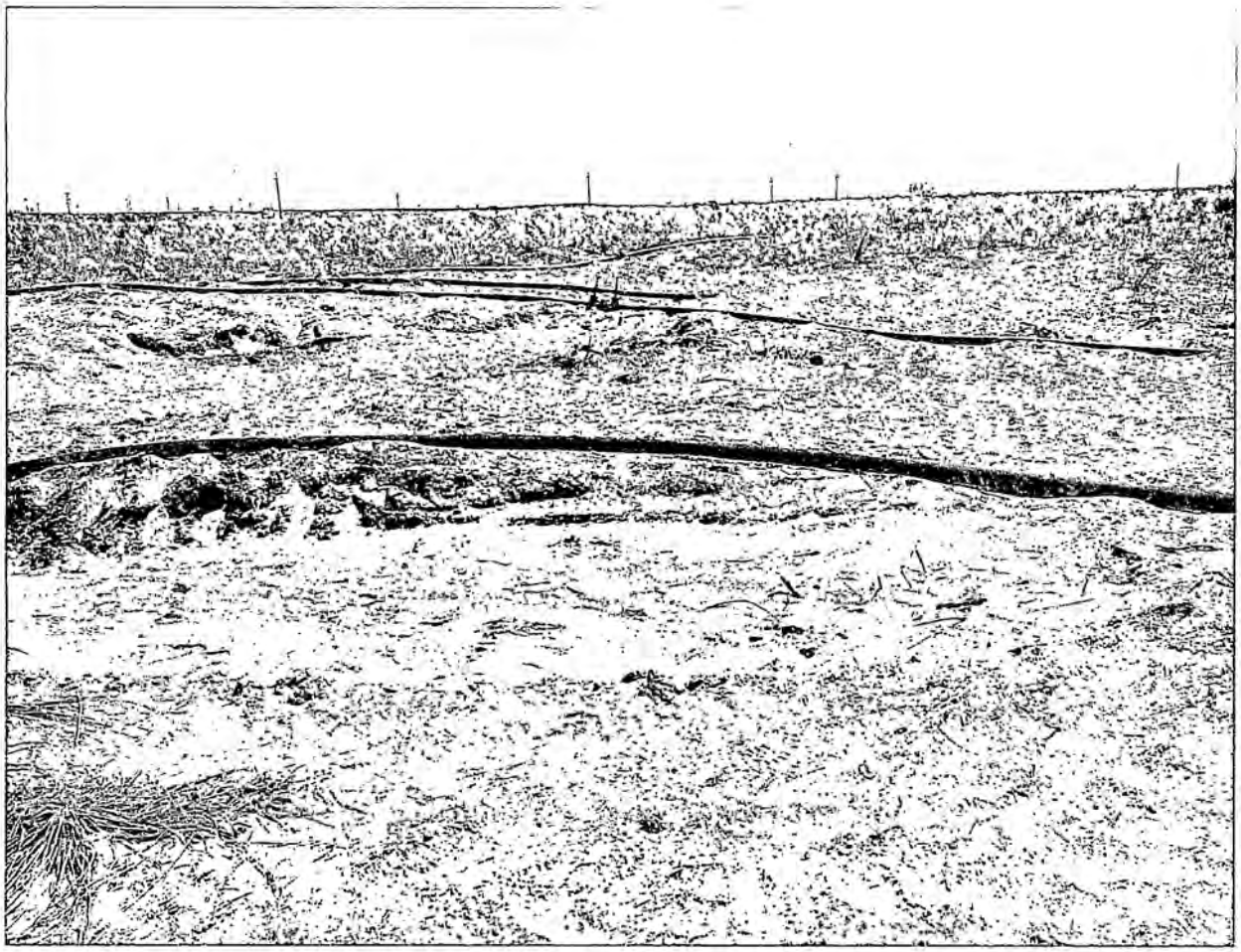
Notes:

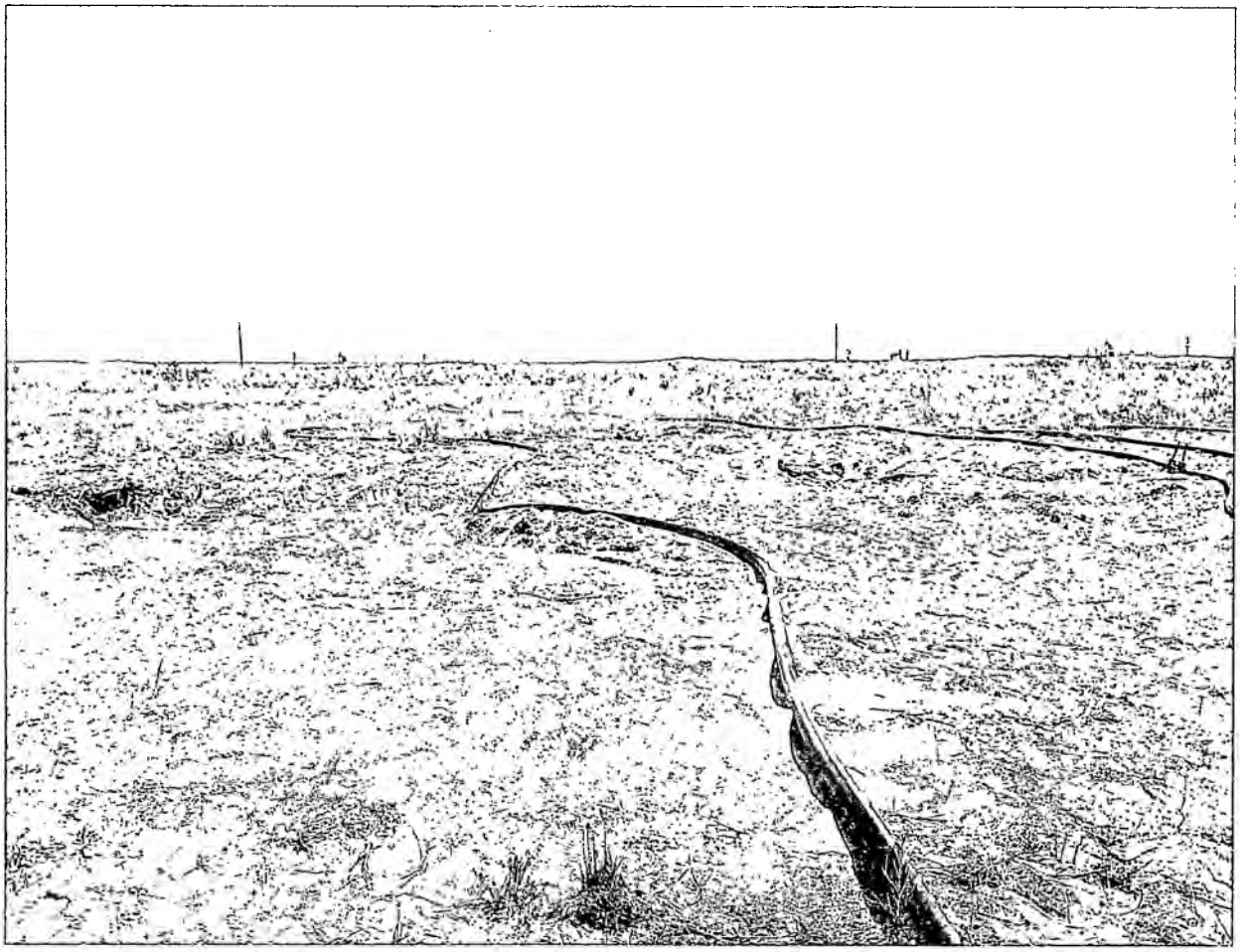
1. BDL - Below Detection Limits
2. NA - Not Analyzed
3. Bold concentrations above lab reporting limits.
4. Highlighted cells indicated concentrations above regulatory limits

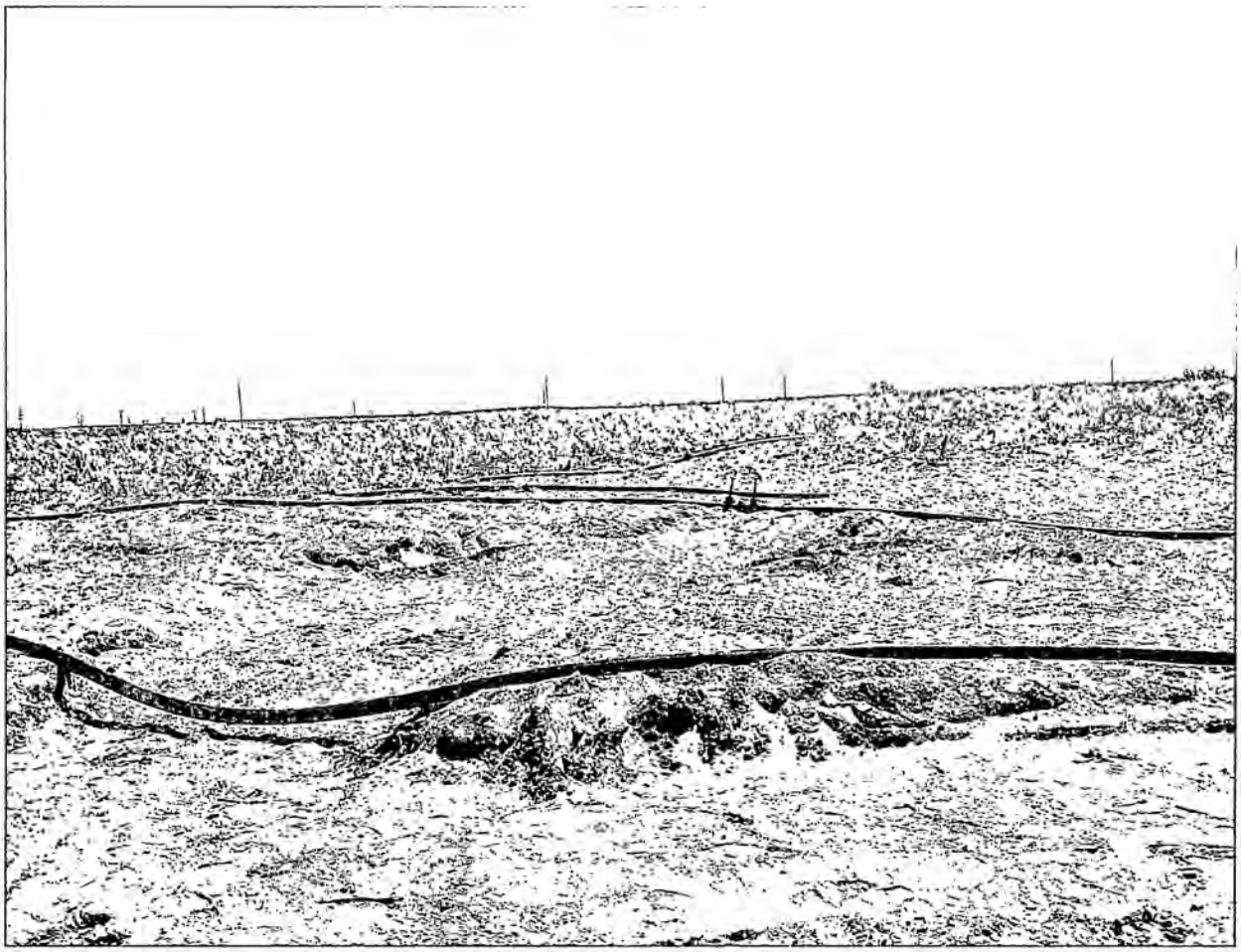
NM Depth to GW

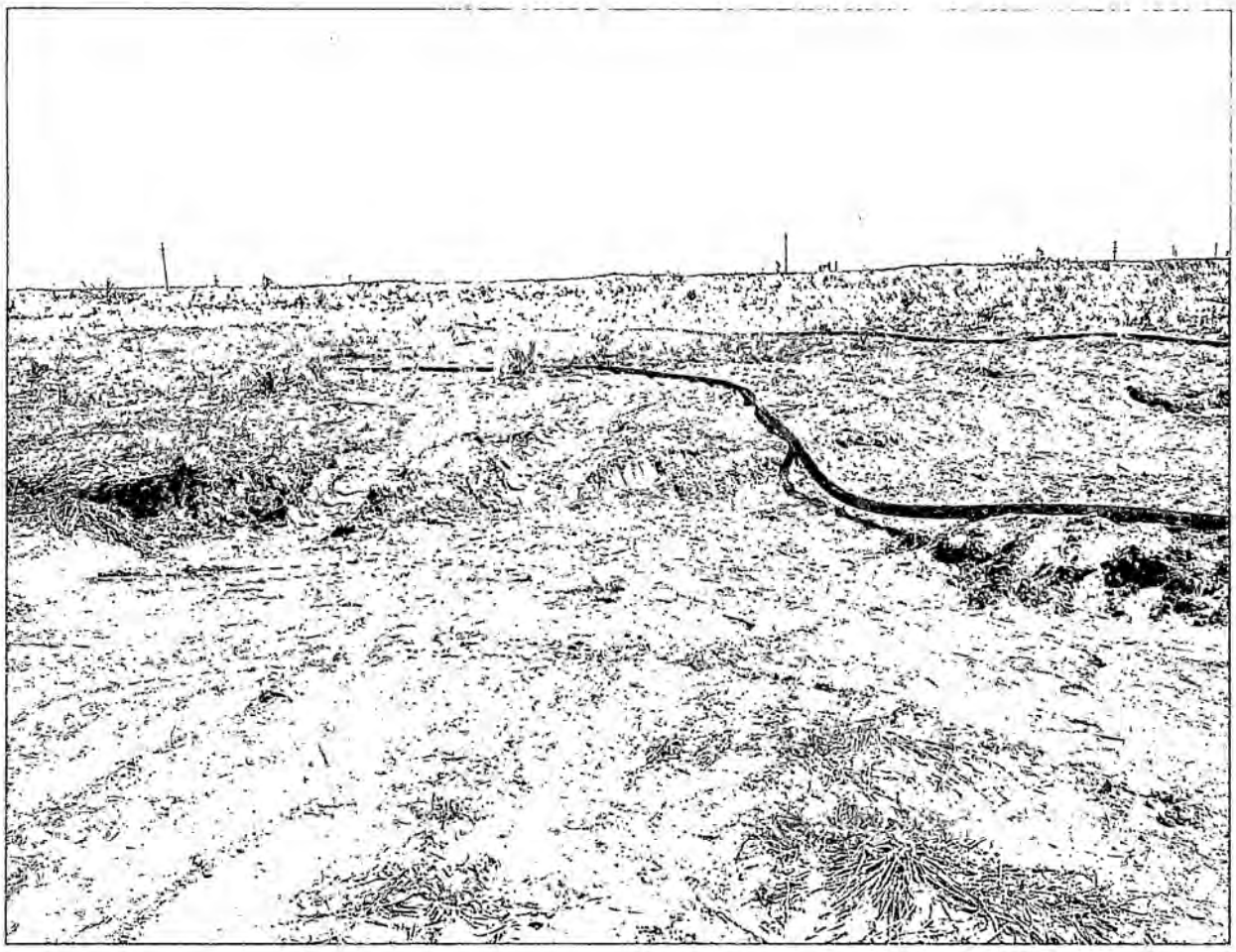












NOT APPROVED

This final report is not approved for the following reasons:
1. The vertical extent of the release has not been delineated.
2. Once vertical delineation has been determined, the depth to groundwater must be verified. If there is less than 10 feet of separation between groundwater and the vertical extent of the release, groundwater sampling will be required.
3. There should be at least three samples that are below the regulatory threshold or show a trend showing that the concentrations are decreasing at depth.

CH2M
12750 Merit Drive
Suite 1100
Dallas, Texas 75251
O +1 972 663 2287
www.ch2m.com

Ms. Kellie Jones
New Mexico Oil Conservation Division
District 1
1625 N. French Drive
Hobbs, New Mexico 88240

Mr. Jeff Robertson
Environmental Protection Division
Bureau of Land Management
620 E. Greene Street
Carlsbad, NM 88220

August 19, 2015

Subject: Final Report
EOG Resources, Inc.
Shinnery Fed #1
1RP-3161 (API 30-025-30247)
Lea County, New Mexico

Dear Ms. Jones and Mr. Roberston,

On behalf of EOG Resources, Inc. (EOG), CH2M HILL Engineers Inc. (CH2M) performed a remedial action at Shinnery Fed #1 (site). Results of the previous soil assessment and subsequent remediation activities are summarized below.

Site Description

The site is located approximately 35 miles west of Hobbs, New Mexico. The legal location for this release is Unit Letter K, Section 13, Township 18S, Range 32E in Lea County, New Mexico. The latitude and longitude for the release is 32.74444, -103.7217, respectively. A site location map is presented in **Figure 1** and an area map is presented in **Figure 2**. The site is located approximately 150 yards due south of the well pad for Shinnery Fed #1 (API No. 30-025-30247) on the east side of the lease road.

Site Ranking and Recommended Remedial Action Levels

Per the August 13, 1993 NMOCD Guidelines for Remediation of Leaks, Spills and Releases, the ranking for this site is 10 based on the following criteria:

- Depth to Ground Water 50-99 feet (per USGS Site 324629103253601)
- Wellhead Protection Area >1,000 feet
- Distance to Surface Water Body >1,000 horizontal feet

Based on the site ranking of 10, NMOCD Recommended Remedial Action Levels (RRALs) are 50 milligrams per kilogram (mg/kg) for benzene, toluene, ethylbenzene, xylene (BTEX); 10 mg/kg for benzene; 1,000 mg/kg for total petroleum hydrocarbons (TPH); and 500 mg/kg for chloride.

Background Information

Form C-141 attached as **Appendix A**, was received by the New Mexico Oil Conservation Division (NMOCD) on April 30, 2014 and the site was assigned Remediation Permit 1RP-3161. A Final Report Form C-141 is also attached under **Appendix A**. The following summarizes the site history of the reported release:

- On February 28, 2014, approximately 20 barrels (bbls) of produced water was released due to an equipment malfunction (3-inch poly water line separated). All released fluids were located off the well pad and within the field (150 yards south of the well pad). No fluids were recovered. The spill area measured approximately 60 feet (north to south) by 40 feet (east to west) in the pasture to the north of the equipment malfunction. No watercourses were reached. Based on the source of the spill (produced water), the contaminants of concern (COCs) were identified as BTEX, TPH, and chloride.
- On March 6, 2014, EOG contracted a third party consultant to conduct a site assessment and to facilitate soil sampling activities utilizing a hand auger within the impacted areas. Twelve samples were collected for vertical and horizontal delineation.
- On April 17, 2014, the third party consultant returned to the site and collected four additional samples. Three samples were collected via direct push drilling technologies for vertical delineation. In addition, one sample was collected for horizontal delineation. The spill area was delineated horizontally.
- On October 25, 2014, EOG contracted CH2M to facilitate soil sampling activities within the impacted areas in conjunction with a remediation company (Watson Construction) that was contracted to excavate impacted soils. CH2M HILL collected seven confirmation samples from an excavated zone within the impacted area. The location of the samples was based on observations made from previous soil sampling efforts by the prior contractor and the purpose was to attempt vertical delineation.
- On November 12, 2014, CH2M returned to the site and collected two additional confirmation samples from a deeper excavation to verify that chloride concentrations substantially decreased with depth.
- In support of a NMOCD- and BLM-approved work plan, dated December 8, 2014, impacted soils to a depth of 5 feet below ground surface (bgs) were removed from the site, a polyethylene liner was installed, and non-impacted backfill was placed over the liner by Watson Construction.

The results of the soil sampling activities have been previously provided to NMOCD and BLM. However, historic sample location figures and a data summary table are provided in **Appendix B** and **Appendix C**, respectively, to facilitate report review.

Conclusions

The impacted area was characterized based on the COCs identified for the site. Initial site characterization determined that BTEX and TPH were not of concern and that the cleanup action would be based on chloride soil concentrations. Lateral limits were delineated and the vertical investigation demonstrates that although chloride concentrations remain above RRALs at 20 feet bgs in the eastern portion of the spill footprint (1,150 mg/kg at Shinnery Fed #1-E-11122014-20'), they are below laboratory detection limits at the same depth within the western portion of the spill footprint (<25 mg/kg at Shinnery Fed #1-W-11122014-20'). Additionally, data demonstrates that chloride concentrations substantially decline with depth (from 5,020 mg/kg at 7.5 feet bgs to 1,150 mg/kg at 20 feet bgs). As such, EOG received concurrence from BLM and NMOCD via email on December 12, 2014 that excavation and liner installation was an acceptable remedial action. During January 8-13, 2015 approximately 712 cubic yards of impacted soil was removed from the site and transported to Lea Land landfill for disposal (refer to **Figure 3** for excavation limits), a reinforced 20 mil polyethylene liner was installed (product details contained in **Appendix D**), and approximately 1,008 cubic yards of non-impacted backfill from Canvas Ranch was placed over the liner by Watson Construction (photo log contained in **Appendix E**).

EOG has fulfilled the scope of work presented in the NMOCD- and BLM-approved work plan and subsequently addressed the requirement to remove or mitigate migration of remaining chlorides in site soil to the maximum extent practicable. EOG requests that a no further action designation be granted for the site. If you have any questions or comments with regards to this request for closure, please do not hesitate to contact Jennifer Dussor at jennifer.dussor@ch2m.com or (972) 663-2287.

Regards,
CH2M HILL Engineers, Inc.

Russ Weigand
Client Services Manager

Jennifer Dussor
Project Manager

Enclosures:

Figures
Figure 1 Site Location Map
Figure 2 Area Map
Figure 3 Excavation Limits

Appendixes
Appendix A Form C-141 (Initial and Final)
Appendix B Historical Soil Sample Location Figures
Appendix C Historical Soil Sampling Data Summary
Appendix D Liner Product Sheet
Appendix E Photo Log

C: Zane Kurtz, EOG
Jamie Keyes, NMOCD
Tomáš 'Doc' Oberding, PhD, NMOCD

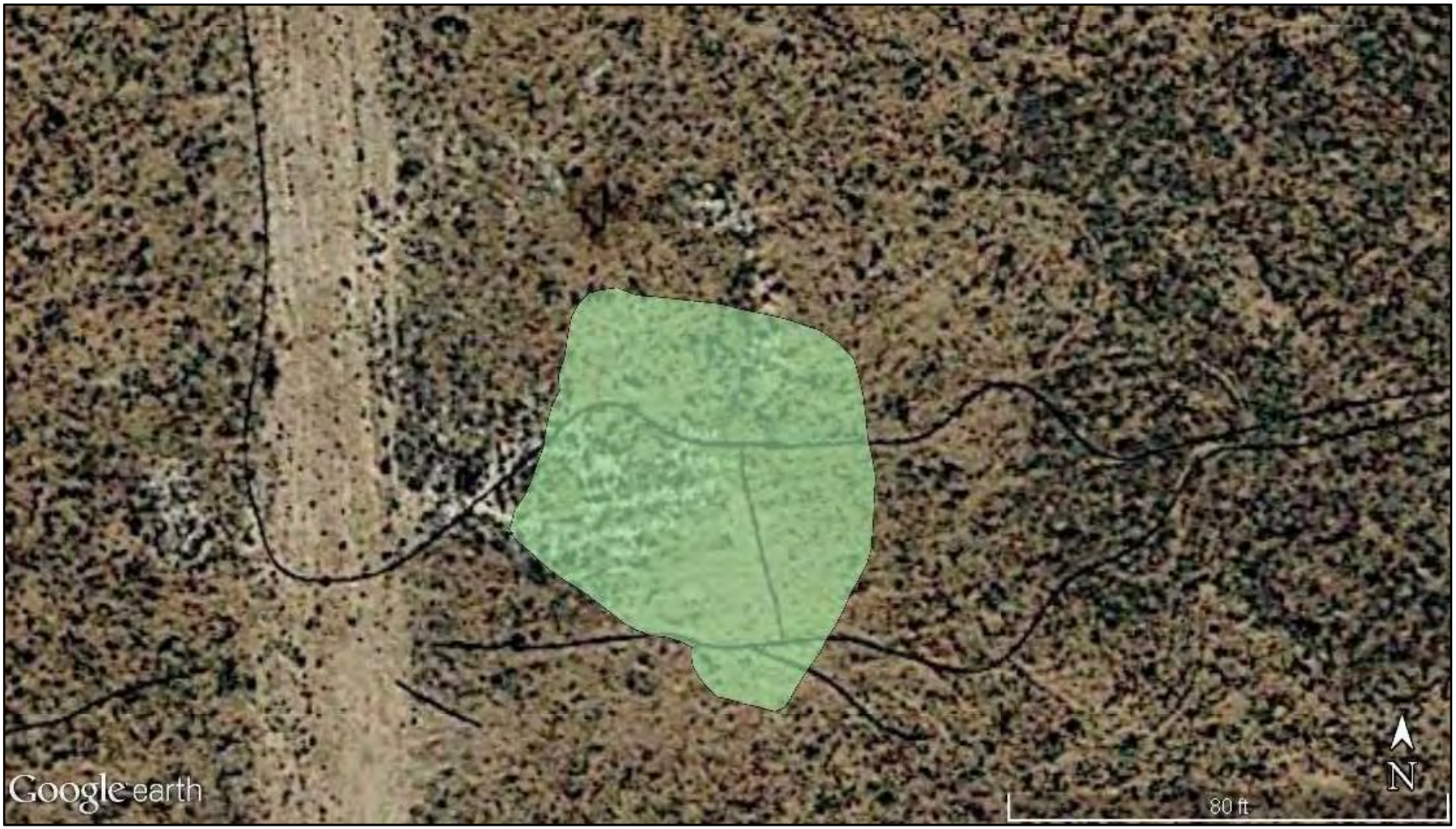
Figures

NOTE: This image has been modified from the original. The base map is from Google Earth Pro, but the superimposed information is from CH2M HILL.

FIGURE 1
Site Location Map
EOG Resources - Shinnery Fed #1
Final Report (1RP3161)
Lea County, New Mexico

NOTE: This image has been modified from the original. The base map is from Google Earth Pro, but the superimposed information is from CH2M HILL.

FIGURE 2
Area Map
EOG Resources - Shinnery Fed #1
Final Report (1RP3161)
Lea County, New Mexico



NOTE: This image has been modified from the original. The base map is from Google Earth Pro, but the superimposed information is from CH2M HILL.

LEGEND

Approximate limits of excavation and subsequent liner installation
(Appendix B contains figures depicting historical sample locations)

FIGURE 3
Excavation Limits
EOG Resources - Shinnery Fed #1
Final Report (1RP3161)
Lea County, New Mexico

Appendix A
Form C-141 (Initial and Final)

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

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	EOG Resources, Inc.	Contact	Zane Kurtz
Address	5509 Champions Dr., Midland, TX 79706	Telephone No.	432-425-2023
Facility Name	Shinnery Fed #1	Facility Type	Lease road near active well

Surface Owner BLM	Mineral Owner BLM	API No. 30-025-30247

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	13	18S	32E	1980	South	1980	West	Lea

Latitude 32.7444 **Longitude** -103.7217

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 20 bbls	Volume Recovered 0 bbls
Source of Release Rupture of 3-inch poly line	Date and Hour of Occurrence 2/28/2014 4:00 PM	Date and Hour of Discovery 2/28/2014 4:00 PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Jennifer Van Curen (BLM)	
By Whom? Ryan Kainer	Date and Hour 3-5-2014	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
No watercourse was reached by spill.

Describe Cause of Problem and Remedial Action Taken.*
Approximately 20 bbls of produced water was released due to an equipment malfunction (3-inch poly water line separated). All released fluids were located off the well pad and within the field (150 yards south of the well pad). The spill area measured approximately 60 feet (north to south) by 40 feet (east to west) in the pasture to the north of the equipment malfunction. The contaminants of concern (COCs) include benzene, toluene, ethylbenzene, xylene (BTEX), TPH and chloride. No fluids were recovered.

Describe Area Affected and Cleanup Action Taken.*
The impacted area was characterized based on the above listed COCs. Initial site characterization determined that BTEX and TPH were not of concern and that the cleanup action would be based on chloride soil concentrations. Lateral limits were delineated and the vertical investigation demonstrated that although chloride concentrations remained above RRALs at 20 feet below ground surface in one area (1,150 mg/kg), the concentrations substantially declined with depth. As such, EOG received concurrence from BLM and NMOCD to excavate impacted area to a depth of 5 feet below ground surface, install a reinforced poly liner across excavation footprint, and backfill with non-impacted fill. During January 8-13, 2015 approximately 712 cubic yards of impacted soil was removed from the site and transported to Lea Land landfill for disposal, a reinforced 20 mil polyethylene liner was installed, and approximately 1,008 cubic yards of un-impacted backfill (from Canvas Ranch) was placed over the liner by Watson Construction.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD 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, NMOCD 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:	OIL CONSERVATION DIVISION	
Printed Name: Zane Kurtz	Approved by Environmental Specialist:	
Title: Sr. Safety & Environmental Representative	Approval Date:	Expiration Date:
E-mail Address: Zane_Kurtz@eogresources.com	Conditions of Approval:	Attached ☐
Date: 07-20-2015 Phone: 432-425-2023		

* Attach Additional Sheets If Necessary

HOBBS OCD

APR 30 2014

RECEIVED

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

Oil Conservation Division
1220 South St. Francis Dr.
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Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company – EOG Resources, Inc.	Contact – Ryan Kainer
Address – 5509 Champions Drive, Midland, TX 79706	Telephone No. (432) 686-3662
Facility Name – Shinnery Fed #1	Facility Type – Gas Well

Surface Owner –BLM	Mineral Owner –BLM	API No. 30-025-30247

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	13	18S	32E	1980	South	1980	West	Lea

Latitude 32.7444 Longitude -103.7217

NATURE OF RELEASE

Type of Release – Produced Water	Volume of Release - 20 bbls	Volume Recovered – 0 bbls
Source of Release – 3" Poly line ruptured	Date and Hour of Occurrence: 2/28/2014, 4:00 PM	Date and Hour of Discovery 2/28/2014, 4:00PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Jennifer Van Curen (BLM)	
By Whom? Ryan Kainer	Date and Hour 3/5/2014	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

NA

JRL 5/1/14
DEPTH TO WATER = 50'

Describe Cause of Problem and Remedial Action Taken.*
Approximately 20 bbls of produced water was released from equipment malfunction (3" poly water line seperated). All released fluids are located off the location and within the field (100 yards south of well).

Describe Area Affected and Cleanup Action Taken.*

EOG propose to delineate the impacted area, vertically and horizontally by collecting soil samples and having them analyzed for TPH, BTEX, and Chlorides. The impacted area will be excavated, stockpiled on poly-plastic, and transported to an approved disposal facility. Clean material will be backfilled within the excavated area to normal grade and seeded with BLM seed mix type II.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD 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, NMOCD 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:	OIL CONSERVATION DIVISION
Printed Name: Ryan Kainer	Approved by Environmental Specialist:
Title: Sr. Safety & Environmental Rep.	Approval Date: 7-9-14 Expiration Date: 9-12-14
E-mail Address: ryan_kainer@eogresources.com	Conditions of Approval: Site Supervisor Attached ☐ 7-14-3161
Date: 3/05/2014 Phone: 432-686-3662	

* Attach Additional Sheets If Necessary

Delineate & remediate site as per NMOCD guidelines. Submit final C-141 by 9-12-14

ogrid 7377
RT01419 043007
p t01419 043148

JUL 10 2014

Appendix B
Historical Soil Sample Location Figures

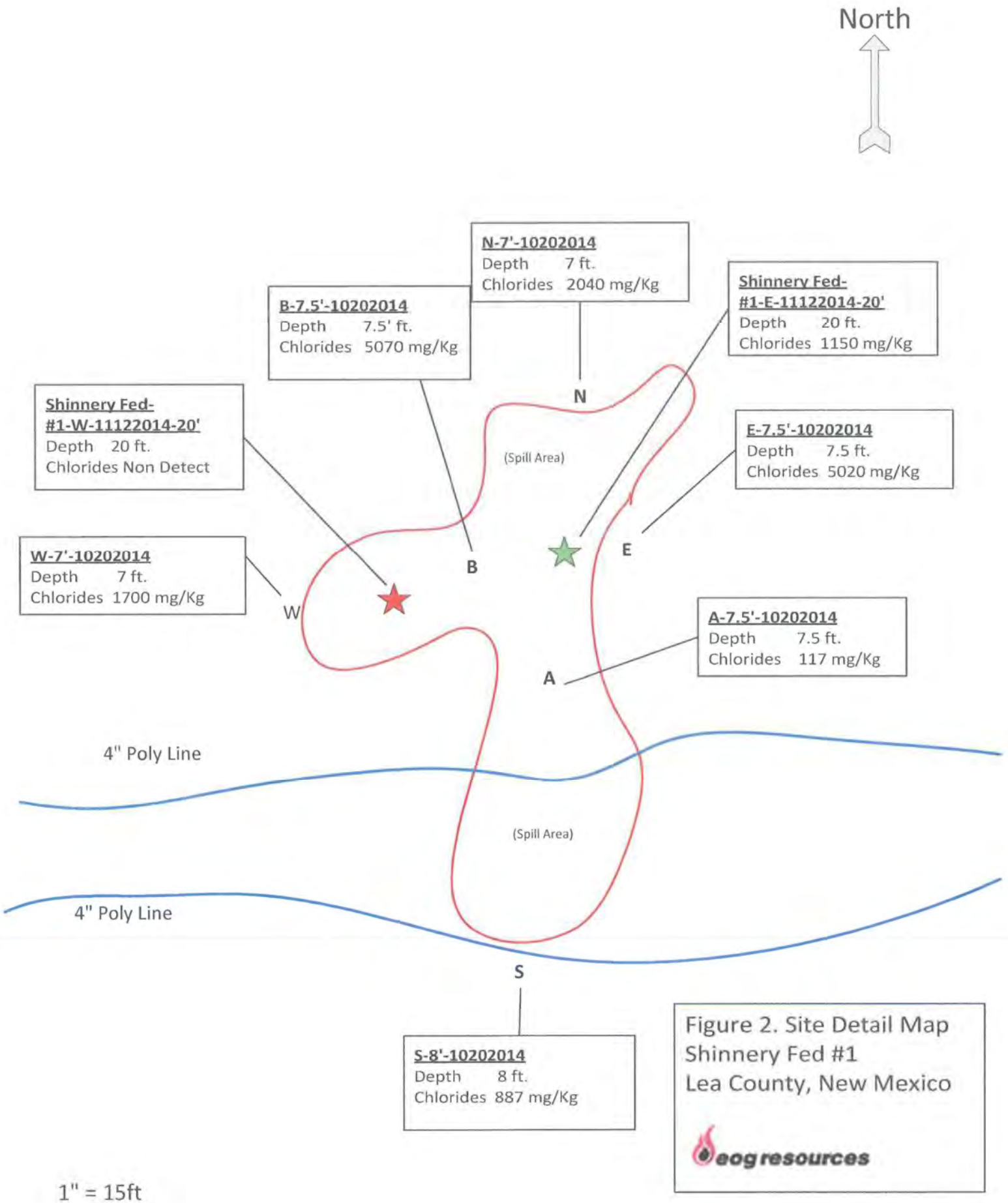
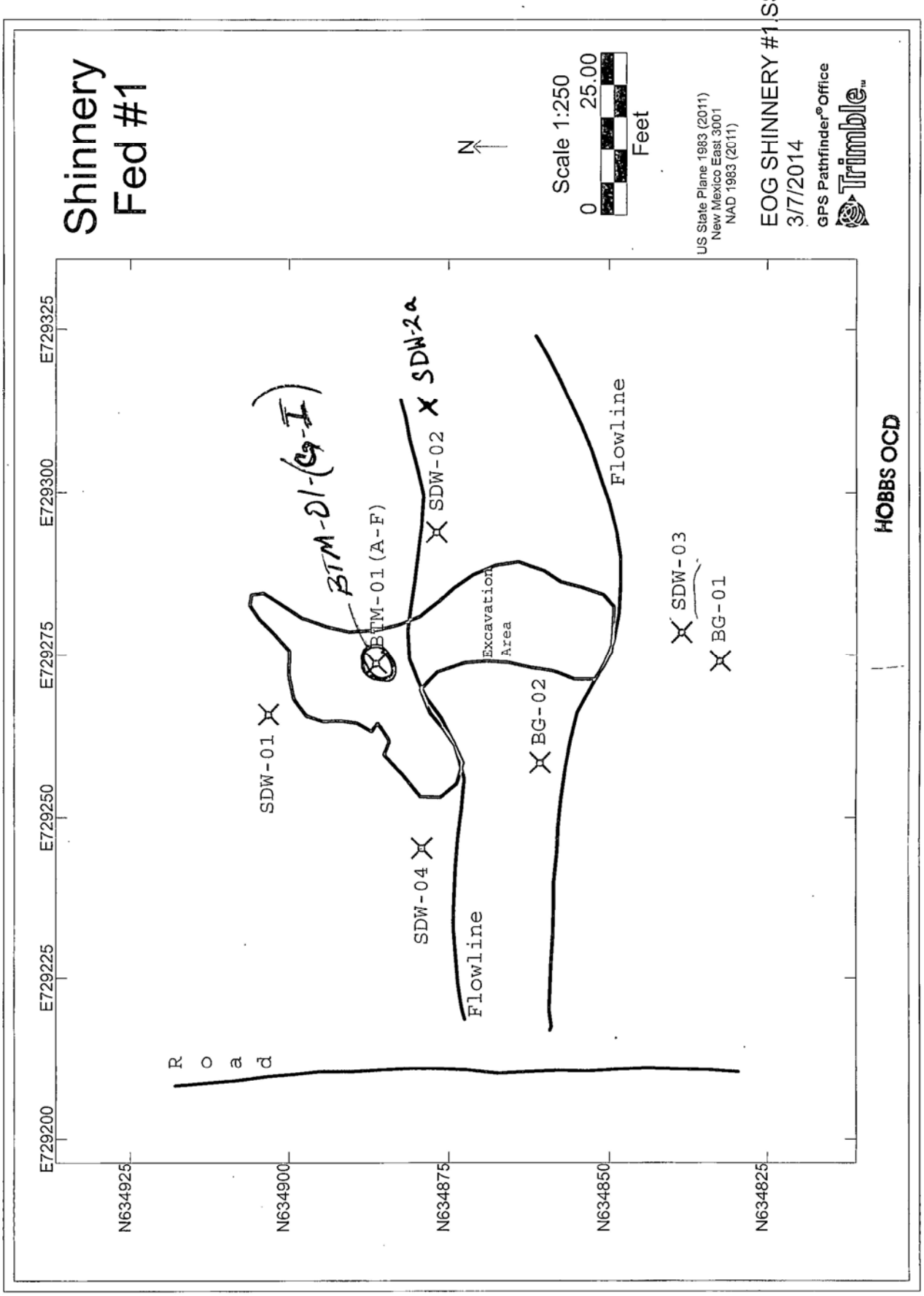


Figure 2. Site Detail Map
Shinnery Fed #1
Lea County, New Mexico

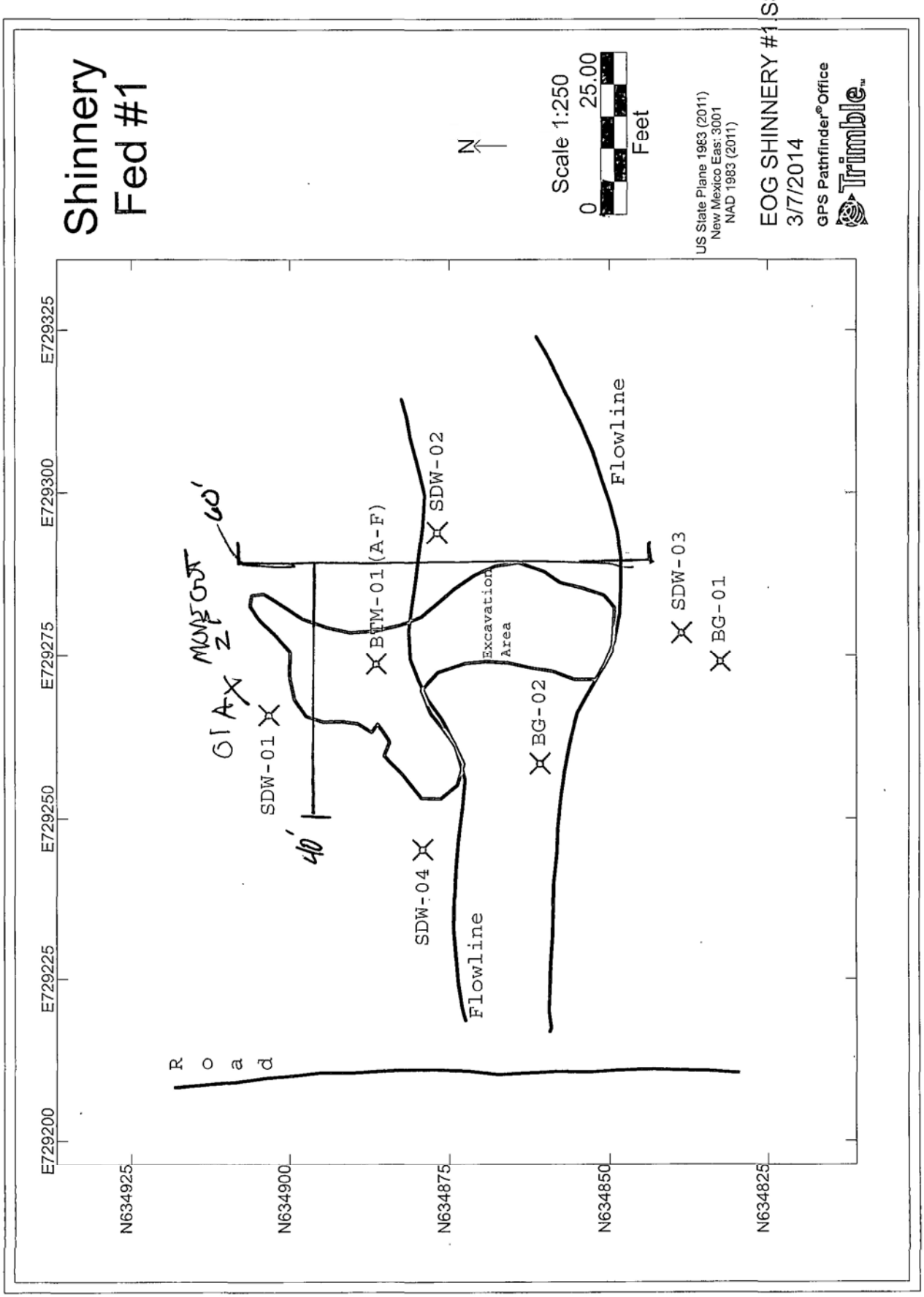
eog resources



HOBBS OCD

APR 3 0 2014

RECEIVED


Shinnery
Fed #1
N
Scale 1:250
0
25.00
Feet
US State Plane 1963 (2011)
New Mexico East 3001
NAD 1983 (2011)
EOG SHINNERY #1 SSF
3/7/2014
GPS Pathfinder® Office
Trimble
E729200
E729225
E729250
E729275
E729300
E729325
N634925
N634900
N634875
N634850
N634825
Road
SDW-01
SDW-04
BTM-01 (A-F)
SDW-02
BG-02
SDW-03
BG-01
Excavation Area
Flowline
Flowline
40'
60'

Appendix C
Historical Soil Sampling Data Summary

Appendix C. Historical Soil Sampling Data Summary
EOG Resources - Shinnery Fed #1
Final Report (1RP3161)
Lea County, New Mexico

Sample ID	Depth (bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	Chlorides (mg/kg)
SDW-01	0-6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0.0	<4.00	**907**
SDW-02	0-6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	88.4	<4.00	**3,200**
SDW-02a	0-6"	4/17/2014	NA	NA	NA	NA	NA	NA	NA	58
SDW-03	0-6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	53
SDW-04	0-6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<25.0
BTM-01-A	1'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	51.4	<4.00	**4,040**
BTM-01-B	2'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**1,440**
BTM-01-C	3'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**6,280**
BTM-01-D	4'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**11,100**
BTM-01-E	5'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**10,300**
BTM-01-F	6'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**9,790**
BTM-01-G	10'	4/17/2014	NA	NA	NA	NA	NA	NA	NA	**7,260**
BTM-01-H	15'	4/17/2014	NA	NA	NA	NA	NA	NA	NA	**3,290**
BTM-01-I	18'	4/17/2014	NA	NA	NA	NA	NA	NA	NA	**4,650**
BG-01	0-6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	154
BG-02	0-6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**4,250**
S-8'-10202014	8'	10/20/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**887**
A-7.5'-10202014	7.5'	10/20/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	117
B-7.5'-10202014	7.5'	10/20/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**5,070**
W-7'-10202014	7'	10/20/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**1,700**
BG-7'-10202014	7'	10/20/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	30.1
N-7'-10202014	7'	10/20/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**2,040**
E-7.5'-10202014	7.5'	10/20/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**5,020**
Shinnery Fed #1-W-11122014-20'	20'	11/12/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<25.0
Shinnery Fed #1-E-11122014-20'	20'	11/12/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**1,150**

Table Notes:
bold values above Recommended Remedial Action Levels (RRALs)
bgs below ground surface
mg/kg milligram per kilogram
NA not analyzed
' feet
" inches

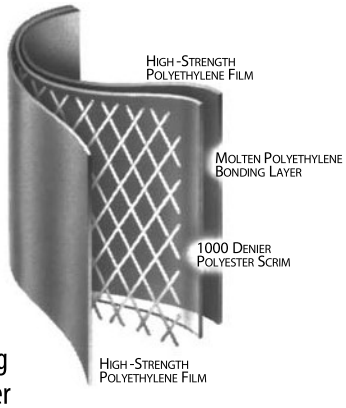
Appendix D
Liner Product Sheet

DURA•SKRIM® R20BDV

Scrim Reinforced Polyethylene

RAVEN ENGINEERED FILMS

Product Description



DURA•SKRIM® R20BDV consists of virgin outer layers of high-strength polyethylene film laminated together with hot molten polyethylene. DURA•SKRIM® R20BDV is black on one side and gray on the other for added versatility. The outer layers are formulated with thermal and UV stabilizers to assure long outdoor life. A layer of polyester scrim reinforcement placed between these plies greatly enhances tear resistance and increases service life. DURA•SKRIM's heavy-duty diamond reinforcement responds to tears immediately by surrounding and stopping the tear.

Product Use

DURA•SKRIM® R20BDV is used in applications that require exceptional outdoor life and demand high puncture and excellent barrier properties. DURA•SKRIM® R20BDV is manufactured from a very chemical-resistant, virgin polyethylene.

Size & Packaging

DURA•SKRIM® R20BDV is available in a variety of widths and lengths. Panel sizes up to 57,000 square feet are available. All panels are accordion folded every six feet and tightly rolled on a heavy-duty core for ease of handling and time-saving installation.

DURA•SKRIM®

Landfill Cover

Product	Part #
DURA•SKRIM	R20BDV

APPLICATIONS

- Underslab Vapor Retarders
- Modular Tank Liners
- Daily Landfill Covers
- Remediation Liners
- Earthen Liners
- Interim Landfill Caps
- Remediation Covers
- Erosion Control Covers

DURA•SKRIM® R20BDV

Scrim Reinforced Polyethylene

ISO 9001:2008 CERTIFIED MANAGEMENT SYSTEM

		DURA•SKRIM R20BDV	
PROPERTIES	**TEST METHOD**	IMPERIAL	METRIC
APPEARANCE		Black/Gray	
THICKNESS, NOMINAL		20 mil	0.51 mm
WEIGHT		74 lbs/MSF 10.7 oz./yd^2	361 g/m^2
CONSTRUCTION		Extrusion laminated with scrim reinforcement	
TENSILE STRENGTH (SCRIM BREAK)	ASTM D7003	75 lbf/in	131 N/cm
TENSILE ELONGATION AT BREAK (FILM BREAK)	ASTM D7003	700 %	700 %
TENSILE ELONGATION AT BREAK (SCRIM BREAK)	ASTM D7003	20 %	20 %
GRAB TENSILE	ASTM D7004	114 lbf	507 N
PUNCTURE RESISTANCE	ASTM D4833	40 lbf	178 N
***TRAPEZOID TEAR**	ASTM D4533	70 lbf	311 N
MULLEN BURST	ASTM D751	140 psi	965 kPa
HIGH PRESSURE OIT (HPOIT)	ASTM D5885	> 1400 min	
MAXIMUM USE TEMPERATURE		180°F	82°C
MINIMUM USE TEMPERATURE		-70°F	-57°C
WVTR	ASTM E96 Method A	0.023 g/100in^2/day	0.354 g/m^2/day
PERM RATING	ASTM E96 Method A	0.052 Perms grains/(ft^2·hr·in·Hg)	0.034 Perms g/(24hr·m^2·mm Hg)

*Tests are an average of diagonal directions.

DURA•SKRIM®

DURA♦SKRIM® R20BDV is a black/gray four-layer reinforced laminate. The outer layers consist of high-strength, polyethylene film manufactured using virgin grade resins and is formulated with thermal and UV stabilizers to assure long outdoor life. DURA♦SKRIM® R20BDV is reinforced with 1000 denier scrim reinforcement laid in a diagonal pattern spaced 3/8" apart with an additional machine direction scrim every 3" across the width to provide excellent tear resistance and increased service life. The individual plies are laminated together with molten polyethylene.

RAVEN INDUSTRIES

Engineered Films Division
P.O. Box 5107
Sioux Falls, SD 57117-5107
Ph: (605) 335-0174 • Fx: (605) 331-0333

Toll Free: **800-635-3456**
Email: **efdsales@ravenind.com**
www.ravenefd.com

2/13 EFD 1264

Scan QR Code to download current technical data sheets via the Raven website.

Appendix E
Photo Log

Well: Shinnery Federal No. 1 (Lea County, NM)

Liner Installation

PHOTO LOG

Post liner installation, looking north.

Post liner installation, looking south.

Post liner installation, looking east.

Post liner installation, looking west.

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-basin Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 00677	CP	LE	1	1	26	18S	32E		617750	3621373*	2972	700		
L 03454	L	LE	2	2	30	18S	33E		622200	3621422*	3301	100	35	65

Average Depth to Water: **35 feet**

Minimum Depth: **35 feet**

Maximum Depth: **35 feet**

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 619719.112 **Northing (Y):** 3623599.861 **Radius:** 4000

***UTM location was derived from PLSS - see Help**

HOBBS OCD

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

JUL 09 2014

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

RECEIVED

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company	OGRID Number	Contact
Yates Petroleum Corporation	25575	Robert Asher
Address		Telephone No.
104 S. 4TH Street		575-748-1471
Facility Name	API Number	Facility Type
Yarrow BHY State #4-H	30-025-41054	Battery

Surface Owner	Mineral Owner	Lease No.
State	State	VO-6276

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	32	23S	33E	475'	North	2,043'	East	Lea

Latitude 32.26702 Longitude 103.59194

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Produced Water	130 B/PW	130 B/PW
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Water tank	4/27/2014; 11:30 AM	4/27/2014; 11:30 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Geoff Leking/NMOCD I	
By Whom? Robert Asher/Yates Petroleum Corporation	Date and Hour 4/28/2014, 8:07 AM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
The head switch failed, water pump did not start and tank run over.

Describe Area Affected and Cleanup Action Taken.*
An approximate area of 70' X 60' (all released water was contained in lined/bermed battery). The water pump was turned on, and vacuum trucks were called and recovered all produced water. **Depth to Ground Water: >100' (approximately 275', Section 32, T23S-R33E, per NMOSE), Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS 0. Based on battery being lined/bermed and all water recovered, Yates Petroleum Corporation requests closure.**

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD 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, NMOCD 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:	OIL CONSERVATION DIVISION	
Printed Name: Robert Asher	Approved by District Supervisor: Environmental Specialist	
Title: NM Environmental Regulatory Supervisor	Approval Date: 7-9-14	Expiration Date: —
E-mail Address: boba@yatespetroleum.com	Conditions of Approval:	Attached ☐
Date: Thursday, May 01, 2014 Phone: 575-748-4217	1RP- —	7-14-3161

* Attach Additional Sheets If Necessary

JUL 10 2014

ogrid 25575
n701419
p701419

CH2M
12750 Merit Drive
Suite 1100
Dallas, Texas 75251
O +1 972 663 2287
www.ch2m.com

RECEIVED
By JKeyes at 9:39 am, Sep 28, 2015

APPROVED
By JKeyes at 9:39 am, Sep 28, 2015

Ms. Kellie Jones
New Mexico Oil Conservation Division
District 1
1625 N. French Drive
Hobbs, New Mexico 88240

Ms. Shelly Tucker
Environmental Protection Division
Bureau of Land Management
620 E. Greene Street
Carlsbad, NM 88220

September 21, 2015

Subject: Work Plan
EOG Resources, Inc.
Shinnery Fed #1
1RP-3161 (API 30-025-30247)
North Young Fed 12-1 (near Shinnery Fed #1)
1RP-3849 (API 30-025-30247)
Lea County, New Mexico

Dear Ms. Jones and Ms. Tucker,

On behalf of EOG Resources, Inc. (EOG), CH2M HILL Engineers Inc. (CH2M) is providing this work plan to the New Mexico Oil Conservation Division (NMOCD) and Bureau of Land Management (BLM). This work plan presents the proposed approach for additional site investigation and remediation activities at the Shinnery Fed #1 and North Young Fed 12-1 sites. The sites are collocated given the second release of produced water for North Young Fed 12-1, which occurred within the boundary of the prior release at Shinnery Fed #1.

Site Descriptions

The sites are located approximately 35 miles west of Hobbs, New Mexico. The legal location for the sites is Unit Letter K, Section 13, Township 18S, Range 32E in Lea County, New Mexico. The latitude and longitude for the release is 32.74444, -103.7217, respectively. A site location map is presented in **Figure 1** and an area map is presented in **Figure 2**. Both sites are located approximately 150 yards due south of the well pad for Shinnery Fed #1 (API No. 30-025-30247) on the east side of the lease road.

Site Ranking and Recommended Remedial Action Levels

Per the August 13, 1993 NMOCD Guidelines for Remediation of Leaks, Spills and Releases, the ranking for this site is 10 based on the following criteria:

- Depth to Ground Water 50-99 feet (per USGS Site 324629103253601)
- Wellhead Protection Area >1,000 feet
- Distance to Surface Water Body >1,000 horizontal feet

Based on the site ranking of 10, NMOCD Recommended Remedial Action Levels (RRALs) are 50 milligrams per kilogram (mg/kg) for benzene, toluene, ethylbenzene, xylene (BTEX); 10 mg/kg for benzene; 1,000 mg/kg for total petroleum hydrocarbons (TPH); and 500 mg/kg for chloride. Site ranking criteria and RRALs are summarized in the following Table 1 and Table2, respectively.

Table 1 – NMOCD Site Ranking Criteria

Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993

Condition	Score
Depth to Groundwater[a]	
< 50 feet	20
50 – 99 feet	10
> 100 feet	0
Wellhead Protection Area	
< 1000 feet from a water source	20
< 200 feet from private domestic water source	20
Distance to Surface Water Body	
< 200 horizontal feet	20
200 – 1000 horizontal feet	10
> 1,000 horizontal feet	0

Notes:

[a] Guidance does not explicitly state whether this is depth from ground surface or depth from other reference point.

Table 2 – NMOCD Recommended Remediation Action Levels

Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993

Analyte (ppm)	Score of >19	Score of 10 - 19	Score of 0 - 9
Benzene	10	10	10
BTEX	50	50	50
TPH	100	1,000	5,000
Chloride [a]	250	500	1,000

Notes:

[a] The RRAL for chloride was developed subsequent to the publication of the 1993 guidance document and is therefore not referenced within the 1993 version.

ppm parts per million
BTEX benzene, toluene, ethylbenzene, and xylene
TPH total petroleum hydrocarbons

Background Information

The Form C-141 for Shinnery Fed #1 and North Young Fed 12-1 are attached as **Appendix A**. The New Mexico Oil Conservation Division (NMOCD) previously assigned Remediation Permit (RP) numbers 1RP-3161 and 1RP-3849 to the Shinnery Fed #1 and North Young Fed 12-1 sites, respectively. The following summarizes the site history of the reported release at Shinnery Fed #1 where previous investigations have been completed:

- On February 28, 2014, approximately 20 barrels (bbls) of produced water was released due to an equipment malfunction (3-inch poly water line separated). All released fluids were located off the well pad and within the field (150 yards south of the well pad). No fluids were recovered. The spill area measured approximately

60 feet (north to south) by 40 feet (east to west) in the pasture to the north of the equipment malfunction. No watercourses were reached. Based on the source of the spill (produced water), the contaminants of concern (COCs) were identified as BTEX, TPH, and chloride.

- On March 6, 2014, EOG contracted a third party consultant to conduct a site assessment and to facilitate soil sampling activities utilizing a hand auger within the impacted areas. Twelve samples were collected for vertical and horizontal delineation.
- On April 17, 2014, the third party consultant returned to the site and collected four additional samples. Three samples were collected via direct push drilling technologies for vertical delineation. In addition, one sample was collected for horizontal delineation. The spill area was delineated horizontally.
- On October 25, 2014, EOG contracted CH2M to facilitate soil sampling activities within the impacted areas in conjunction with a remediation company (Watson Construction) that was contracted to excavate impacted soils. CH2M HILL collected seven confirmation samples from an excavated zone within the impacted area. The location of the samples was based on observations made from previous soil sampling efforts by the prior contractor and the purpose was to attempt vertical delineation.
- On November 12, 2014, CH2M returned to the site and collected two additional confirmation samples from a deeper excavation to verify that chloride concentrations substantially decreased with depth.
- In support of a NMOCD- and BLM-approved work plan, dated December 8, 2014, impacted soils to a depth of 5 feet below ground surface (bgs) were removed from the site, a polyethylene liner was installed, and non-impacted backfill was placed over the liner by Watson Construction in January 2015. Limits of the prior excavation and existing liner are provided on **Figure 3**.
- Following review of the investigation report (dated August 19, 2015) summarizing these activities, the NMOCD requested additional characterization of chlorides in soil since, although concentrations decreased with depth, the vertical extent of chlorides above the recommended remedial action levels (RRAL) was not demonstrated.

The results of the soil sampling activities at Shinnery Fed #1 have been previously provided to NMOCD and BLM. Historic sample location figures and a data summary table are provided in **Appendix B** and **Appendix C**. The impacted area was characterized based on potential COCs identified for the site. Only chlorides have been detected in soil; BTEX and TPH have not been detected in soils samples to-date. As a result, the additional site characterization summarized in the following sections will be limited to chlorides in soil. This will include additional characterization for potentially impacted soil associated with the collocated North Young Fed 12-1 site.

Scope of Work

The additional scope of work for this investigation will include excavation of the previously installed 20 mil liner and overlying backfill at Shinnery Fed 12-1. This will be followed by additional soil sampling to further delineate the vertical extent of chlorides in soil below the liner. Should chlorides be present in soil horizontally outside the extent of the previously installed liner based on the release at North Young Fed 12-1, additional soil will be excavated to depths of approximately 4 feet (ft) below ground surface (bgs) in those areas. A replacement 20 mil liner, or extension of the existing liner, will then be installed and clean backfill used to bring the site back to the existing grade.

Field Program

The field work will consist of the following:

1. Excavate soil previously placed as backfill above the liner installed at the site. Excavated soil above the liner will be stockpiled onsite and reused, if possible, based on confirmation sampling. Impacted soil will be disposed offsite.
2. Remove liner to facilitate collection of subsurface soil samples.
3. Collect discrete samples from native soil below the liner to verify that chloride concentrations in soil are declining at an adequate rate with depth to be protective of groundwater.
4. Based on communication with NMOCD "adequate rate with depth" will be demonstrated through the collection of 3 consecutively increasing depth samples, that have no less than a 10 foot variance between the shallowest and deepest sample, and show decreasing concentrations. These samples shall be collected in the eastern portion of the footprint of the original spill to address chloride results of a previous sample collected at 20 ft bgs (1,150 ppm) and an additional sample location for vertical delineation of the more recent spill will be collected near the release point (south end of prior/current release area) at the poly line. Although the deepest sample does not have to be below the RRAL for chloride, there does have to be adequate line of evidence or empirical data to indicate that concentrations are decreasing with depth at a rate that is protective of groundwater.
5. Based on the subsequent release at North Young Fed 12-1, additional soil samples will be collected to support horizontal delineation. Results of those samples demonstrating soil concentrations below the RRAL for chloride or a decrease at an adequate rate with depth will drive the excavation of soil from areas horizontally beyond the current limits of the existing liner to depths of up to 4 feet bgs. Confirmation samples will be used to evaluate soil impacts. Excavated soil that is not suitable for reuse as determined by field screening will be taken to an offsite disposal facility.
6. Replace liner, to include potential changes in footprint of impacted soil below 4 ft bgs that exceeds the RRAL for chloride (but meets the description for declination of an "adequate rate with depth"). Additionally liner will extend beneath valve on polyline to mitigate future potential failure of poly lines at this location.
7. Backfill to grade with clean soil.

Health and Safety

The existing Health and Safety Plan (HSP) will be updated, if necessary, and used during the site investigation activities. The HSP will be maintained on-site and will be reviewed and signed by all personnel entering the work area. All staff will at a minimum be required to wear flame retardant clothing, steel-toed boots, safety glasses, and hard-hats.

Quality Assurance/Quality Control

Confirmation sampling will include standard quality control/quality assurance procedures to minimize cross-contamination of samples and provide reliable laboratory analytical results.

Reporting

A brief letter report will be prepared following completion of the site investigation activities included in this Work Plan and submitted to the NMOCD and BLM for review. It will include updates to the site description, summary of the field investigation and laboratory results, and recommendations for additional investigation or no-further-action.

Work Plan Approval Request

EOG is prepared to initiate the scope of work upon approval by the NMOCD and BLM. If you have any questions or comments with regards to this Work Plan, please do not hesitate to contact Jennifer Dussor at Jennifer.Dussor@ch2m.com or (972) 663-2287. Your timely response is appreciated.

Regards,
CH2M HILL Engineers, Inc.

Russ Weigand
Client Services Manager

Jennifer Dussor
Project Manager

Enclosures:

Figures
Figure 1 Site Location Map
Figure 2 Area Map
Figure 3 Original Excavation Limits

Appendixes
Appendix A C-141 Forms
Appendix B Historical Soil Sample Location Figures
Appendix C Historical Soil Sampling Data Summary

C: Jeff Roberston, BLM
Jamie Keyes, NMOCD
Tomáš 'Doc' Oberding, PhD, NMOCD
Jamie Keyes, NMOCD
Zane Kurtz, EOG

Figures

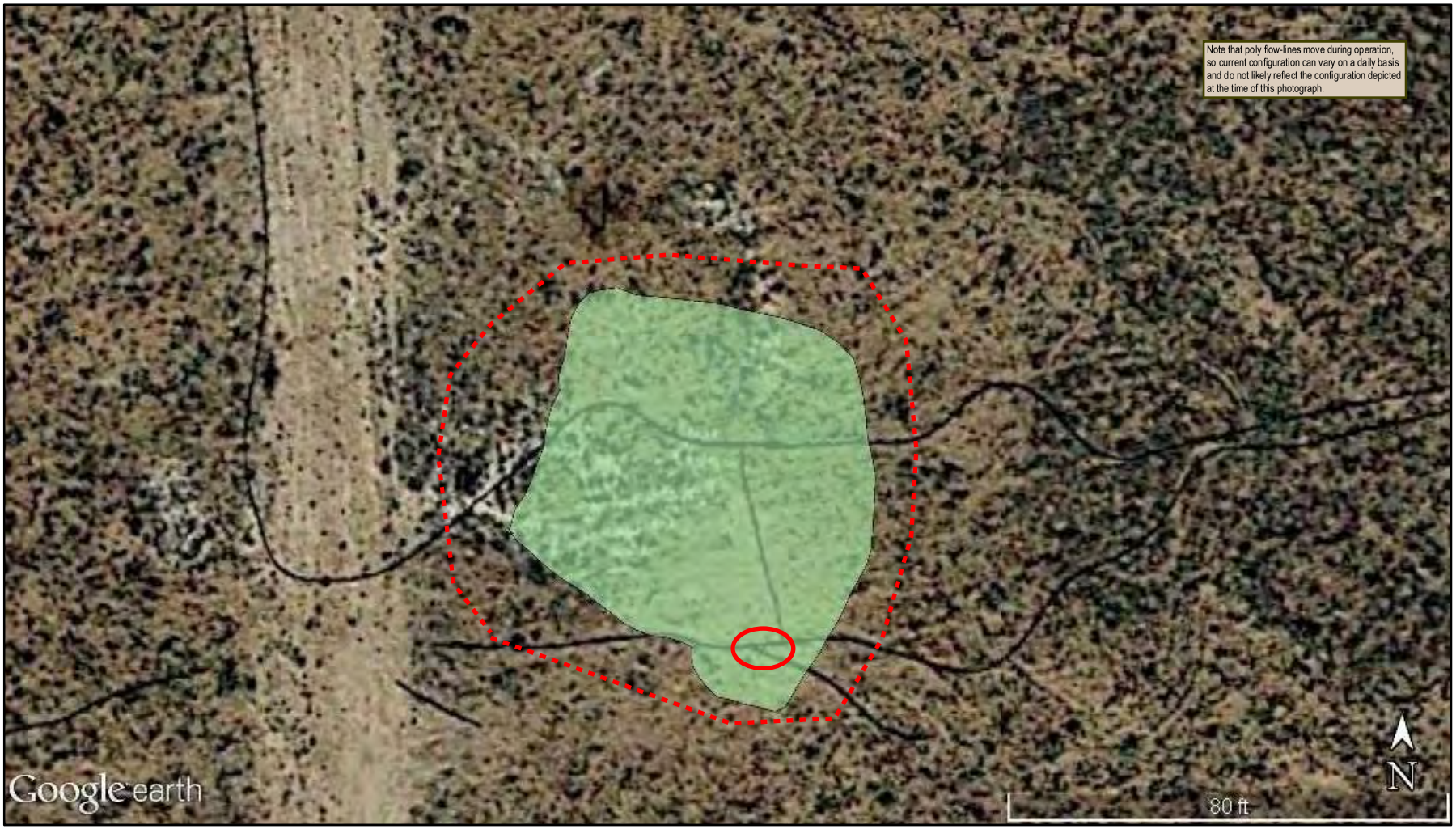
NOTE: This image has been modified from the original. The base map is from Google Earth Pro, but the superimposed information is from CH2M HILL.

FIGURE 1
Site Location Map
EOG Resources - Shinnery Fed #1
Work Plan (1RP3161 and 1RP3849)
Lea County, New Mexico

ch2m

NOTE: This image has been modified from the original. The base map is from Google Earth Pro, but the superimposed information is from CH2M HILL.

FIGURE 2
Area Map
EOG Resources - Shinnery Fed #1
Work Plan (1RP3161 and 1RP3849)
Lea County, New Mexico



NOTE: This image has been modified from the original. The base map is from Google Earth Pro, but the superimposed information is from CH2M HILL.

LEGEND

- Approximate limits of original excavation and subsequent liner installation (Appendix B contains figures depicting historical sample locations)
- Revised limits of area of investigation.
- Area of polyline failure for both spills.

FIGURE 3
Excavation Limits
EOG Resources - Shinnery Fed #1
Work Plan (1RP3161 and 1RP3849)
Lea County, New Mexico

ch2m

Appendix A
C-141 Forms

HOBBS OCD

APR 30 2014

RECEIVED

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

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company – EOG Resources, Inc.	Contact – Ryan Kainer
Address – 5509 Champions Drive, Midland, TX 79706	Telephone No. (432) 686-3662
Facility Name – Shinnery Fed #1	Facility Type – Gas Well

Surface Owner –BLM	Mineral Owner –BLM	API No. 30-025-30247

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	13	18S	32E	1980	South	1980	West	Lea

Latitude 32.7444 Longitude -103.7217

NATURE OF RELEASE

Type of Release – Produced Water	Volume of Release - 20 bbls	Volume Recovered – 0 bbls
Source of Release – 3" Poly line ruptured	Date and Hour of Occurrence: 2/28/2014, 4:00 PM	Date and Hour of Discovery 2/28/2014, 4:00PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Jennifer Van Curen (BLM)	
By Whom? Ryan Kainer	Date and Hour 3/5/2014	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

NA

JRL 5/1/14
DEPTH TO WATER = 50'

Describe Cause of Problem and Remedial Action Taken.*
Approximately 20 bbls of produced water was released from equipment malfunction (3" poly water line seperated). All released fluids are located off the location and within the field (100 yards south of well).

Describe Area Affected and Cleanup Action Taken.*

EOG propose to delineate the impacted area, vertically and horizontally by collecting soil samples and having them analyzed for TPH, BTEX, and Chlorides. The impacted area will be excavated, stockpiled on poly-plastic, and transported to an approved disposal facility. Clean material will be backfilled within the excavated area to normal grade and seeded with BLM seed mix type II.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD 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, NMOCD 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:	OIL CONSERVATION DIVISION
Printed Name: Ryan Kainer	Approved by Environmental Specialist:
Title: Sr. Safety & Environmental Rep.	Approval Date: 7-9-14 Expiration Date: 9-12-14
E-mail Address: ryan_kainer@eogresources.com	Conditions of Approval: Site Supervisor Attached ☐ 7-14-3161
Date: 3/05/2014 Phone: 432-686-3662	

* Attach Additional Sheets If Necessary

Delineate & remediate site as per NMOCD guidelines. Submit final C-141 by 9-12-14

ogrid 7377
RT01419 043007
p t01419 043148

JUL 10 2014

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
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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 August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company EOG Resources, Inc.	Contact Zane Kurtz
Address 5509 Champions Drive, Midland, TX 79706	Telephone No. 432-425-2023
Facility Name **Polyline from North Young Fed 12 -1 near Shinnery Federal #1**	Facility Type **Oil and Gas Well**

Surface Owner **BLM**	Mineral Owner **BLM/EOG**	API No. **30-025-30247**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	13	18S	32E	1980	South	1980	West	Lea

Latitude 32.7444 **Longitude** -103.7217

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release **120 bbls**	Volume Recovered **0 bbls**
Source of Release 3" poly line rupture	Date and Hour of Occurrence 9-9-2015 / 1200	Date and Hour of Discovery 9-9-2015 / 1500
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Shelly Tucker/ BLM 575-361-0084	
By Whom? Zane Kurtz, EOG, 432-425-2023	Date and Hour 9-9-2015 @1625	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
3" poly line came apart at a fussed weld. Released about 120 bbls of produced water. Zero was recovered. Occurred where we had a previous release and installed a poly liner at 4 ft to prevent future releases. 3rd party consultant will go out and delineate spill area and collect samples. Samples will be submitted and a work plan will be submitted to go out and excavate impacted soil and properly remove and dispose of impacted soil. Then area will be backfilled with clean material to normal grade. Hopefully all released fluid was captured in poly line we installed previously.

Describe Area Affected and Cleanup Action Taken.*

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD 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, NMOCD 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: Zane Kurtz 9-9-15	OIL CONSERVATION DIVISION	
Printed Name: Zane Kurtz	Approved by Environmental Specialist:	
Title: Sr. Safety and Environmental Rep., EOG Resources, Inc.	Approval Date:	Expiration Date:
E-mail Address: zane_kurtz@eogresources.com	Conditions of Approval:	Attached ☐
Date: 9-9-2015 Phone: 432-425-2023		

* Attach Additional Sheets If Necessary

Appendix B
Historical Site and Sample Location Figures

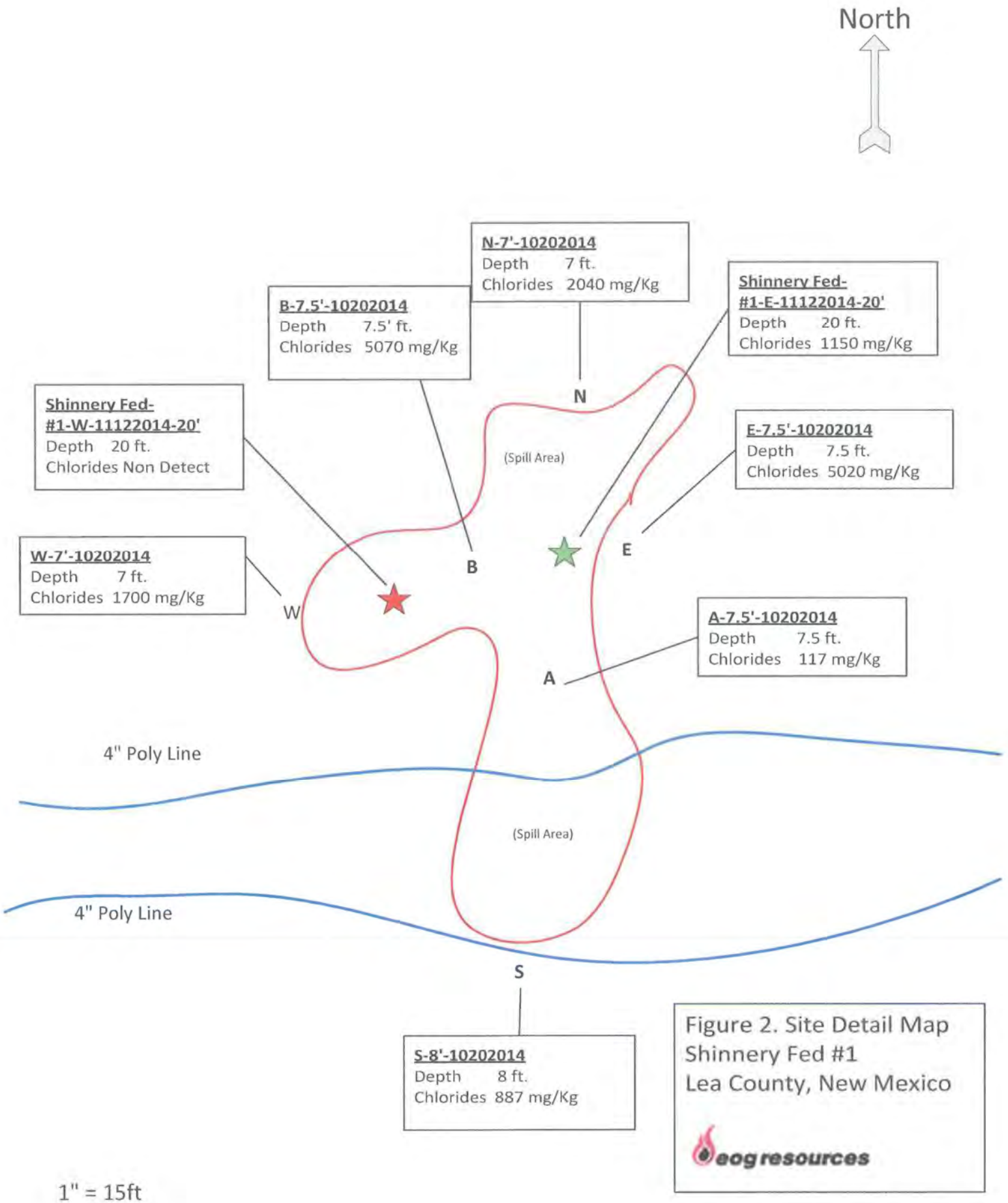
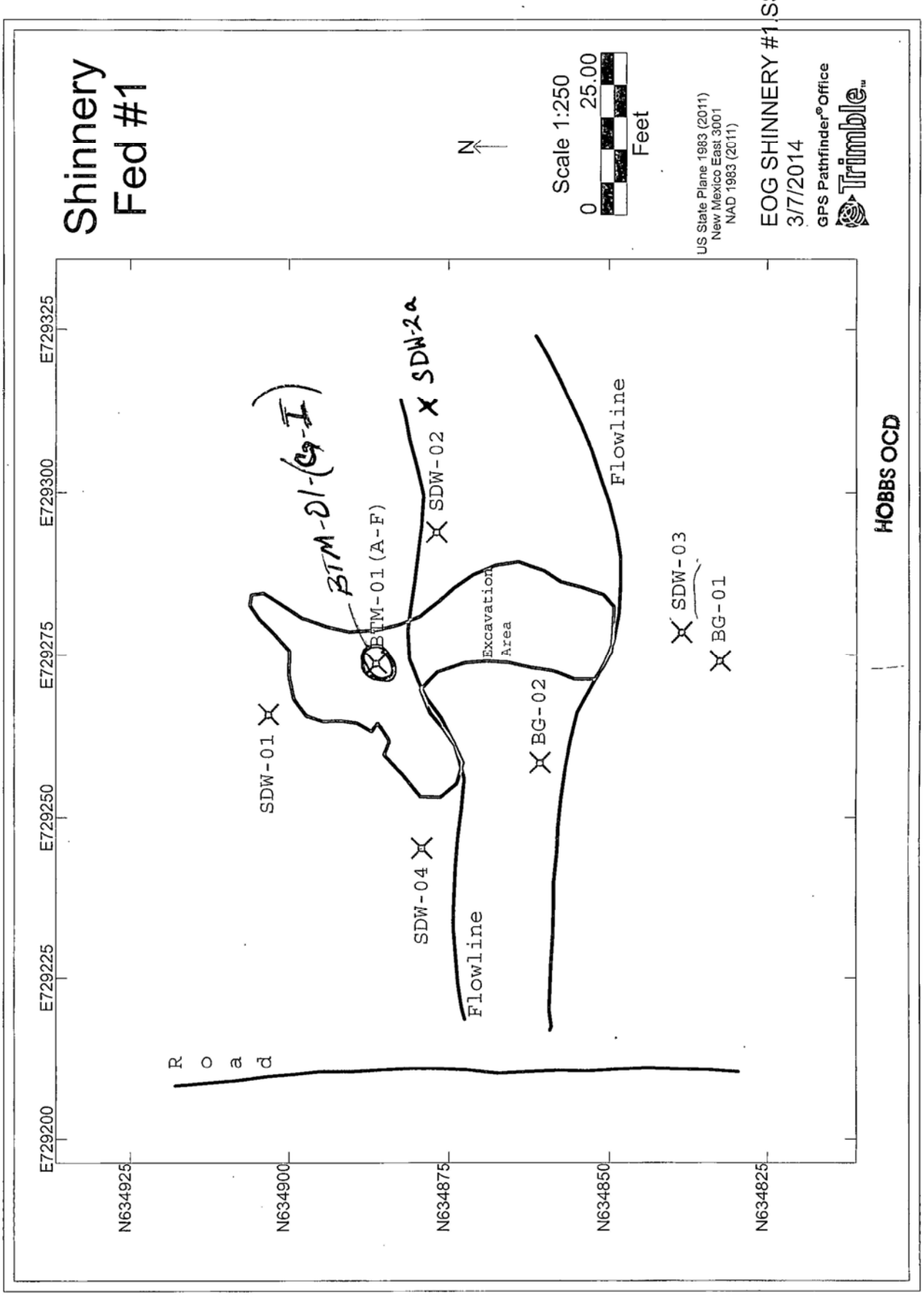


Figure 2. Site Detail Map
Shinnery Fed #1
Lea County, New Mexico

eog resources



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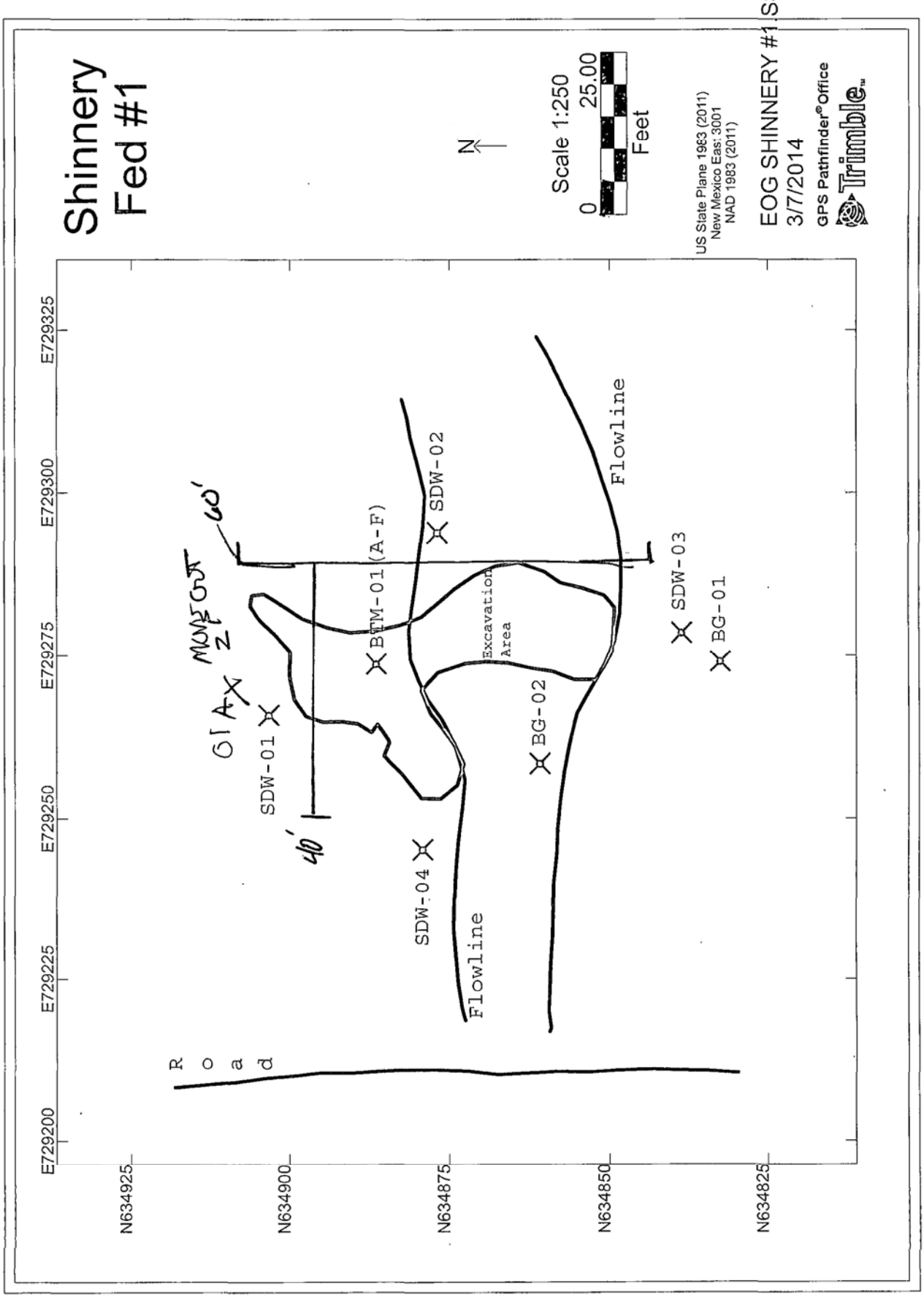
APR 3 0 2014

RECEIVED


Shinnery
Fed #1
N
Scale 1:250
0
25.00
Feet
US State Plane 1963 (2011)
New Mexico East 3001
NAD 1983 (2011)
EOG SHINNERY #1 SSF
3/7/2014
GPS Pathfinder® Office
Trimble
E729200
E729225
E729250
E729275
E729300
E729325
N634925
N634900
N634875
N634850
N634825
Road
SDW-01
SDW-04
BTM-01 (A-F)
SDW-02
BG-02
SDW-03
BG-01
Excavation Area
Flowline
Flowline
40'
60'

Appendix C
Historical Soil Sampling Data Summary

Appendix C. Historical Soil Sampling Data Summary
EOG Resources - Shinnery Fed #1
Final Report (1RP3161)
Lea County, New Mexico

Sample ID	Depth (bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	Chlorides (mg/kg)
SDW-01	0-6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0.0	<4.00	**907**
SDW-02	0-6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	88.4	<4.00	**3,200**
SDW-02a	0-6"	4/17/2014	NA	NA	NA	NA	NA	NA	NA	58
SDW-03	0-6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	53
SDW-04	0-6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<25.0
BTM-01-A	1'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	51.4	<4.00	**4,040**
BTM-01-B	2'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**1,440**
BTM-01-C	3'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**6,280**
BTM-01-D	4'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**11,100**
BTM-01-E	5'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**10,300**
BTM-01-F	6'	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**9,790**
BTM-01-G	10'	4/17/2014	NA	NA	NA	NA	NA	NA	NA	**7,260**
BTM-01-H	15'	4/17/2014	NA	NA	NA	NA	NA	NA	NA	**3,290**
BTM-01-I	18'	4/17/2014	NA	NA	NA	NA	NA	NA	NA	**4,650**
BG-01	0-6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	154
BG-02	0-6"	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**4,250**
S-8'-10202014	8'	10/20/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**887**
A-7.5'-10202014	7.5'	10/20/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	117
B-7.5'-10202014	7.5'	10/20/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**5,070**
W-7'-10202014	7'	10/20/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**1,700**
BG-7'-10202014	7'	10/20/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	30.1
N-7'-10202014	7'	10/20/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**2,040**
E-7.5'-10202014	7.5'	10/20/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**5,020**
Shinnery Fed #1-W-11122014-20'	20'	11/12/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<25.0
Shinnery Fed #1-E-11122014-20'	20'	11/12/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	**1,150**

Table Notes:
bold values above Recommended Remedial Action Levels (RRALs)
bgs below ground surface
mg/kg milligram per kilogram
NA not analyzed
' feet
" inches

APPROVED

Ensure BLM concurrence/approval.

May 31, 2016 Reference No. 088210-20

Mr. Zane Kurtz
Sr. Safety and Environmental Representative
5509 Champions Drive.
Midland, TX 79706
VIA E-Mail: zane_kurtz@eogresources.com

Dear Mr. Kurtz:

Re: Assessment Summary Report
North Young Fed 12-1 near Shinnery Federal No. 1 (API #30-025-30247)
1RP-3849
EOG Resources, Inc.
Site Location: Unit K, Sec. 13, T 18-S, R 32-E
(Lat 32.7444°, Long -103.7217°)
Lea County, New Mexico

GHD Services, Inc. is pleased to present this report for the above referenced site. Assessment activities were performed on February 29 and April 25, 2016 at the North Young Fed 12-1 (hereafter referred to as the "Site"). A historical release occurred at this Site that was known as the Shinnery Federal No. 1. The Site is located within Unit K, Section 13, Township 18 South, Range 32 East, in Lea County, New Mexico (Figure 1).

The Site is an active oil and gas well site approximately 12 miles south of Maljamar, New Mexico. According to EOG personnel, a release of approximately 120 barrels (bbls) of produced water occurred when a three inch poly line ruptured at a fuse weld. The release was discovered on September 9, 2015 and none of the fluids were recovered. A C-141 Form was submitted to the New Mexico Oil Conservation Division (NMOCD) on September 9, 2015 and remediation permit (RP) number 1RP-3849 was assigned. The location of the September 9, 2015 release was the same as a former release associated with the Shinnery Federal No. 1 that occurred on February 28, 2014.

The February 28, 2014 release was approximately 20 bbls of produced water all of which were unrecoverable. From February 28, 2014 and January 13, 2015 a third party contractor and CH2M Hill of Dallas, TX performed assessment and remedial activities in response to the Shinnery Federal No. 1 release. The horizontal extent of the release was delineated, impacted soils from the horizontal release footprint were excavated, a 20 millimeter (mm) liner was placed within the excavation and covered with clean fill. Approximately 712 cubic yards (yd^3) of impacted soil were removed from the excavation and disposed of at the Lea Land Landfill in Carlsbad, NM. Approximately 1,008 yd^3 of clean fill from Canvas Ranch were placed over top of the liner. All remedial efforts were performed by Watson Construction and overseen by CH2M Hill. Details of remedial activities were reported to the

NMOCD and the Bureau of Land Management (BLM) in a report dated August 19, 2015 that was submitted by CH2M Hill. Remedial closure for the Shinnery Federal No. 1 release was not granted by the NMOCD since the vertical extent of soil impacts had not been fully assessed.

The second release at the Site, associated with the North Young Fed 12-1, occurred on September 9, 2015. Soil impacts were localized to the area in and around the previous Shinnery Federal No. 1 lined and backfilled excavation. Due to the volume of the North Young Fed 12-1 release (120 bbls) the horizontal extent of impacted soils extended beyond the previously lined area. A work plan dated September 28, 2015 proposed by CH2M Hill was submitted to and approved by the NMOCD and BLM. The work plan detailed the horizontal and vertical delineation, excavation, and subsequent backfilling and lining of the newly impacted area. From October 1, 2015 through December 18, 2015 CH2M Hill performed the following assessment activities:

- Soil samples were collected from around the edge of the visibly impacted area.
- Impacted soils were excavated from on top of and around the previously lined area to and extent of approximately 100 feet by 100 feet.
- The previous placed liner was removed for further excavation of soil to a depth of approximately five feet bgs.
- Two soil borings were advanced in order to assess the vertical extent of chloride impacts in the area.

Consulting responsibilities were transferred to GHD prior to installation of a replacement liner and backfilling of the excavation.

Due to the uncertainty of the sample locations and the horizontal extent assessed by CH2M Hill, GHD completed additional soil sampling at the North Young Fed 12-1 release. Sampling was performed by GHD on February 29, 2016 and April 25, 2016 and discussed further in this report.

1. Introduction

There are relatively few groundwater wells in the area of the Site with which to obtain a depth to groundwater. Based on information available from the New Mexico Tech Pit Portal website, the closest USGS gauging site is located approximately 2.75 miles northwest of the site. The data from this website indicates groundwater at a depth of approximately 84 feet below ground surface (bgs). It was also observed by CH2M Hill during drilling activities on December 17 and 18, 2015 that groundwater was not present in two soil borings advanced to 50 feet bgs.

There do not appear to be any well head protection areas and no surface water bodies within 200 to 1000 ft of the Site. Therefore, the preliminary total ranking score for the Site is 10 (see table below).

Based on this score, the applicable NMOCD Site-specific Recommended Remediation Action Limits (RRALs) are 10 milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for total benzene, toluene, ethylbenzene, and xylenes (BTEX), 1000 mg/kg for total petroleum hydrocarbons (TPH), and 250 mg/kg for chlorides.

New Mexico Oil Conservation Division Site Assessment	
Ranking Criteria	Score
Depth to Ground Water (>50 ft bgs,< 100 ft bgs)	10
Wellhead Protection Area (> 1000 ft from water source, > 200 ft from domestic source)	0
Distance to Surface Body Water (> 1000 ft)	0
Ranking Criteria Total Score	**10***
*Because the ranking criteria total score is 10, NMOCD established RRALs are 10 mg/kg for benzene, 50 mg/kg for total BTEX, 1,000 mg/kg for TPH[1], and 250 mg/kg for chlorides.	

1. NMOCD Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993

2. Assessment Activities

Site assessment activities were initially performed by CH2M Hill of Dallas, Texas between October 1 and December 18, 2015. Soil assessment activities (excavation and drilling) were performed and soil samples were analyzed by TraceAnalysis, Inc. (TraceAnalysis) of Lubbock, Texas.

The analytical data obtained from the soil samples collected by CH2M Hill indicated that the horizontal extent of chloride concentrations had been delineated to below the RRAL. However, the exact locations of the collected samples were unknown to EOG or GHD at the time of the transfer of consulting responsibilities in February of 2016. The vertical extent of chloride concentrations were delineated by the advancement of two soil borings overseen by CH2M Hill in December of 2015. The results of the soil boring analytical data can be referenced on Figure 2.

Further soil sampling to confirm the horizontal extent of chloride impacts to soil was performed by GHD on February 29, 2016 and April 25, 2016. A total of eight soil samples were collected using a hand auger at a depth of approximately 4.5 feet bgs in each location on February 29, 2016. The samples were submitted to Hall Environmental Analysis Laboratory (HEAL) of Albuquerque, New Mexico for analysis of chloride by EPA Method 300. The results of the samples indicated that the horizontal extent of the chloride was assessed except for the southern end of the site (sample number S-088210-20-022916-SP-02). Three additional soil samples were collected in this area on April 25 and analyzed for chloride by EPA Method 300 by HEAL. The results of these samples were below the laboratory reporting limit.

The impacted soil located at the southern portion of the excavation (indicated by sample S-088210-20-022916-SP-02) was excavated on May 20, 2016. Laboratory analytical results from the February and April 2016 sampling indicate that chloride concentrations in the samples that were submitted were below the RRAL for chloride (Figure 2). Based on this, it appears that the vertical and horizontal extent of chloride has been fully assessed at the site.

3. Summary and Recommendations

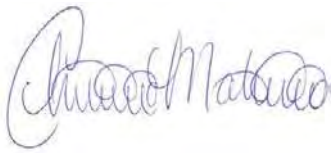
Based on the assessment of the petroleum hydrocarbon and chloride concentrations, GHD recommends the following:

- Placement of a 20 mil polyethylene liner in the bottom of the excavation at a depth of 4.5 to 5 ft bgs.
- Backfilling of the excavation with clean fill material and wheel compacting to grade.
- Fertilizing and reseeding of the disturbed area with a BLM-approved seed mix.

Following completion of the above activities EOG will request that no further action be required for the Site. Should you have any questions, or require additional information regarding this submittal, please feel free to contact myself or Bernie Bockisch at (505) 884-0672 or Bernard.Bockisch@ghd.com.

Sincerely,

GHD



Bernard Bockisch
Senior Project Manager

Christine Mathews,
Staff Scientist

BB/mc/02

SOURCE: USGS 7.5 MINUTE QUAD
"LAGUNA GATUNA NW, DOG LAKE, GREENWOOD LAKE, AND MALJAMAR, NEW MEXICO"

LAT/LONG: 32.7444° NORTH, 103.7217° WEST
COORDINATE: NAD83 DATUM, U.S. FOOT
STATE PLANE ZONE - NEW MEXICO EAST

Figure 1

SITE LOCATION MAP
NORTH YOUNG FED 12-1
LEA COUNTY, NEW MEXICO
EOG Resources

088210-20(000)GN-DL001 MAY 26/2016

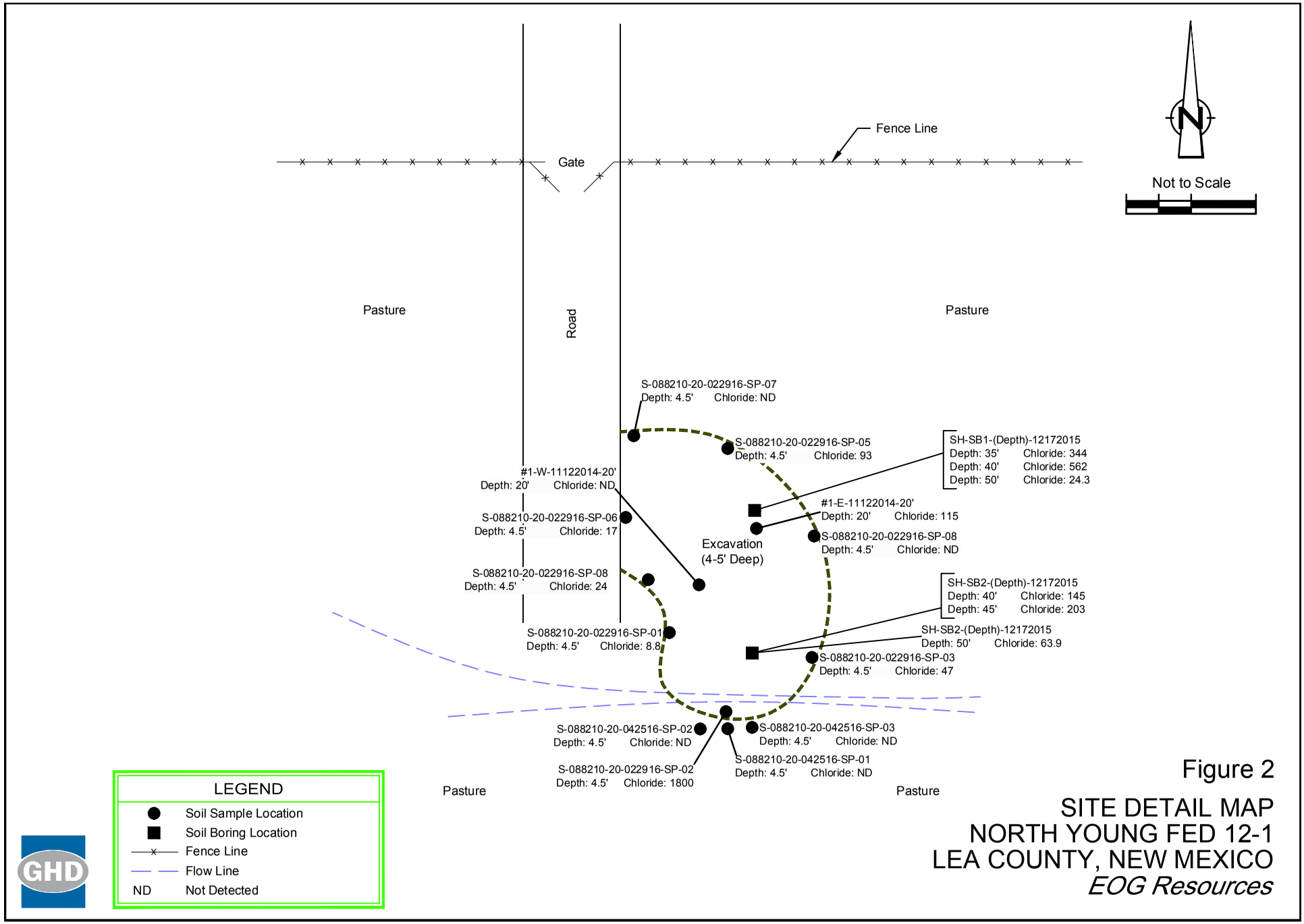


Figure 2

SITE DETAIL MAP
NORTH YOUNG FED 12-1
LEA COUNTY, NEW MEXICO
EOG Resources

088210-20(000)GN-DL001 MAY 26/2016

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 11, 2016

Bernie Bockish
GHD
6121 Indian School Road, NE #200
Albuquerque, NM 87110
TEL: (505) 884-0672
FAX

RE: North Young Fed 12-1 OrderNo.: 1603190

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 8 sample(s) on 3/3/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1603190**
Date Reported: **3/11/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Lab Order:** 1603190
Project: North Young Fed 12-1

Lab ID: 1603190-001 **Collection Date:** 2/29/2016 3:30:00 PM
Client Sample ID: S-088210-20-022916-SP-01 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	8.8	7.5		mg/Kg	5	3/8/2016 11:43:33 PM	24147

Lab ID: 1603190-002 **Collection Date:** 2/29/2016 3:40:00 PM
Client Sample ID: S-088210-20-022916-SP-02 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	1800	75		mg/Kg	50	3/10/2016 3:52:37 AM	24147

Lab ID: 1603190-003 **Collection Date:** 2/29/2016 3:45:00 PM
Client Sample ID: S-088210-20-022916-SP-03 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	47	7.5		mg/Kg	5	3/9/2016 12:58:01 AM	24147

Lab ID: 1603190-004 **Collection Date:** 2/29/2016 3:50:00 PM
Client Sample ID: S-088210-20-022916-SP-04 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	1.5		mg/Kg	1	3/9/2016 1:47:40 AM	24147

Lab ID: 1603190-005 **Collection Date:** 2/29/2016 4:00:00 PM
Client Sample ID: S-088210-20-022916-SP-05 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	93	7.5		mg/Kg	5	3/9/2016 2:12:29 AM	24147

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order: **1603190**
Date Reported: **3/11/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: North Young Fed 12-1
Lab Order: 1603190

Lab ID: 1603190-006 **Collection Date:** 2/29/2016 4:05:00 PM
Client Sample ID: S-088210-20-022916-SP-06 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	17	7.5		mg/Kg	5	3/9/2016 2:37:18 AM	24147

Lab ID: 1603190-007 **Collection Date:** 2/29/2016 4:10:00 PM
Client Sample ID: S-088210-20-022916-SP-07 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	7.5		mg/Kg	5	3/9/2016 3:02:08 AM	24147

Lab ID: 1603190-008 **Collection Date:** 2/29/2016 4:15:00 PM
Client Sample ID: S-088210-20-022916-SP-08 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	24	7.5		mg/Kg	5	3/9/2016 3:26:57 AM	24147

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603190**

11-Mar-16

Client: GHD

Project: North Young Fed 12-1

Sample ID	**MB-24147**	SampType:	**MBLK**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**24147**		RunNo:	**32667**				
Prep Date:	**3/8/2016**	Analysis Date:	**3/8/2016**		SeqNo:	**999625**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-24147**	SampType:	**LCS**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**24147**		RunNo:	**32667**				
Prep Date:	**3/8/2016**	Analysis Date:	**3/8/2016**		SeqNo:	**999626**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.0	90	110			

Sample ID	**1603190-001AMS**	SampType:	**MS**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**S-088210-20-022916**	Batch ID:	**24147**		RunNo:	**32667**				
Prep Date:	**3/8/2016**	Analysis Date:	**3/8/2016**		SeqNo:	**999650**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	21	7.5	15.00	8.790	79.2	64.2	131			

Sample ID	**1603190-001AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**S-088210-20-022916**	Batch ID:	**24147**		RunNo:	**32667**				
Prep Date:	**3/8/2016**	Analysis Date:	**3/9/2016**		SeqNo:	**999651**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	23	7.5	15.00	8.790	93.6	64.2	131	9.98	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD Work Order Number: 1603190 RcptNo: 1

Received by/date: 03/03/16

Logged By: Ashley Gallegos 3/3/2016 9:50:00 AM

Completed By: Ashley Gallegos 3/3/2016 1:50:15 PM

Reviewed By: 03/03/16

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

Client: GHD - Albuquerque

Mailing Address: 6121 Indian School Rd NE Ste 200

Albuquerque, NM, 87110

Phone #: 505-884-0672

Email or Fax#: Bernard.Bockisch@ghd.com

QA/QC Package: ☑ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time: ☑ Standard ☐ Rush

Project Name: North Young Fed 12-1

Project #: 088210/20

Project Manager: Bernard Bockisch 505-280-0572

Sampler: Steve Perez

On Ice: ☑ Yes ☐ No

Sample Temperature: 24+1.0 = 1.4°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1603190	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chlorides 300.0				Air Bubbles (Y or N)
2-29-16	1530	Soil	S-088210-20-022916-SP-01	4ozglass-1	Ice	-001												X				
	1540		S-088210-20-022916-SP-02			-002																
	1545		S-088210-20-022916-SP-03			-003																
	1550		S-088210-20-022916-SP-04			-004																
	1600		S-088210-20-022916-SP-05			-005																
	1605		S-088210-20-022916-SP-06			-006																
	1610		S-088210-20-022916-SP-07			-007																
	1615		S-088210-20-022916-SP-08			-008																

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
2-29-16	8:20	Steve Perez		3/2/16	0820	
Date:	Time:	Relinquished by:	Received by:	Date	Time	
				03/03/16	0950	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 29, 2016

Bernie Bockish
GHD
6121 Indian School Road, NE #200
Albuquerque, NM 87110
TEL: (505) 884-0672
FAX

RE: North Young Fed 12-1 OrderNo.: 1604B57

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 3 sample(s) on 4/27/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1604B57**
Date Reported: **4/29/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: North Young Fed 12-1
Lab Order: 1604B57

Lab ID: 1604B57-001 **Collection Date:** 4/25/2016 4:00:00 PM
Client Sample ID: S-088210-20-042516-SP-01 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **SRM**	
Chloride	ND	30		mg/Kg	20	4/28/2016 12:51:47 PM	25067

Lab ID: 1604B57-002 **Collection Date:** 4/25/2016 4:05:00 PM
Client Sample ID: S-088210-20-042516-SP-02 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **SRM**	
Chloride	ND	30		mg/Kg	20	4/28/2016 1:29:02 PM	25067

Lab ID: 1604B57-003 **Collection Date:** 4/25/2016 4:10:00 PM
Client Sample ID: S-088210-20-042516-SP-03 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **SRM**	
Chloride	ND	30		mg/Kg	20	4/28/2016 2:06:15 PM	25067

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1604B57**

29-Apr-16

Client: GHD

Project: North Young Fed 12-1

Sample ID	**MB-25067**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**25067**	RunNo:	**33881**					
Prep Date:	**4/28/2016**	Analysis Date:	**4/28/2016**	SeqNo:	**1043530**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-25067**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**25067**	RunNo:	**33881**					
Prep Date:	**4/28/2016**	Analysis Date:	**4/28/2016**	SeqNo:	**1043531**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD Work Order Number: 1604B57 RcptNo: 1

Received by/date: RM 04/27/16

Logged By: Ashley Gallegos 4/27/2016 9:30:00 AM

Completed By: Ashley Gallegos 4/27/2016 10:05:22 AM

Reviewed By: 04/27/16

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client: GHD - Albuquerque

Mailing Address: 6121 Indian School Rd NE

Ste 200, Albuquerque, NM, 87110

Phone #: 505-884-0672

Email or Fax#: Bernard.Bockisch@ghd.com

QA/QC Package: ☑ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ NELAP ☐ Other

EDD (Type)

Turn-Around Time: ☐ Standard ☑ Rush 48hr

Project Name: North Young Fed 12-1

Project #: 088210/20

Project Manager: Bernard Bockisch 505-280-0572

Sampler: Steve Perez

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.4

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1604857	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	X Chloride 300.0				Air Bubbles (Y or N)
4-25-16	1600	Soil	S-088210-20-042516-SP-01	4oz glass-1	Ice	-001												X				
↓	1605	Soil	S-088210-20-042516-SP-02	↓	↓	-002												↓				
↓	1610	Soil	S-088210-20-042516-SP-03	↓	↓	-003												↓				

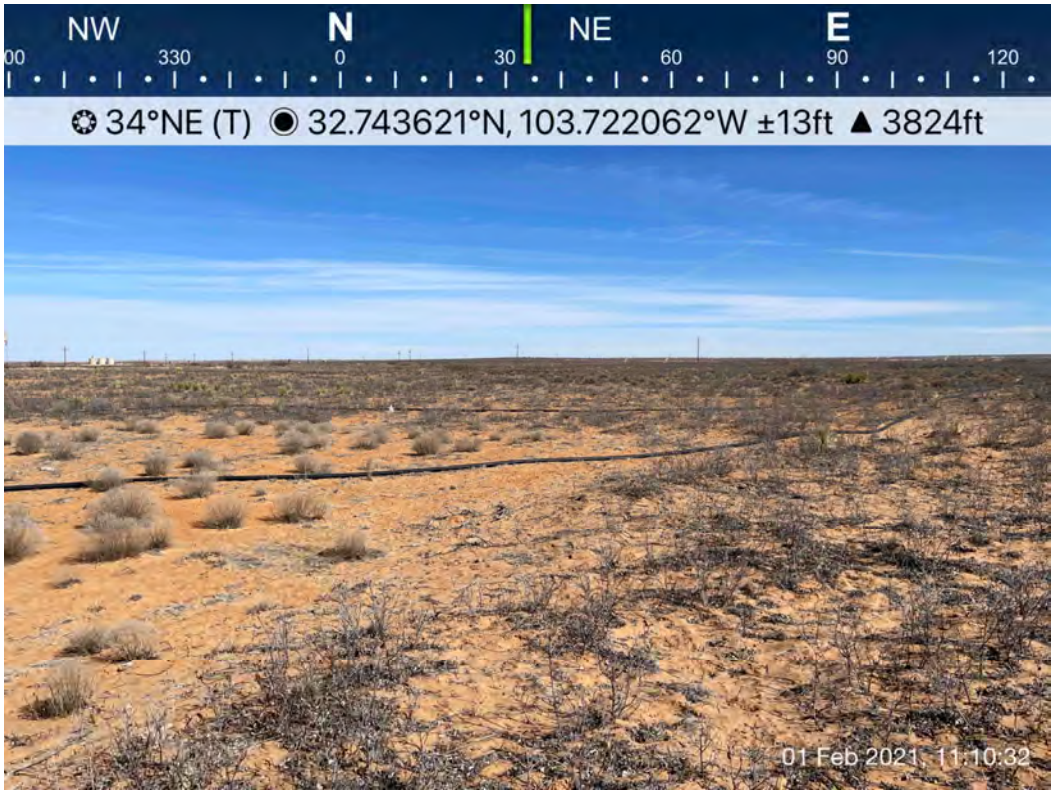
Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
4/26/16	0730	Steve Perez		4/26/16	0730	
4/26/16	1900			04/27/16	0930	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

ATTACHMENT D
Photographic Documentation

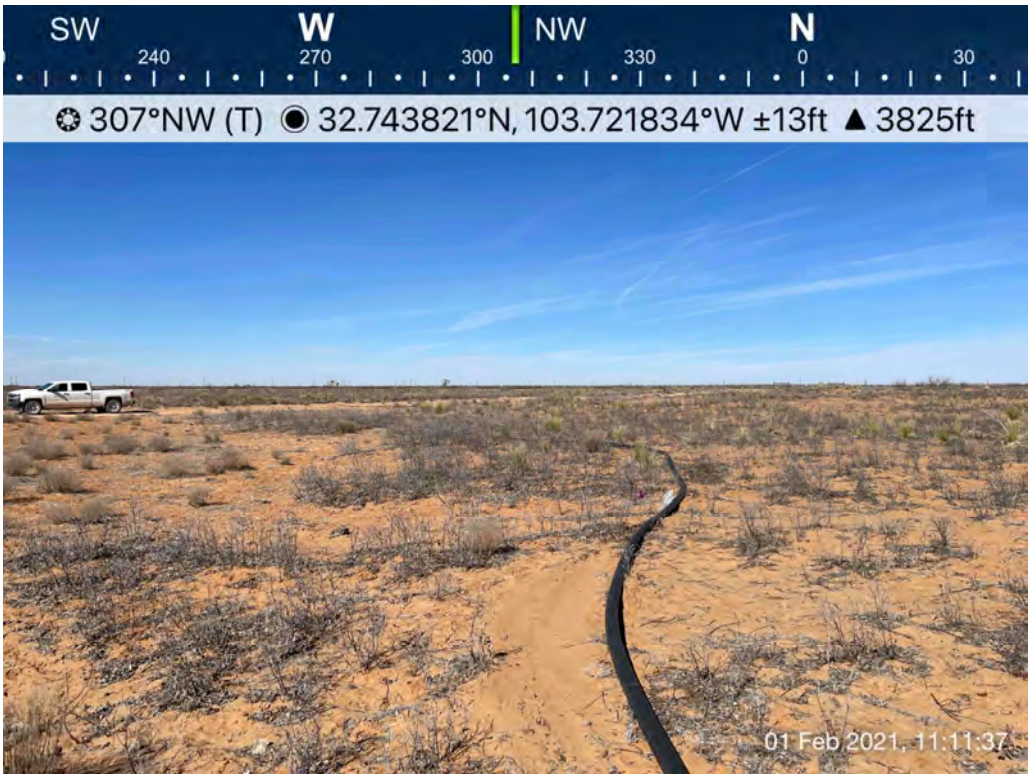
EOG Resources
Shinnery Federal #001
Lea County, New Mexico

View of Remediated Area – View Southeast

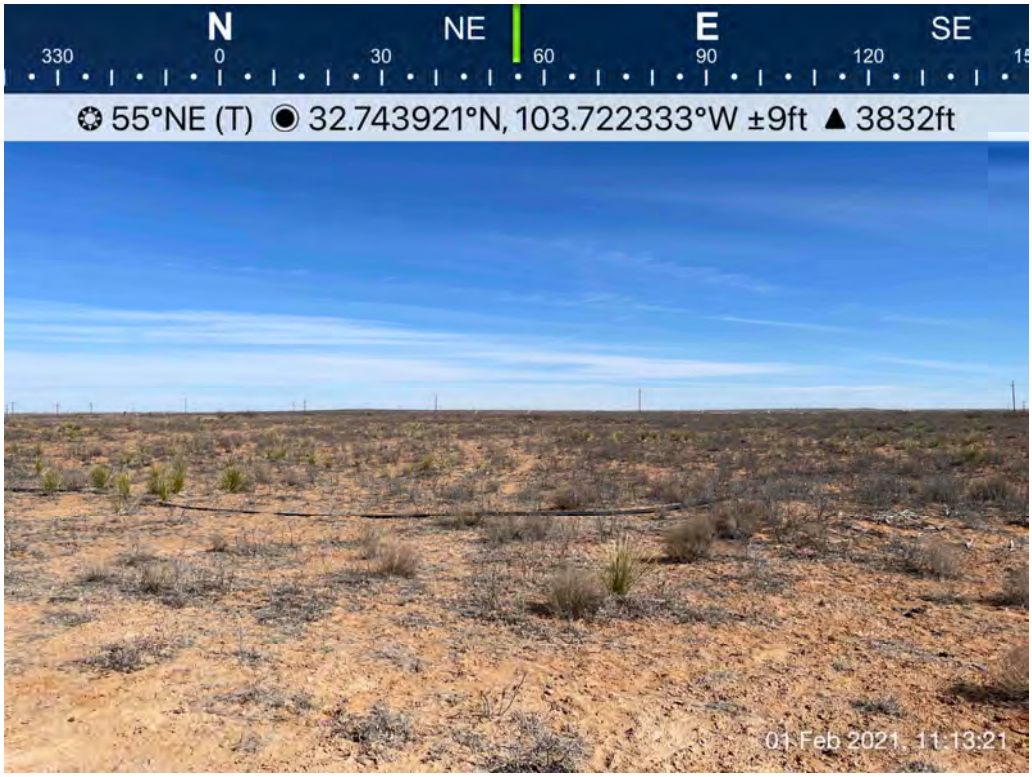


View of Remediated Area – View North

EOG Resources
Shinnery Federal #001
Lea County, New Mexico



View of Remediated Area – View West



View of Remediated Area – View Northeast

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 57358

CONDITIONS

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 57358
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	1/4/2023