

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 32.7444°, -103.7217°, 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



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 (yd³) of impacted soil were removed from the excavation and disposed of at the Lea Land Landfill in Carlsbad, NM. Approximately 1,008 yd³ 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



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

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

APR Ball Minerals and Natural Resources

Form C-141
Revised August 8, 2011

Oil Conservation Division RECEIVED 20 South St. Francis Dr. Santa Fe. NM 87505

Submit 1 Copy to appropriate District Office in **RECEIVED** Cordance with 19.15.29 NMAC.

			Rela	ase Notifi	cation	and Co	rrective A	ction			
			11011			OPERA]		E E	ZI Initis	ıl Report	Final R
Name of Company – EOG Resources, Inc.			Contact – R		<u> </u>						
				No. (432) 686-3	662	·····					
Facility Name – Shinnery Fed #1			Facility Typ	e – Gas Well							
Surface Ow	ner –BLM		. <u>-</u>	Mineral (Owner –	BLM	<u>, , , , , , , , , , , , , , , , , , , </u>	Т	API No	. 30-025-	30247
				LOC	ATION	OF REI	EASE				
Unit Letter K	Section 13	Township 18S	Range 32E	Feet from the 1980	North/	South Line South	Feet from the 1980	East/Wc We		County Lea	· · · · · · · · · · · · · · · · · · ·
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By Whom? I							our 3/5/2014				
Was a Water	course Read		5	1		If YES, Vo	lume Impacting	the Waterc	course.		
			Yes 🛚								<u> </u>
If a Watercou	ırse was Im	pacted, Descr	ibe Fully.	•					-1,14	ע	
NA								arl Dept	TH TO	T WATE	R=501
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Describe Are	a Affected	and Cleanup	Action Tal	cen.*			·				
Chlorides. T	he impacted	l area will be	excavated		oly-plasti	ic, and transpo	oil samples and h orted to an appro- pe II.				
regulations a public health should their o	II operators or the envioperations h nment, In a	are required to ronnient. The lave failed to addition, NMC	o report and acceptant adequately DCD accep	nd/or file certain ce of a C-141 rep investigate and	release no ort by the remediate	otifications and NMOCD me contaminati	knowledge and und perform correct arked as "Final Roon that pose a three the operator of	ctive actior leport" doc reat to grou	ns for release as not reliand water	eases whic eve the op , surface v	h may endanger erator of liability vater, human heal
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Signature:	/	=									
Printed Name	e: Ryan Kai	ner				Approved by	Environmental 8	pecialist:	4		
Title: Sr. Saf	ety & Envir	onmental Rep	o			Approval Dat	c: 2-9-1	9 Ex	piration	Date: 9	-12-19
E-mail Addre	ess: ryan_ka	niner@eogres	ources.cor	3		Conditions of	Approval:	-1_		Attache	d 🔲
Date: 3/05/	2014	;	Phone	: 432-686-3662			•			アー/	4-3161
Attach Addi		ets If Necess	sary			Dohnol	o & roudate	550	4		のター・イ チン
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						Fml	1000 gml	9-12-1	/9		p 101419

		Page 6 of 9.	5
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 X 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 X 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						
X 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						
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						
X Topographic/Aerial maps						
X 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.

Received by OCD: 10/21/2021 3:41:28 PM Form C-141 State of New Mexico Page 4 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. James Kennedy Printed Name: Title: Environmental Specialist ____ Date: __2/25/2021____ Signature: Telephone: 432-258-4346 James.Kennedy@eogresources.com email: **OCD Only** Received by: Date:

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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 it	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 must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office
☐ ☐ Laboratory analyses of final sampling (Note: appropriate ODG	C District office must be notified 2 days prior to final sampling)
☑ Description of remediation activities	
and regulations all operators are required to report and/or file certai may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and replacement human health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regular restore, reclaim, and re-vegetate the impacted surface area to the conformation of the Conformat	ations. The responsible party acknowledges they must substantially onditions that existed prior to the release or their final land use in OCD when reclamation and re-vegetation are complete.
Signature: James F. Kennedy	Date:2/25/2021
email:James.Kennedy@eogresources.com	Telephone: 432-258-4346
OCD Only	
Received by:	Date:
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible for regulations.
Closure Approved by: Hall	Date: _1/4/2023
Printed Name: Brittany Hall	Title: Environmental Specialist

District 1 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

State of New Mexico Energy Minerals and Natural Re

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

Oil Conservation Division 1220 South St. Francis Dr.

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

District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa Fe, NM 87505 Release Notification and Corrective Action **OPERATOR** Name of Company EOG Resources, Inc. Contact Zane Kurtz Telephone No. 432-425-2023 Address 5509 Champions Drive, Midland, TX 79706 Facility Name Polyline from North Young Fed 12-1 near Facility Type Oil and Gas Well Shinnery Federal #1 Mineral Owner BLM/EOG API No. 30-025-30247 Surface Owner BLM LOCATION OF RELEASE Feet from the North/South Line Feet from the East/West Line County Township Range Unit Letter Section 1980 West 32E 1980 South 188 13 Longitude -103.7217 Latitude 32.7444 NATURE OF RELEASE Volume of Release 120 bbls Volume Recovered 0 bbls Type of Release Produced Water Date and Hour of Occurrence Date and Hour of Discovery Source of Release 3" poly line rupture 9-9-2015 / 1500 9-9-2015 / 1200 If YES, To Whom? Was Immediate Notice Given? ✓ Yes ☐ No ☐ Not Required Shelly Tucker/ BLM 575-361-0084 By Whom? Zane Kurtz, EOG, 432-425-2023 Date and Hour 9-9-2015 @1625 If YES, Volume Impacting the Watercourse. Was a Watercourse Reached? Yes No 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. OIL CONSERVATION DIVISION 9-9-15 Signature: Jan & lhye Approved by Environmental Specialist: Printed Name: Zane Kurtz Approval Date: 09/11/2015 Expiration Date: 11/11/2015 Title: Sr. Safety and Environmental Rep., EOG Resources, Inc. E-mail Address: zane kurtz@eogresources.com Conditions of Approval: Attached Discrete site samples required. Delineate and 1RP 3849 remediate per NMOCD guidelines. Phone: 432-425-2023 9-9-2015 Geotagged photos of remediation required. Attach Additional Sheets If Necessary nJXK1525445337

Ensure BLM concurrence/approval.

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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.

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 X 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 X No				
Are the lateral extents of the release within a 100-year floodplain?	Yes X No				
Did the release impact areas not on an exploration, development, production, or storage site?	Yes X 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.

Received by OCD: 10/21/2021 3:41:28 PM Form C-141 State of New Mexico Page 4 Oil Conservation Division

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

I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release not public health or the environment. The acceptance of a C-141 report by the failed to adequately investigate and remediate contamination that pose a thr addition, OCD acceptance of a C-141 report does not relieve the operator of and/or regulations.	ifications and perform corrective actions for releases which may endanger OCD does not relieve the operator of liability should their operations have eat to groundwater, surface water, human health or the environment. In
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:

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		- "8" 0,
Incident ID		
District RP	1RP-3849	
Facility ID		
Application ID		

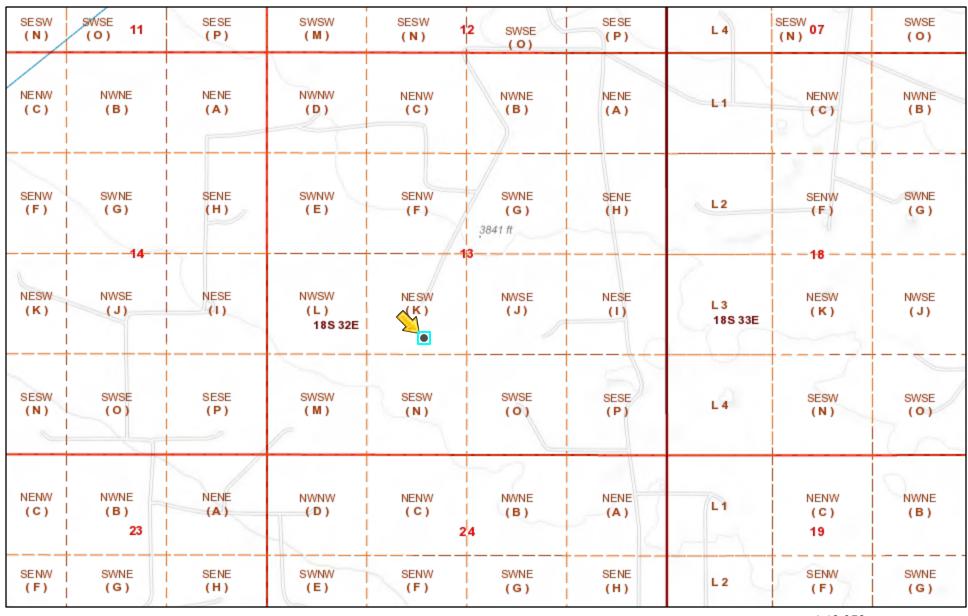
Closure

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 i	toms must be included in the closure report
Closure Report Attachment Checknst: Each of the Johnwing t	иеть тим ое темией т те столиге герогі.
A scaled site and sampling diagram as described in 19.15.29.1	11 NMAC
Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office
☐ ☐ Laboratory analyses of final sampling (Note: appropriate ODG	C District office must be notified 2 days prior to final sampling)
☐ Description of remediation activities	
and regulations all operators are required to report and/or file certai may endanger public health or the environment. The acceptance of	ations. The responsible party acknowledges they must substantially onditions that existed prior to the release or their final land use in
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:
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible for regulations.
Closure Approved by: Ham Hall	Date: _1/4/2023
Printed Name: Brittany Hall	Title: Environmental Specialist

ATTACHMENT B Site Characterization Data

Shinnery Federal #1





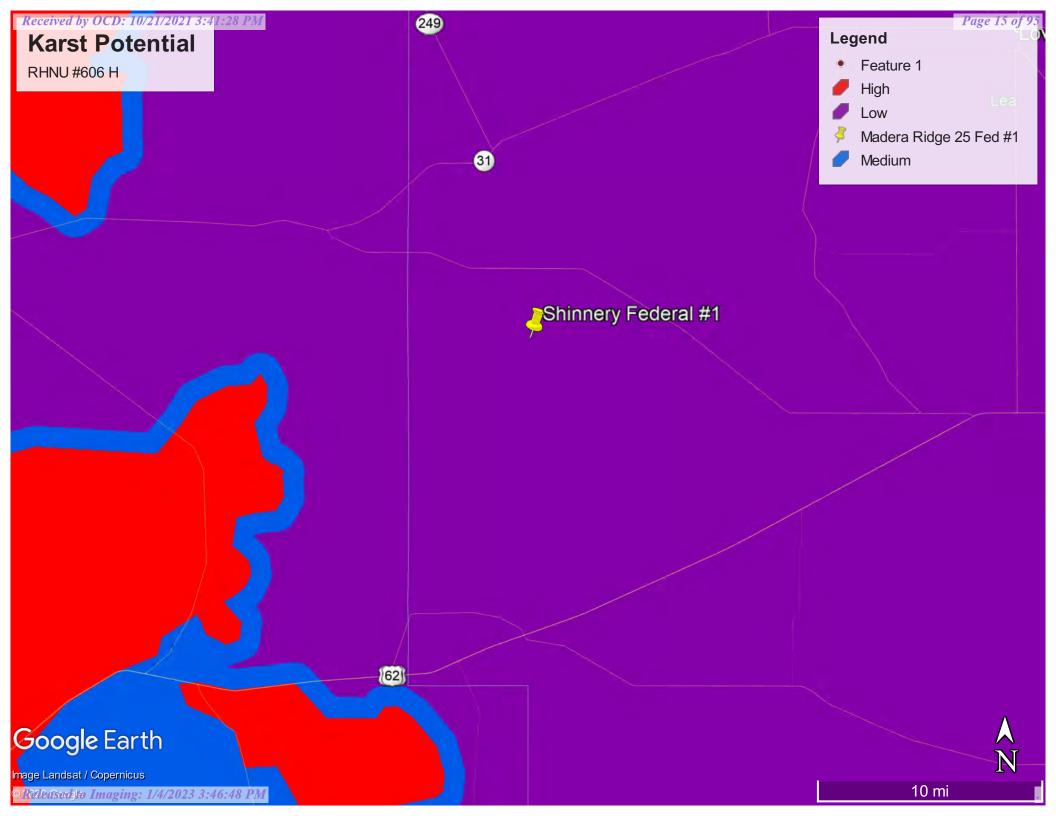
OSE Water-bodies

PLSS Townships OSE Streams

1:18,056 0.13 0.25 0.5 mi 0.2 0.4 0 0.8 km

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

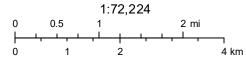
PLSS First Division



New Mexico NFHL Data



February 23, 2021



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



National Water Information System: Mapper

USGS Home Contact USGS Search USGS

Help Info





National Water Information System: Web Interface

USGS Water Resources

USGS Home Contact USGS Search USGS

Data Category:		Geographic Area:			
Groundwater	~	New Mexico	~	GO	

Click to hideNews Bulletins

Introducing The Next Generation of USGS Water Data for the Nation
 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			Α
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		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		Z			A
1986-03-25		D	62611		3331.51	NAVD88	1	Z			A
1986-03-25		D	72019	429.49			1	Z			A

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	Α	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
News

U.S. Department of the Interior | U.S. Geological Survey
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

USA.gov

ATTACHMENT C Assessments Documentation

HOBBS OCD

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

APR Balley Minerals and Natural Resources

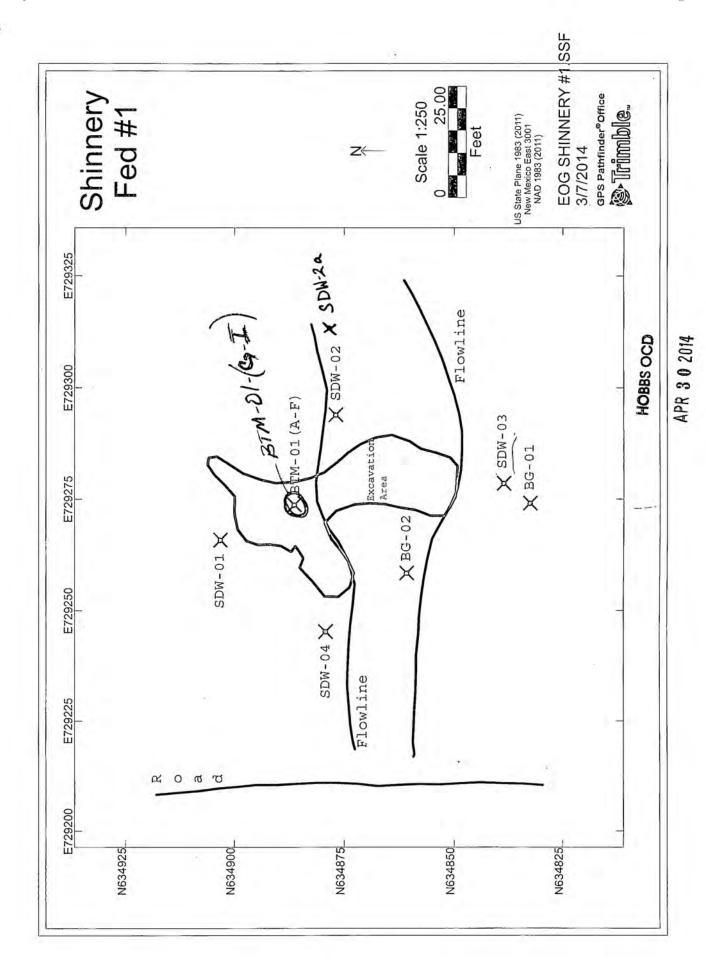
Oil Conservation Division RECEIVED 20 South St. Francis Dr. Santa Fe, NM 87505

Form C-141 Revised August 8, 2011

Submit I Copy to appropriate District Office in RECEIVED cordance with 19.15.29 NMAC.

Name of Company – EOG Resources, Inc. Address – 5509 Champions Drive, Midland, TX 79706 Tacility Name – Shinnery Fed #1 Surface Owner –BLM Mineral Owner –B LOCATION Unit Letter Section Township Range Feet from the North/Sc 13	Couth Line Couth Longitude OF RELE Volume of Date and He 2/28/2014, 4 If YES, To Jennifer Van Date and He If YES, Vol	yan Kainer lo. (432) 686-3 e - Gas Well LEASE Feet from the 1980 LEASE Release - 20 bbls our of Occurrence 4:00 PM Whom? In Curen (BLM) Our 3/5/2014	East/West Line West S Volume te: Date and 2/28/20	County Lea Recovered – 0 bbls d Hour of Discovery 14, 4:00PM
Address – 5509 Champions Drive, Midland, TX 79706 Facility Name – Shinnery Fed #1 Surface Owner –BLM Mineral Owner –B LOCATION Unit Letter Section Township Range 1980 Section 1980 Section 1980 Section Section	Celephone N Facility Type BLM FOREL South Line Fouth Longitude OF RELE Volume of 1 Date and He 2/28/2014, If YES, To Jennifer Val Date and He If YES, Vol	LEASE Feet from the 1980 LEASE Feet from the 1980 LEASE Release - 20 bbls our of Occurrence 4:00 PM Whom? In Curen (BLM) Our 3/5/2014	East/West Line West S Volume ce: Date and 2/28/20	County Lea Recovered – 0 bbls d Hour of Discovery 14, 4:00PM
Facility Name — Shinnery Fed #1 Surface Owner —BLM Mineral Owner —B LOCATION Unit Letter Section Township Range 1980 So Latitude 32.7444 NATURE O Type of Release — Produced Water Source of Release — 3" Poly line ruptured Was Immediate Notice Given? Yes No Not Required By Whom? Ryan Kainer Was a Watercourse Reached? Yes No Not Required If a Watercourse was Impacted, Describe Fully.* NA Describe Cause of Problem and Remedial Action Taken.* Approximately 20 bbls of produced water was released from equipment mallocation and within the field (100 yards south of well).	Couth Line Couth Longitude OF RELE Volume of Date and He 2/28/2014, 4 If YES, To Jennifer Van Date and He If YES, Vol	EASE Feet from the 1980 103.7217 EASE Release - 20 bbls our of Occurrence 4:00 PM Whom? In Curen (BLM) our 3/5/2014	East/West Line West S Volume ce: Date and 2/28/20	County Lea Recovered – 0 bbls d Hour of Discovery 14, 4:00PM
Surface Owner —BLM LOCATION Unit Letter Section Township Range Feet from the North/Sc Latitude 32.7444 NATURE O Type of Release — Produced Water Source of Release — 3" Poly line ruptured Was Immediate Notice Given? Yes No Not Required By Whom? Ryan Kainer Was a Watercourse Reached? Yes No If a Watercourse was Impacted, Describe Fully.* NA Describe Cause of Problem and Remedial Action Taken.* Approximately 20 bbls of produced water was released from equipment mallocation and within the field (100 yards south of well).	JOF RELE South Line South Line South Longitude OF RELE Volume of John Carlot and Ho 2/28/2014, 4 If YES, To Jennifer Van Date and Ho If YES, Vol	Feet from the 1980 -103.7217 EASE Release - 20 bbls our of Occurrence 4:00 PM Whom? In Curen (BLM) our 3/5/2014	East/West Line West S Volume te: Date and 2/28/20 the Watercourse.	County Lea Recovered – 0 bbls d Hour of Discovery 14, 4:00PM
Unit Letter Section Township Range Feet from the North/Sc Latitude 32.7444 NATURE O Type of Release - Produced Water	Longitude OF RELE Volume of Date and He 2/28/2014, If YES, To Jennifer Van Date and He If YES, Vol	Feet from the 1980 103.7217 EASE Release - 20 bbls our of Occurrence 4:00 PM Whom? In Curen (BLM) Our 3/5/2014	East/West Line West S Volume te: Date and 2/28/20 the Watercourse.	County Lea Recovered – 0 bbls d Hour of Discovery 14, 4:00PM
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NA Describe Cause of Problem and Remedial Action Taken.* Approximately 20 bbls of produced water was released from equipment mallocation and within the field (100 yards south of well).	Ifunction (3"		MRL 5/11 DEPTH T	14 C WATER = 50 1
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Approximately 20 bbls of produced water was released from equipment mal location and within the field (100 yards south of well).	dfunction (3"			
Describe Asso Affects I and Cleanus Action Tolera		poly water line	seperated). All re	eleased fluids are located off th
Describe Area Affected and Cleanup Action Taken.*				
EOG propose to delineate the impacted area, vertically and horizontally by c Chlorides. The impacted area will be excavated, stockpiled on poly-plastic, backfilled within the excavated area to normal grade and seeded with BLM	, and transpo	orted to an appro-	aving them analy: wed disposal facili	zed for TPH, BTEX, and ity. Clean material will be
I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release not public health or the environment. The acceptance of a C-141 report by the ishould their operations have failed to adequately investigate and remediate or the environment. In addition, NMOCD acceptance of a C-141 report doe federal, state, or local laws and/or regulations.	tifications an NMOCD ma contamination	nd perform correct arked as "Final Roon that pose a thr	ctive actions for re teport" does not re reat to ground wat	eleases which may endanger elieve the operator of liability ter, surface water, human health
-> 2 ·		OIL CON	SERVATION	N DIVISION
Signature:				
A	approved by	Environmental 8	pecialist:	
Printed Name: Ryan Kainer	/	//		
Fitle: Sr. Safety & Environmental Rep. A	Approval Date	e: 2-9-1	9 Expiration	n Date: 9-12-19
E-mail Address: ryan kainer@eogresources.com	Conditions of	Approval		T
a man reservoir fair numer (geoglesources com		ingthe roy our	4	Attached
Date: 3/05/2014 Phone: 432-686-3662 Attach Additional Sheets If Necessary		coo gala		7-14-3161





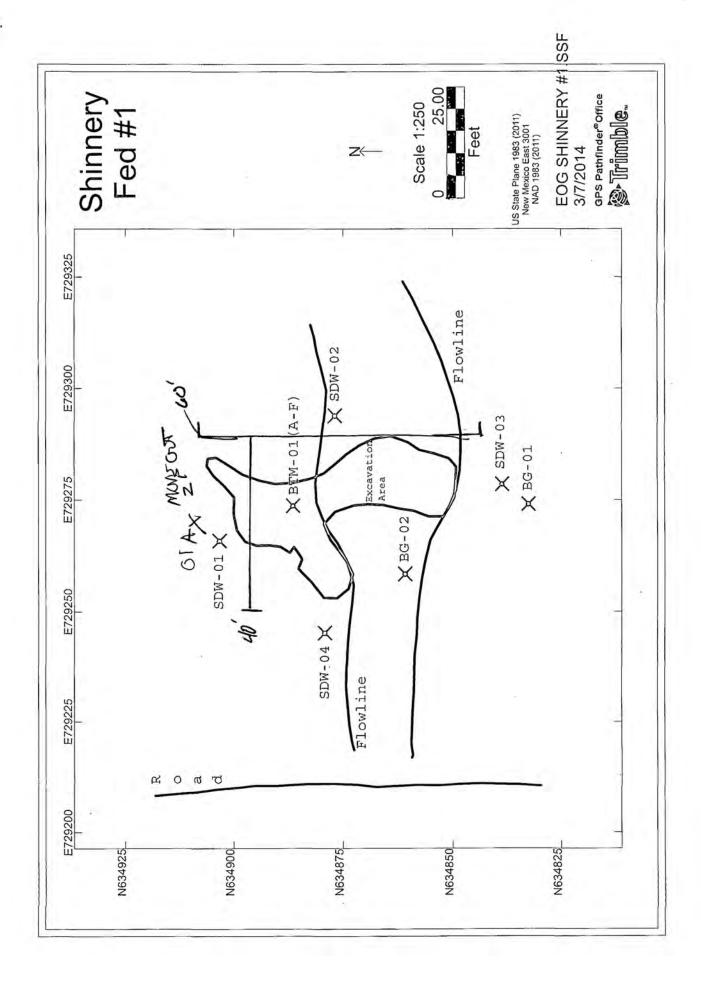


TABLE I
SOIL ANALYTICAL SUMMARY
EOG RESOURCES INC.
SHINNERY FED #1
LEA COUNTY, NEW MEXICO

Xylenes Total The Chlorides STEX	kg) (mg/kg) (mg/kg) Total (GRO/DRO) (mg/kg) (mg/kg)	inded Remediation Action Levels (Total Ranking Score = 10)	20. 1000 1000	mg/kg. mg/kg mg/kg mg/kg	n Soil Samples	2 <0.02 <50.0 <4.00 <50.0 <50.0	72 <0.02 88.4 <4.00 88.4 3200	NA NA NA 58	72 <0.02 <50.0 <4.00 <50.0 53	72 <0.02 <50.0 <4.00 <50.0 <25.0	Soil Samples	72 <0.02 51.4 <4.00 51 4,040	0.02 <50.0 <4.00 <50.0 1,440	72 <0.02 <50.0 <4.00 <50.0 6,280	72 <0.02 <50.0 <4.00 <50.0 11,100	72 <0.02 <50.0 <4.00 <50.0 10,300	02 <0.02 <50.0 <4.00 <50.0 9,790	NA NA NA 7,260	. NA NA 3,290	NA NA NA 4,650	Samples		72 <0.02 <50.0 <4.00 <50.0 154
-	(9u/9uu)	Levels (Total Ranking		mg/kg mg/kg	Horizontal Delineation Soil Samples	<0.02 <0.02	<0.02 <0.02	NA NA	<0.02 <0.02	<0.02 <0.02	Vertical Delineation Soil Samples	<0.02 <0.02	<0.02 <0.02	<0.02 <0.02	<0.02 <0.02	<0.02 <0.02	<0.02 <0.02	NA NA	NA . NA	NA NA	Back Ground Soil Samples	<0.02 <0.02	
	(mg/kg) (diation Action	* * *	mg/kg	zontal Deline	<0.02	<0.02	NA	<0.02	<0.02	rtical Delinea	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	NA	NA	Back Ground	<0.02	
	(mg/kg)	nded Reme	1	mg/kg	Hor	<0.02	<0.02	NA	<0.02	<0.02	Ve	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	NA	NA		<0.02	
	(mg/kg)	NMOCD Recomme	10	mg/kg		<0.02	<0.02	NA	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	NA	NA		<0.02	
Sample	Date	NMOCE	The last state of the			3/6/2014	3/6/2014	4/17/2014	3/6/2014	3/6/2014		3/6/2014	3/6/2014	3/6/2014	3/6/2014	3/6/2014	3/6/2014	4/17/2014	4/17/2014	4/17/2014		3/6/2014	
The state of	Deptn	10 mm	* * * * * * * * * * * * * * * * * * *	. 4		Surface - 6"	Surface - 6"	Surface - 6"	Surface - 6"	Surface - 6"		1,	2,	3,	4,	5,	.9	10,	15,	18'		Surface - 6"	
9	Sample ID					SDW-01	SDW-02	SDW-02a	SDW-03	SDW-04		BTM-01-A	BTM-01-B	BTM-01-C	BTM-01-D	BTM-01-E	BTM-01-F	BTM-01-G	BTM-01-H	BTM-01-1		BG-01	

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

			Donne	Tolugan	Ethyl-	Vulgano	Total		TPH	H	Chloridge
Sample	Depth	Sample Date	(mg/kg)	(mg/kg)	Benzene (mg/kg)	(mg/kg)	BTEX (mg/kg)	DRO (mg/kg)	GRO (mg/kg)	Total (GRO/DRO) (mg/kg)	(mg/kg)
		OWN	NMOCD Recommended		ediation Act	ion Levels (Remediation Action Levels (Total Ranking Score = 10)	g Score = 1	(0		
			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	lineation Sc	il Samples				
SDW-01	Surface	3/6/14	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	206
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 Del.	Vertical Delineation Soil Samples	Samples				
BTM-01-A		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	રા	3/6/14	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	10,300
BTM-01-F	.9	3/6/14	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<50.0	062'6
					Back Gr	Back Ground Soil Samples	saldu				
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:

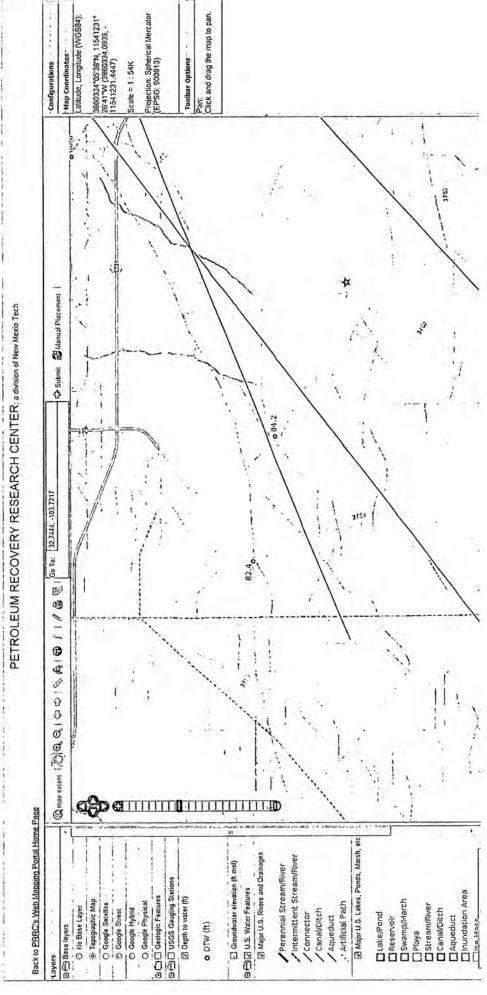
^{1.} BDL - Below Detection Limits

^{2.} NA - Not Analyzed

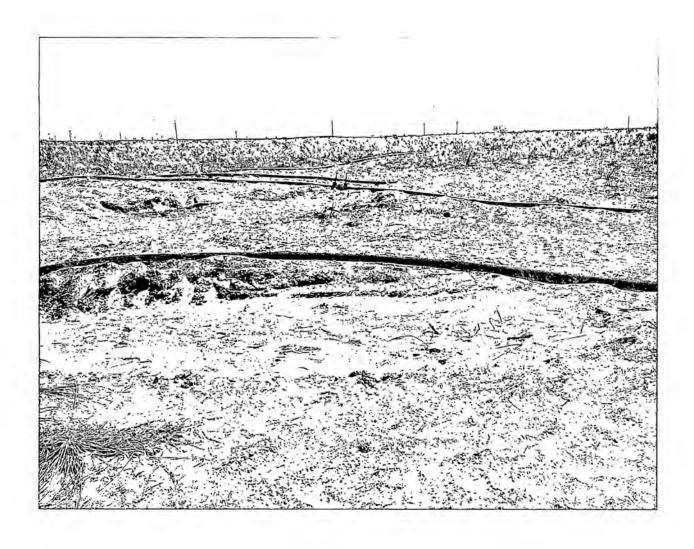
^{3.} Bold concentrations above lab reporting limits.

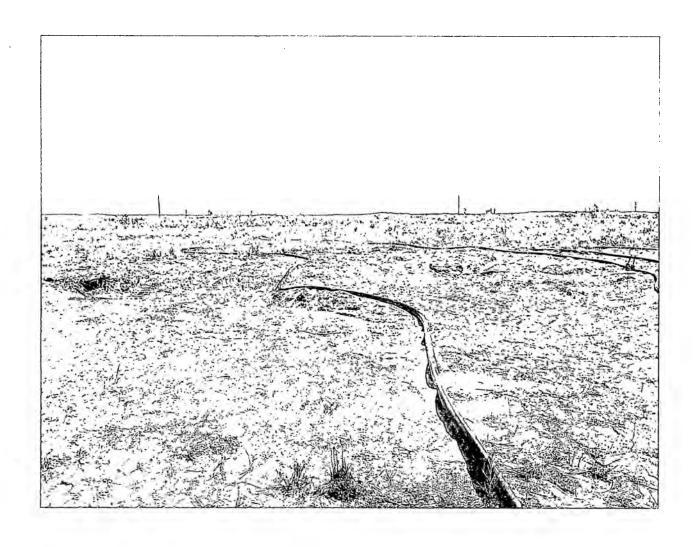
^{4.} Highlighted cells indicated concentrations above regulatory limits

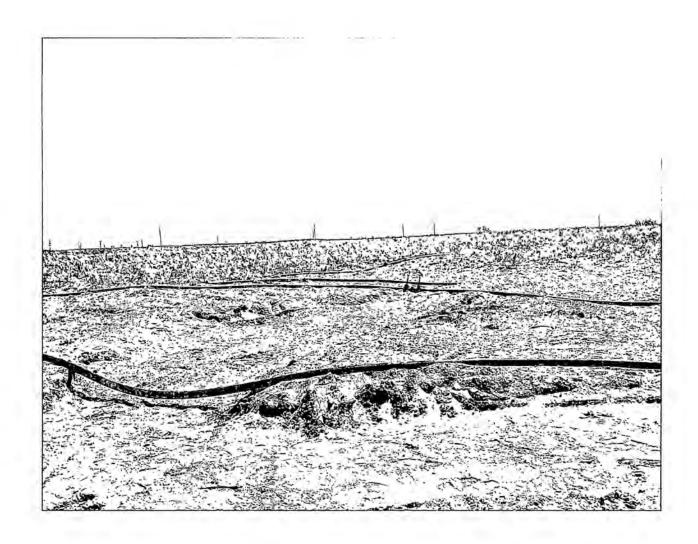
NM Depth to GW



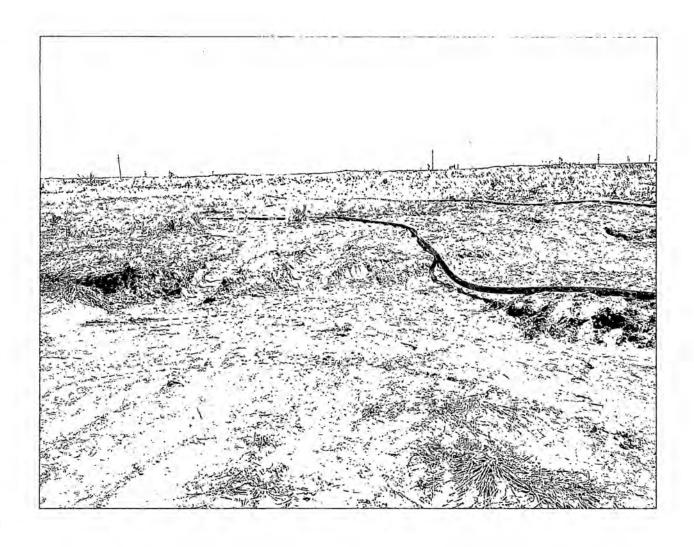














Ms. Kellie Jones New Mexico Oil Conservation Division 1625 N. French Drive Hobbs, New Mexico 88240

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)

>1,000 feet • Wellhead Protection Area

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.

NOT APPROVED

This final report is not approved

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

3. There should be at least three

concentrations are decreasing at

samples that are below the regulatory threshold or show a

trend showing that the

will be required.

depth.

for the following reasons:

1. The vertical extent of the

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

www.ch2m.com

CH2M HILL ENGINEERS, INC.

Page 2 August 19, 1015

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).

CH2M HILL ENGINEERS, INC.

Page 3 August 19, 1015

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

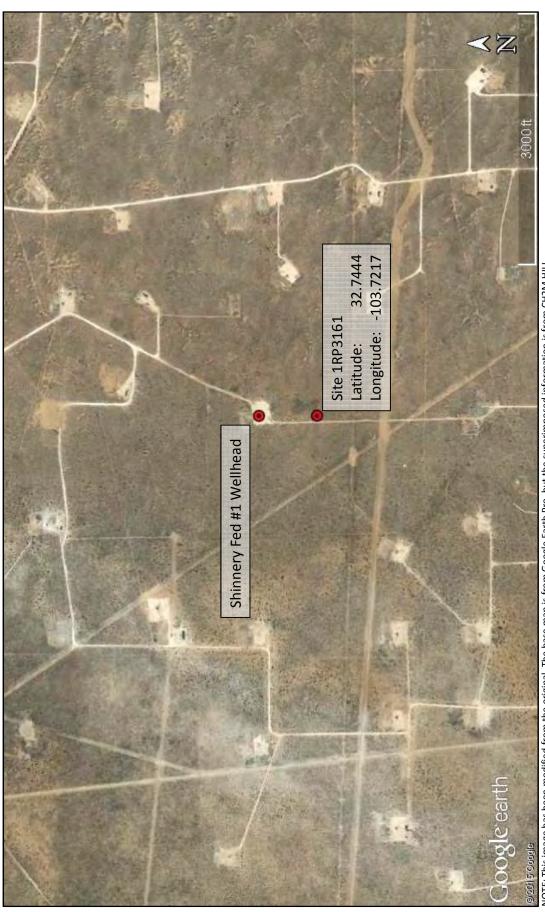
Figures

CH2M HILL ENGINEERS, INC.



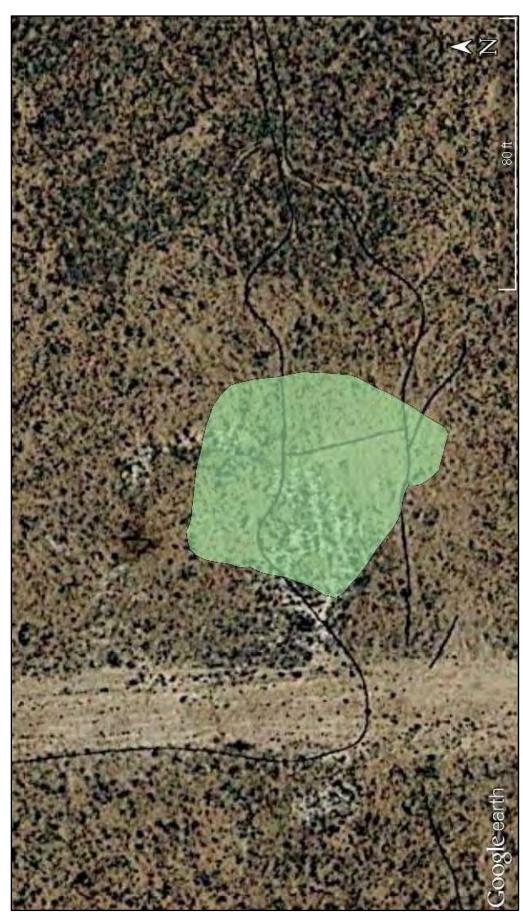
NOTE: This image has been modified from the original. The base map is from Google Earth Pro, but the superimposed information is from CH2M HILL.

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.

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



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

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

1220 S. St. 11ai	icis Di., Santa	1 TC, INIVI 67505	,	Sa	ınta Fe	e, NM 875	05				
			Rele	ease Notific	eation	and Co	rrective A	ction			
						OPERA	ΓOR	☐ Initi:	al Report	\boxtimes	Final Report
Name of Co	ompany E	OG Resourc	es, Inc.		(Contact	Zane Kurtz		ar respons		T man repert
Address				Midland, TX 79	706	Telephone N	lo. 432-425-20)23			
Facility Na	me S	hinnery Fed	#1			Facility Typ	e Lease road	I near active well			
Surface Ow	ner BLM			Mineral ()wner	BLM		API No	. 30-025-3	0247	
				LOCA	ATION	N OF REI	LEASE				
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	,
			La	titude 32.7	444	Longitud	le -103.7217				
				NAT	URE	OF REL	EASE				
Type of Rele	ase Produ	iced Water					Release 20 bbls	Volume F	Recovered	0 bbls	
Source of Re	lease					Date and H	Iour of Occurrenc	e Date and	Hour of Dis	covery	
Rupture of 3	inch poly li	ne				2/28/2014	4:00 PM	2/28/2014	4:00 PM		
Was Immedi	ate Notice (Given? 🛛 Y	es \[\] N	No Not Requ	iired	If YES, To	Whom? Jenn	ifer Van Curen (Bl	LM)		
By Whom?	Ryan Kain					Date and H	lour 3-5-2014				
Was a Water			Yes 🛛			If YES, Vo	lume Impacting t	he Watercourse.			
If a Watercou No watercou		pacted, Descr ched by spill.	ibe Fully.'	k							
Approxima fluids were (north to so include ben	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.										
The impact of concern a investigation (1,150 mg/le excavate im with non-in transported un-impacted I hereby cert regulations a public health should their of the concern of	ed area wa and that the n demonst (g), the con pacted are npacted fill to Lea Lar d backfill (ify that the i ll operators or the enviroperations h	e cleanup act rated that alt ncentrations a to a depth . During Jan nd landfill fo from Canvas nformation gi are required to ronment. The	ed based tion woul hough ch substanti- of 5 feet uary 8-13 r disposa s Ranch) ven above o report ar acceptance adequately	on the above list d be based on coloride concentrally declined with below ground states and the conference of a C-141 report investigate and residue of a C-	hloride ations roth depth urface, i mately 0 mil por the limilete to the lease nort by the emediate	soil concentemained about As such, I install a reinfold	rations. Lateral ove RRALs at 20 EOG received cofforced poly lineards of impacted liner was install n Construction. knowledge and und perform correcarked as "Final Roon that pose a through the contract of the correct arked as through the correct of the correct arked as through the correct of the correct o	ion determined the limits were deline to feet below group oncurrence from the across excavation and approximately and approximately actions for release to ground water responsibility for content of the second sec	eated and to a surface BLM and Non footpring different the nately 1,000 uant to NMO eases which eve the open surface was	in one NMOC at, and site ar 8 cubic OCD rumay er rator of tter, human control of the control of	e area CD to backfill and c yards of ules and adanger Fliability man health
		ws and/or regu			· 			SERVATION			
Signature:											
Printed Nam	e. Zane Kı	ırtz				Approved by	Environmental S	pecialist:			
								Б	D. 4		
Title: Sr. Sa	rety & Envi	ronmental Rep	presentativ	/e		Approval Dat	e:	Expiration	Date:		
E-mail Addre	ess: Zane_	Kurtz@eogres	sources.co	m		Conditions of	Approval:		Attached		
Date: 07-20-	-2015		Phone:	432-425-2023							

^{*} Attach Additional Sheets If Necessary

HOBBS OCD

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Kio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

APR Balles of New Mexico
APR Balles of New Mexico
Apr Balles of New Mexico

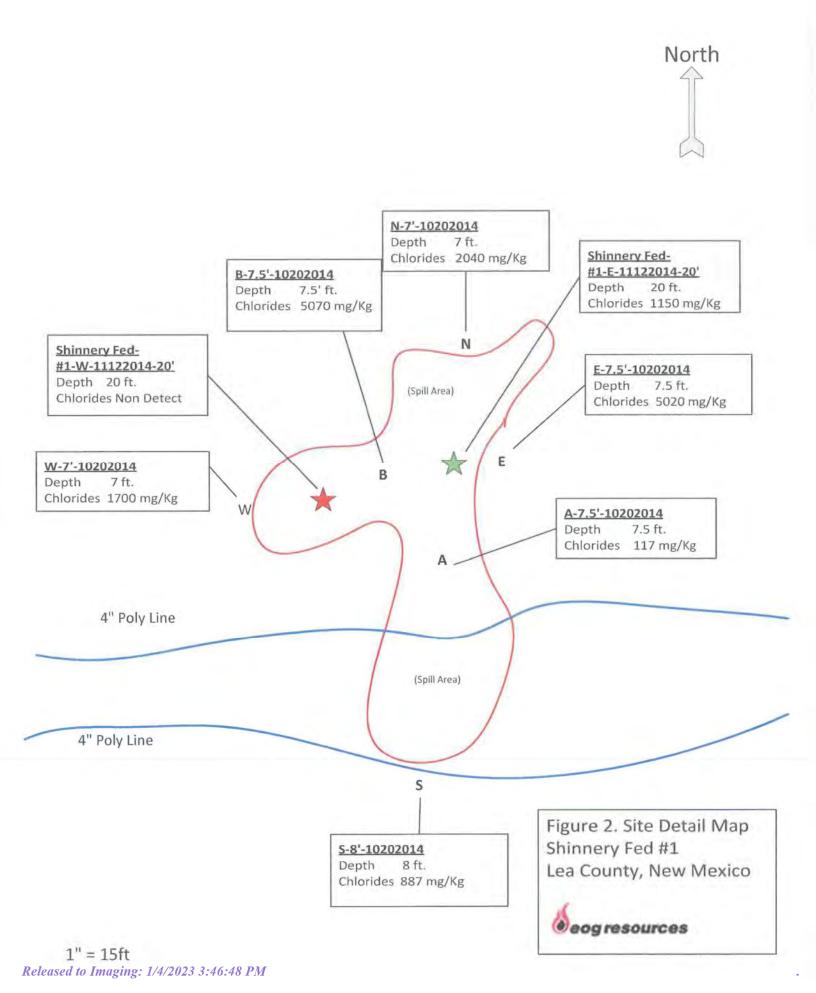
Oil Conservation Division RECEIVED 20 South St. Francis Dr. Santa Fe, NM 87505

Form C-141 Revised August 8, 2011

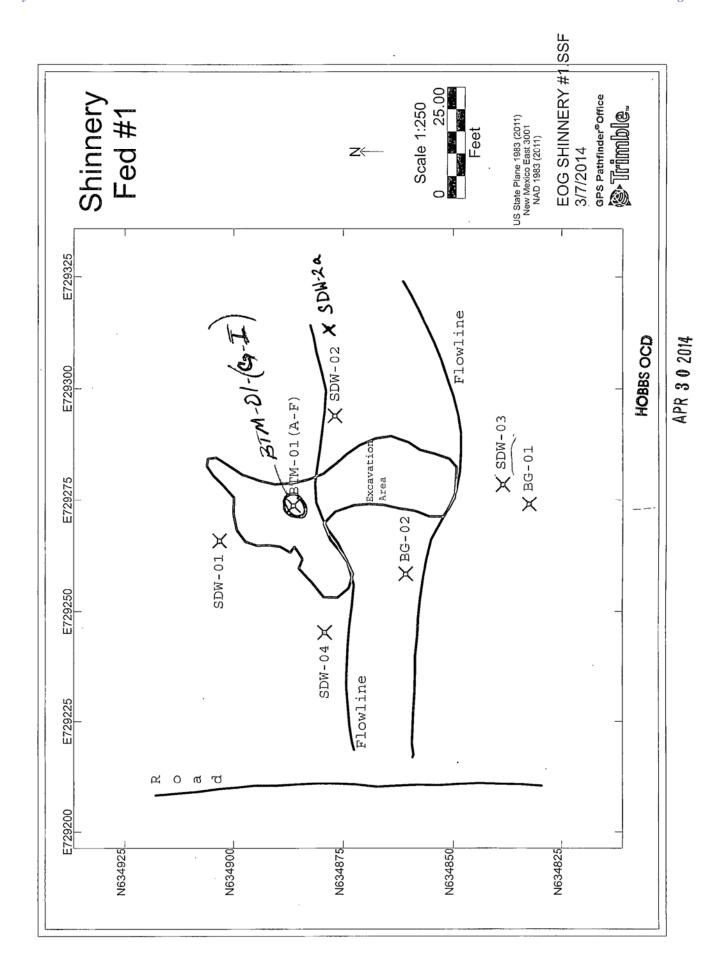
Submit I Copy to appropriate District Office in RECEIVED Cordance with 19.15.29 NMAC.

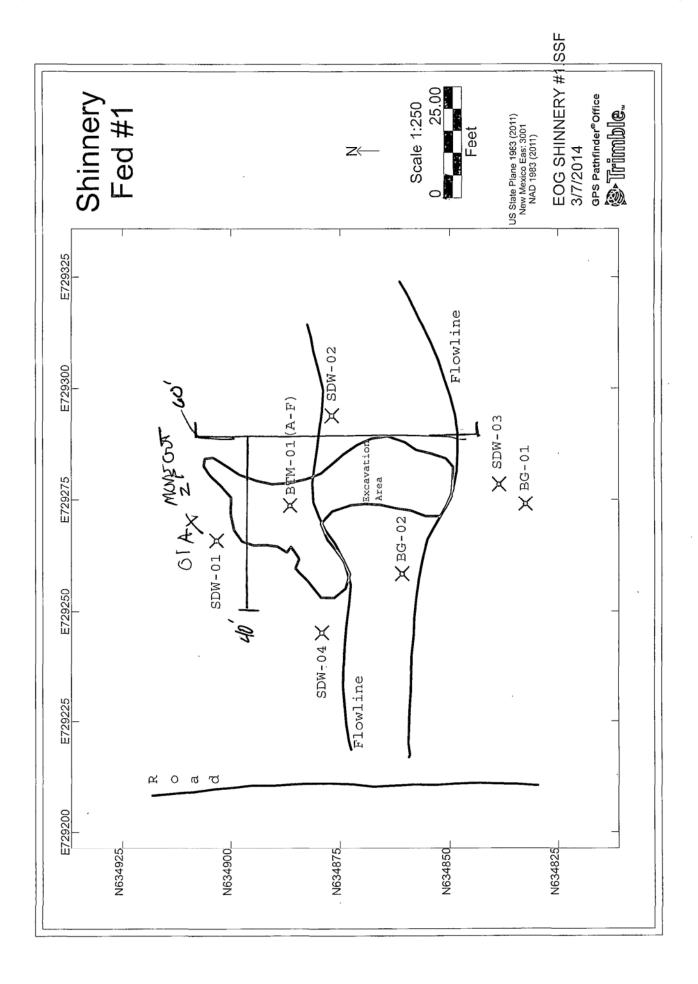
	OPER	ATOR	Б	Initia	l Report
Name of Company – EOG Resources, Inc.		Ryan Kainer	V	M Initia	report rmark
Address – 5509 Champions Drive, Midland, TX 79706		No. (432) 686-3	662		
Facility Name - Shinnery Fed #1		ype - Gas Well			
Puefer Ourse PIM	DIM			ADINA	20.025.20247
Surface Owner –BLM Mineral Ov	vner –BLM			API No.	30-025-30247
LOCA	TION OF R	ELEASE	-		
Unit Letter Section Township Range Feet from the 13 18S 32E 1980	North/South Line South	Feet from the 1980	East/Wo	est Line est	County Lea
Latitude_32.7444	Longitu	de103.7217_			
NATU	URE OF RE	LEASE			
Type of Release - Produced Water		of Release - 20 bbl			ecovered - 0 bbls
Source of Release - 3" Poly line ruptured		Hour of Occurren 4, 4:00 PM		Date and I 2/28/2014.	lour of Discovery
Was Immediate Notice Given?		To Whom?	1.2	2/20/2014	, TAUCINI
✓ Yes ☐ No ☐ Not Req		Van Curen (BLM)	The second		
By Whom? Ryan Kainer		Hour 3/5/2014			
Was a Watercourse Reached? ☐ Yes ☑ No	If YES,	Volume Impacting	the Watero	course.	
If a Watercourse was Impacted, Describe Fully.*	-			. 19 av.	
N/A			JARL	2/1/17	
NA Describe Cause of Problem and Remedial Action Taken.* Approximately 20 bbls of produced water was released from equipment.	ment multimetion	(3" noly water line			WATER = 5c
Describe Cause of Problem and Remedial Action Taken.* Approximately 20 bbls of produced water was released from equipred 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 horizont Chlorides. The impacted area will be excavated, stockpiled on poly	tally by collecting	g soil samples and l sported to an appro	seperated)). All rele	ased fluids are located off t
Describe Cause of Problem and Remedial Action Taken.* Approximately 20 bbls of produced water was released from equipal 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 horizont	tally by collecting y-plastic, and transth BLM seed mix the to the best of release notifications to by the NMOCD mediate contamin	g soil samples and I sported to an appro- type II. ny knowledge and it and perform corre- marked as "Final F ation that pose a th eve the operator of	naving ther wed dispos understand ctive action Report" door reat to grou	m analyzed sal facility I that purst ons for rele es not relic und water, ility for co	d for TPH, BTEX, and Clean material will be uant to NMOCD rules and cases which may endanger eve the operator of liability surface water, human heal ampliance with any other
Describe Cause of Problem and Remedial Action Taken.* Approximately 20 bbls of produced water was released from equipred 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 horizont Chlorides. The impacted area will be excavated, stockpiled on polybackfilled within the excavated area to normal grade and seeded will be the environment of the certain relegulations all operators are required to report and/or file certain relegulations all operators are required to report and/or file certain relegulations all operators are required to report and/or file certain relegulations all operators are required to report and/or file certain relegulations all operators are required to report and/or file certain relegulations all operators are required to report and/or file certain relegulations all operators are required to report and/or file certain relegulations all operators are required to report and/or file certain relegulations all operators are required to acceptance of a C-141 report should their operations have failed to adequately investigate and report the environment. In addition, NMOCD acceptance of a C-141 report of the environment. In addition, NMOCD acceptance of a C-141 report of the environment.	tally by collecting y-plastic, and transth BLM seed mix the to the best of release notifications to by the NMOCD mediate contamin	g soil samples and I sported to an appro- type II. ny knowledge and it and perform corre- marked as "Final F ation that pose a th eve the operator of	naving ther wed dispos understand ctive action Report" door reat to grou	m analyzed sal facility I that purst ons for rele es not relic und water, ility for co	d for TPH, BTEX, and Clean material will be uant to NMOCD rules and cases which may endanger eve the operator of liability, surface water, human heal
Describe Cause of Problem and Remedial Action Taken.* Approximately 20 bbls of produced water was released from equipal 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 horizont Chlorides. The impacted area will be excavated, stockpiled on polybackfilled within the excavated area to normal grade and seeded will hereby certify that the information given above is true and complete regulations all operators are required to report and/or file certain reliphible health or the environment. The acceptance of a C-141 reports should their operations have failed to adequately investigate and report the environment. In addition, NMOCD acceptance of a C-141 refederal, state, or local laws and/or regulations.	tally by collecting y-plastic, and tran th BLM seed mix the test of release notifications to by the NMOCD mediate contamine port does not rele	g soil samples and I sported to an appro- type II. ny knowledge and it and perform corre- marked as "Final F ation that pose a th eve the operator of	naving ther ved dispose understand ctive action Report" door reat to grow responsibilities.	m analyzed sal facility I that pursue so for relections for relections water, will the for control of the cont	d for TPH, BTEX, and Clean material will be uant to NMOCD rules and cases which may endanger eve the operator of liability surface water, human heal ampliance with any other
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Describe Cause of Problem and Remedial Action Taken.* Approximately 20 bbls of produced water was released from equipal 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 horizont Chlorides. The impacted area will be excavated, stockpiled on polybackfilled within the excavated area to normal grade and seeded will hereby certify that the information given above is true and comple regulations all operators are required to report and/or file certain relipublic health or the environment. The acceptance of a C-141 report should their operations have failed to adequately investigate and report the environment. In addition, NMOCD acceptance of a C-141 refederal, state, or local laws and/or regulations. Signature:	tally by collecting plastic, and transth BLM seed mixete to the best of release notifications to by the NMOCD mediate contamination does not release. Approved Approved Conditions	g soil samples and I sported to an approtype II. my knowledge and a and perform corresponded as "Final Fation that pose a the eve the operator of OIL CON and Environmental A	naving ther ved disposunderstand ctive action Report" dorreat to gron responsibilister VA	m analyzed sal facility. I that pursuants for release not relicund water, illity for co	d for TPH, BTEX, and Clean material will be uant to NMOCD rules and asses which may endanger eve the operator of liability surface water, human heal ompliance with any other DIVISION

Appendix B Historical Soil Sample Location Figures









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

Led County, INEW INTEXICO										
	Depth	Sample	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	TPH-DRO	TPH-GRO	Chlorides
Sample ID	(pgs)	Date	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
SDW-01	9-0	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0.0	<4.00	206
SDW-02	9-0	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	88.4	<4.00	3,200
SDW-02a	9-0	4/17/2014	NA	NA	٩N	NA	NA	AN	NA	58
SDW-03	9-0	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	53
SDW-04	9-0	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	.9	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
ВТМ-01-Н	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	9-0	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	154
BG-02	9-0	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	4,250
5-8'-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:										

values above Recommended Remedial Action Levels (RRALs)

below ground surface bold bgs mg/kg NA

milligram per kilogram not analyzed

feet inches

https://deliver.ch2m.com/projects/653209/Company Confidential/Project Folders/Shinnery/FINAL REPORT/Appendix C.xlsx

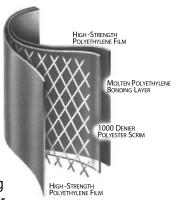
Appendix D Liner Product Sheet

RAVEN ENGINEERED FILMS

Page 49 of 95

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 heavyduty 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.



Landfill Cover

Product	Part #
DURA+SKRIM	R20BDV

APPLICATIONS

Underslab Vapor Retarders	Earthen Liners

Modular Tank Liners Interim Landfill Caps

Daily Landfill Covers Remediation Covers

Remediation Liners Erosion Control Covers



DURA+SKRIM® R20BDV

Page 50 of 95
ISO 9001:2008
CERTIFIED MANAGEMENT SYSTEM

Scrim Reinforced Polyethylene

		DURA+SKR	IM R20BDV
PROPERTIES	TEST METHOD	I MPERIAL	Metric
Appearance		Black	/Gray
THICKNESS, NOMINAL		20 mil	0.51 mm
Weight		74 lbs/MSF 10.7 oz./yd²	361 g/m²
Construction		Extrusion laminated wi	th 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	> 140	0 min
MAXIMUM USE TEMPERATURE		180°F	82°C
MINIMUM USE TEMPERATURE		-70°F	-57°C
WVTR	ASTM E96 Method A	0.023 g/100in²/day	0.354 g/m²/day
PERM RATING	ASTM E96 Method A	0.052 Perms grains/(ft²-hr-in-Hg)	0.034 Perms g/(24hr·m²·mm Hg)

^{*}Tests are an average of diagonal directions.



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.

Note: To the best of our knowledge, unless otherwise stated, these are typical property values and are intended as guides only, not as specification limits. Chemical resistance, odor transmission, longevity as well as other performance criteria is not implied or given and actual testing must be performed for applicability in specific applications and/or conditions. RAVEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability for resulting loss or damage. Limited Warranty available at www.RavenEFD.com



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

PHOTO LOG



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



Liner Installation

PHOTO LOG



Post liner installation, looking north.



Post liner installation, looking south.

PHOTO LOG



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)

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	POD											
	Sub-		QQC	2						Depth	Depth	Water
POD Number	Code basin	County	64 16	4 Sec	Tws	Rng	X	Υ	Distance	Well	Water	Column
CP 00677	СР	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

35 feet

Maximum Depth:

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

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

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

HOBBS OCD

State of New Mexico
Energy Minerals and Natural Resources
JUL 9 2014

Oil Conservation Division 1220 South St. Francis Dr.

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

Santa Fe, NM 87505 RECEIV Release Notification and Corrective Action

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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

Page 2 September 21, 1015

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

Score	
20	
10	
0	
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20	
20	
10	
0	
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Notes:

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
ТРН	100	1,000	5,000
Chloride ^a	250	500	1,000

Notes:

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

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

^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.

Page 3 September 21, 1015

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.

Page 4 September 21, 1015

Field Program

The field work will consist of the following:

- 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.

Page 5 September 21, 1015

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



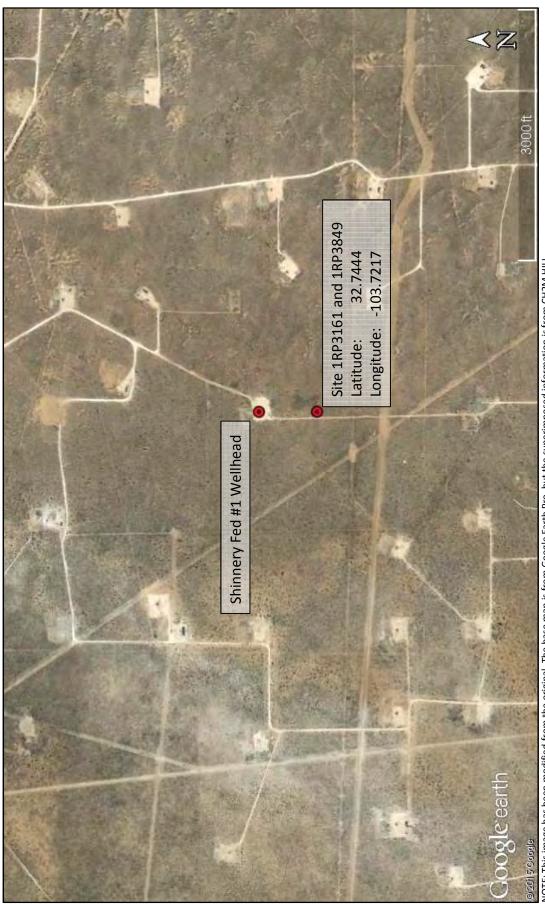
Lea County, New Mexico

FIGURE 1



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.

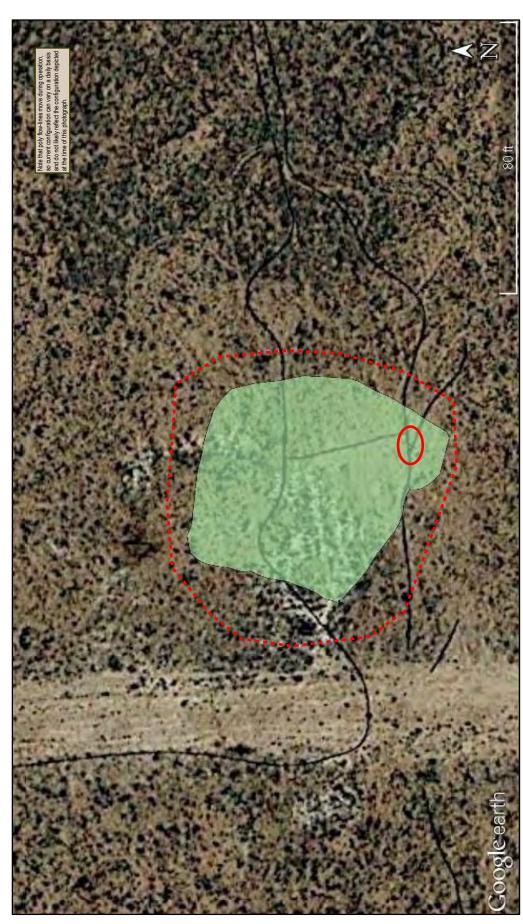
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NOTE: This image has been modified from the original. The base map is from Google Earth Pro, but the superimposed information is from CH2M HILL.

Area Map FIGURE 2

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.

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

Appendix A C-141 Forms

HOBBS OCD

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Kio Brazos Road, Aztec, NM 87410
District IV

APR Ball State of New Mexico
APR Ball State of New Mexico
Apr State of New Mexico

Oil Conservation Division RECEIVED 20 South St. Francis Dr. Santa Fe NM 87505

Form C-141 Revised August 8, 2011

Submit I Copy to appropriate District Office in RECEIVED Cordance with 19.15.29 NMAC.

						OPERA'	FOR	⊠ Initi	al Report				
Name of C	ompany –	EOG Resour	rces Inc			Contact - R		M mu	ar report rular rep				
				I, TX 79706			No. (432) 686-3	662					
		nery Fed #1	,		-		e – Gas Well						
Surface Ov				Mineral C				APINO	. 30-025-30247				
Juliace O	iner DLIV				1. 1. 1. 1.	7	DACE	·	7, 50 025 50217				
Unit Letter	Section	Township	Danna	Feet from the		OF RE	Feet from the	East/West Line	County				
K	13	18S	Range 32E	1980	With the Party Charles	South	1980	West	Lea				
		La	titude	32,7444		Longitude	-103.7217						
			-		TIDE	OF REL							
Type of Rela	ease - Produ	iced Water		NAI	UKE		Release - 20 bbl	s Volume I	Recovered - 0 bbls				
		oly line ruph	ored				lour of Occurrent		Hour of Discovery				
			34			2/28/2014,	4:00 PM		4, 4:00PM				
Was Immed	iate Notice (Yes [No Not Re	equired	If YES, To Jennifer V	Whom? an Curen (BLM)						
By Whom?	Ryan Kaine	tr			-		lour 3/5/2014						
Was a Watercourse Reached? ☐ Yes ☒ No If a Watercourse was Impacted, Describe Fully.*						If YES, Vo	olume Impacting	the Watercourse.					
If a Waterco	urse was Im	pacted, Descr	ribe Fully.				3-5	T. A. A. W					
NA								DEPTH TO	4 CWATER = 50 1				
Approximat	ely 20 bbls	em and Reme of produced w field (100 yard	ater was r	eleased from equip	pment m	alfunction (3	" poly water line	seperated). All rel	eased fluids are located off the				
Describe Ar	ea Affected	and Cleanup.	Action Tal	cen.*									
Chlorides.	The impacte	d area will be	excavated	rtically and horizo , stockpiled on po rade and seeded y	ly-plasti	c, and transp	orted to an appro-	naving them analyze wed disposal facility	ed for TPH, BTEX, and y. Clean material will be				
I hereby cer	all operators or the envi operations l onment. In a	are required frontient. The nave failed to	to report a e acceptan adequately OCD accep	nd/or file certain rece of a C-141 report investigate and re	elease no ort by the emediate	otifications a NMOCD m contaminati	nd perform corre- arked as "Final R ion that pose a the re the operator of	ctive actions for rel teport" does not rel reat to ground wate responsibility for c	suant to NMOCD rules and eases which may endanger ieve the operator of liability r, surface water, human health ompliance with any other				
public health should their or the enviro	, or local la		7	4			OIL CON	SERVATION	DIVISION				
public health should their or the enviro	or local la	>											
public health should their or the environ federal, state	e, or local la	> _	\leq										
public health should their or the environ federal, state Signature:	3	iner	\swarrow			Approved by	Environmental	Approved by Environmental Specialist:					
public health should their or the environ federal, state Signature:	ne: Ryan Ka	iner ronmental Re	, p.			Approved by	1		Date: 9-12-19				
public health should their or the environgederal, state Signature: Printed Nam Title: Sr. Sa	ne: Ryan Ka			n		Approval Da	te: 2-9-/	9 Expiration	Date: 9-12-19 Attached 7-14-3161 99-114-73				

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

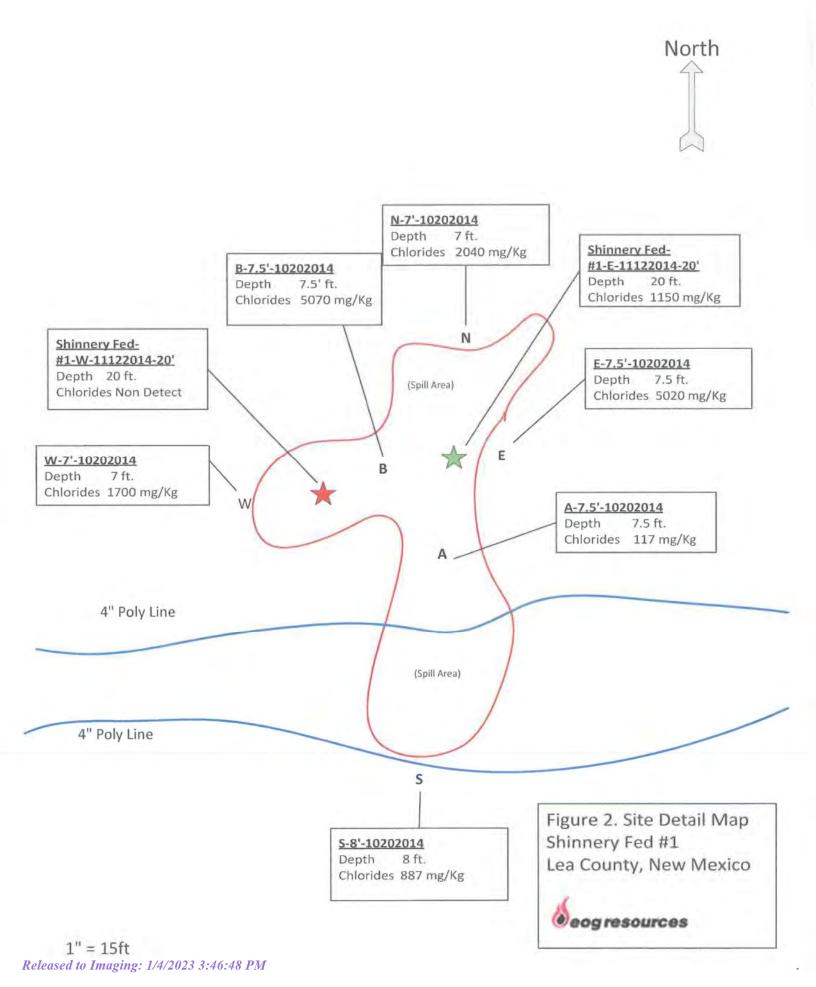
State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

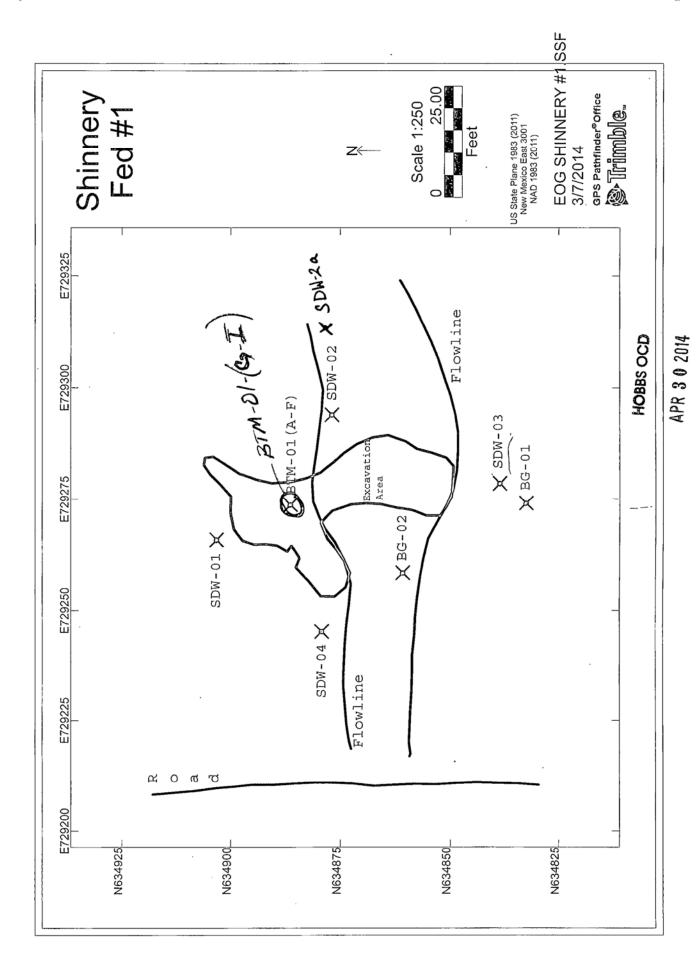
Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

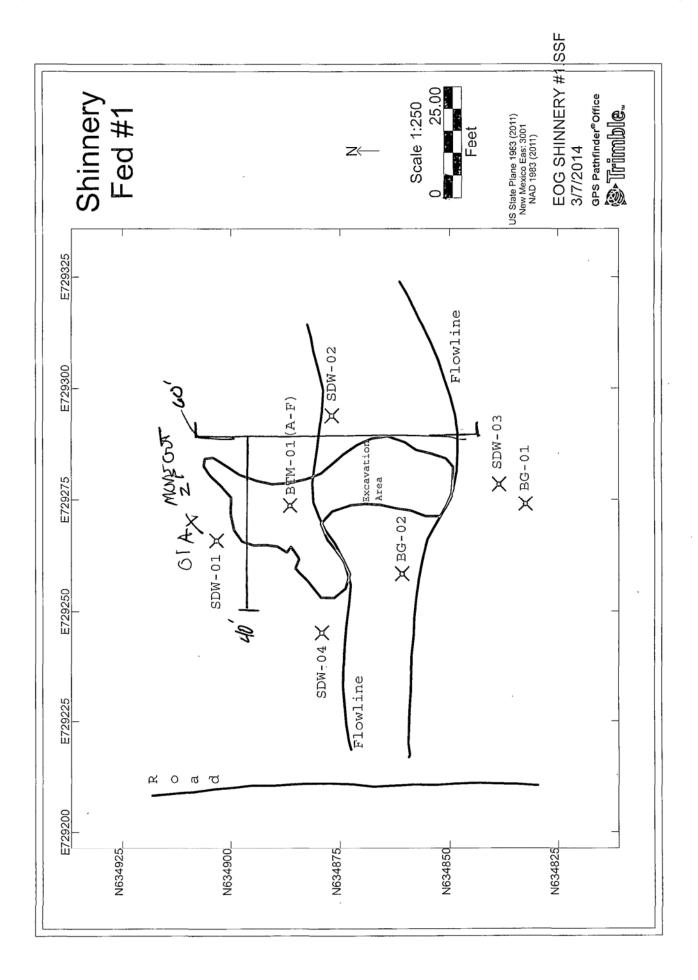
			Rele	ease Notifi		and Co			✓ Initia	al Report	☐ Final Report
Nama of C	omnony E	OG Pacouro	oc Inc				Zane Kurtz		ZZ IIIII	ii Report	L i mai report
		OG Resource pions Drive,		TX 79706			No. 432-425-2	2023			1,
Facility Na Shinnery I	me Polyli	ne from No	th Your	g Fed 12 -1 ne			e Oil and Gas				
Surface Ov	vner BL	М		Mineral	Owner E	BLM/EOG			API No	. 30-025-3	0247
				LOC	ATION	OF RE	LEASE				
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the 1980	East/W West	est Line	County Lea	
K	13	18S	32E	1980		2.4		West		Lea	
			Latitu	de32.7444_			-103.7217	-	-		
				NA	TURE	OF REL	Release 120 b	hio I	Valuma	Recovered	0 bbls
Type of Rel		roduced Wate poly line rupt		_			lour of Occurren			Hour of Dis	W. 10 CO.
Source of K	elease 3	poly line rupi	ure			9-9-2015	1200		9-9-2015		
Was Immed	liate Notice	Given? ⊠	Yes [No □ Not F	Required	If YES, To Shelly Tuc	Whom? ker/ BLM 575-3	61-0084			
By Whom?	Zane Kurtz	, EOG, 432-4	25-2023				Hour 9-9-2015@				
	Was a Watercourse Reached? ☐ Yes ☒ No						olume Impacting	the Wate	rcourse.		
3" poly line installed a p submitted a backfilled v	came apart ooly liner at nd a work p vith clean m	lan will be sut aterial to norn	eld. Relea future rel emitted to nal grade.	sed about 120 bb eases. 3 rd party o go out and excav Hopefully all rel	ate impac	ted soil and	properly remove	and dispo	ose of imp	acted son.	previous release and nples will be Then area will be
I hereby cer regulations public healt should their or the envir	rtify that the all operators th or the env r operations conment. In	s are required ironment. The have failed to	given abov to report a e acceptar adequate OCD acce	e is true and com and/or file certain acc of a C-141 re	release no port by the remediate	otifications a c NMOCD n e contaminat	nd perform corre narked as "Final I ion that pose a th	ective acti Report" d reat to gr	ons for re oes not re ound water	leases which lieve the ope er, surface w	n may endanger erator of liability vater, human health
Signature:	3n	16		15			OIL CON	ISERV	ATION	DIVISI	<u>ON</u>
	me: Zane K	Curtz				Approved by	Environmental	Specialis	t:		
Title: Sr. S	Safety and E	nvironmental	Rep., EO	G Resources, Inc.		Approval Da	ite:	4	Expiration	Date:	-
		kurtz@eogres		Libela.		Conditions of	of Approval:			Attache	d 🔲
Date:	9-9-2015	Phone: eets If Neces	432-425	5-2023						4	

Appendix B Historical Site and Sample Location Figures









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

Led County, New Mexico	4+000	olamo		Cacilot	(+b.:db.:d-)	o a chi	Total PTEV	Cac	Cao	2612
Sample ID	(pgs)	Date	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
SDW-01	9-0	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0.0	<4.00	907
SDW-02	9-0	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	88.4	<4.00	3,200
SDW-02a	9-0	4/17/2014	NA	NA	NA	AN	NA	NA	NA	58
SDW-03	9-0	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	53
SDW-04	9-0	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	<25.0
ВТМ-01-А	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	.9	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
ВТМ-01-Н	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	9-0	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	154
BG-02	9-0	3/6/2014	<0.02	<0.02	<0.02	<0.02	<0.02	<50.0	<4.00	4,250
5-8'-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:										

values above Recommended Remedial Action Levels (RRALs) bold bgs mg/kg NA

below ground surface

milligram per kilogram

not analyzed

feet inches

https://deliver.ch2m.com/projects/653209/Company Confidential/Project Folders/Shinnery/FINAL REPORT/Appendix C.xlsx





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 (yd³) of impacted soil were removed from the excavation and disposed of at the Lea Land Landfill in Carlsbad, NM. Approximately 1,008 yd³ 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.

088210-20Kurtz 2

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 TPH¹, 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.

088210-20Kurtz 3

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.

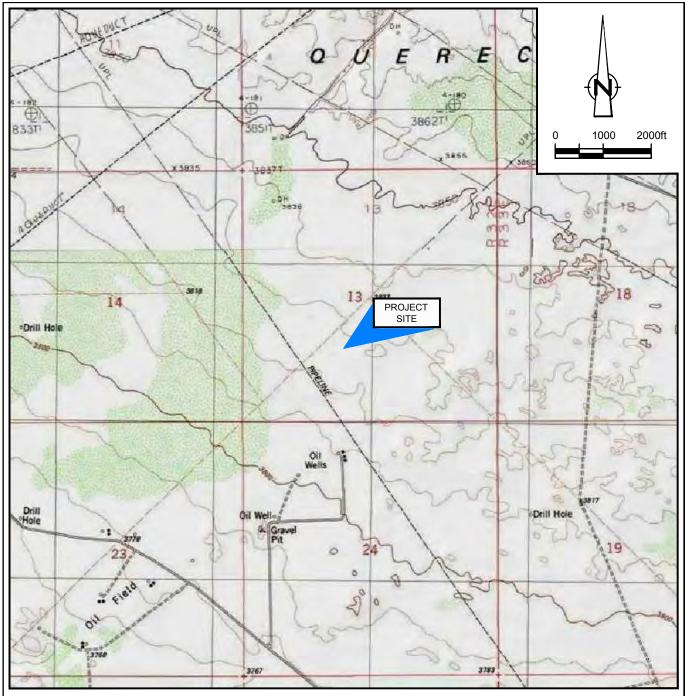
Sincerely,

GHD

Bernard Bockisch Senior Project Manager

BB/mc/02

Christine Mathews, Staff Scientist



SOURCE: USGS 7.5 MINUTE QUAD

"LAGUNA GATUNA NW, DOG LAKE, GREENWOOD LAKE,
AND MALJAMAR, NEW MEXICO"

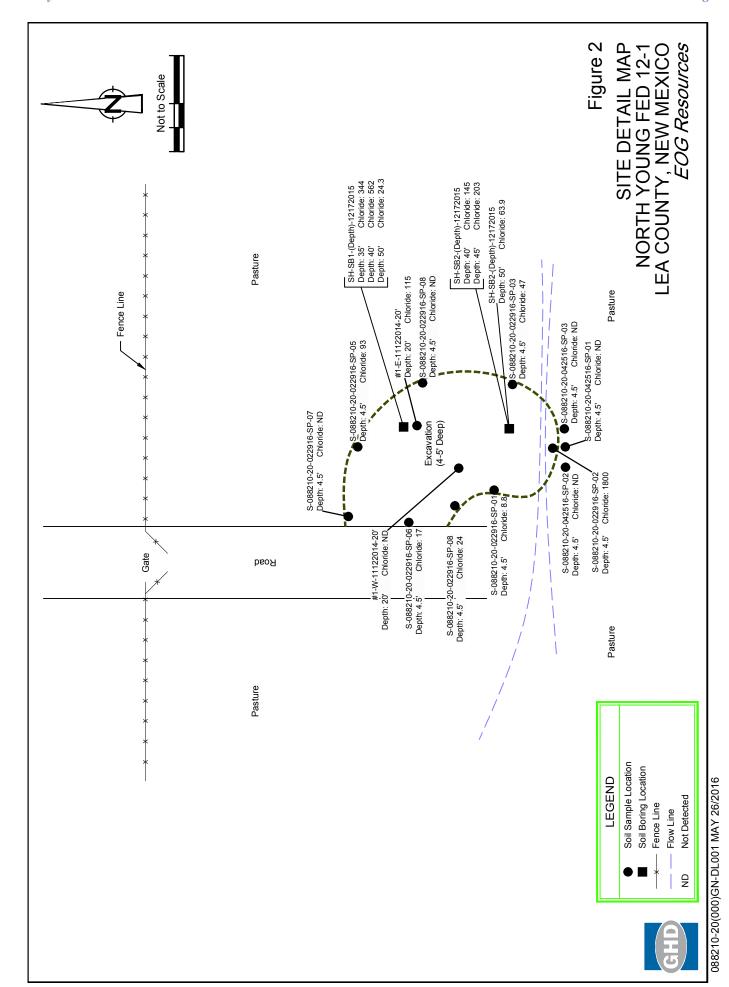
LAT/LONG: 32.7444° NORTH, 103.7217° WEST COORDINATE: NAD83 DATUM, U.S. FOOT STATE PLANE ZONE - NEW MEXICO EAST

Figure 1

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



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





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

OrderNo.: 1603190

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

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

andsl

4901 Hawkins NE

Albuquerque, NM 87109

Analyses

Analyses

Batch ID

Batch ID

Analytical Report

Lab Order: 1603190

DF Date Analyzed

DF Date Analyzed

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 3/11/2016

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

Result

EPA METHOD 300.0: ANIONS Analyst: LGT

PQL Qual Units

Chloride 8.8 7.5 mg/Kg 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

Result **PQL Qual Units DF** Date Analyzed **Batch ID Analyses EPA METHOD 300.0: ANIONS**

Analyst: LGT Chloride 1800 75 mg/Kg 3/10/2016 3:52:37 AM 24147

1603190-003 Collection Date: 2/29/2016 3:45:00 PM Lab ID:

Client Sample ID: S-088210-20-022916-SP-03 Matrix: AQUEOUS

POL Qual Units Analyses Result **DF Date Analyzed Batch ID**

EPA METHOD 300.0: ANIONS Analyst: LGT 3/9/2016 12:58:01 AM Chloride 47 7.5 mg/Kg 24147

1603190-004 Collection Date: 2/29/2016 3:50:00 PM Lab ID:

Matrix: AQUEOUS Client Sample ID: S-088210-20-022916-SP-04 Result

EPA METHOD 300.0: ANIONS Analyst: LGT

POL Qual Units

Chloride ND 1.5 mg/Kg 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

Result **Analyses PQL Qual Units DF Date Analyzed Batch ID**

EPA METHOD 300.0: ANIONS Analyst: LGT

Chloride 93 7.5 mg/Kg 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.

> D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits R

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Е Value above quantitation range

Analyte detected below quantitation limits Page 1 of 3

P Sample pH Not In Range

RLReporting Detection Limit

W Sample container temperature is out of limit as specified Analyses

Batch ID

Analytical Report

Lab Order: 1603190

DF Date Analyzed

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 3/11/2016

CLIENT: GHD Lab Order: 1603190

Project: North Young Fed 12-1

Lab ID: 1603190-006 Collection Date: 2/29/2016 4:05:00 PM

Client Sample ID: S-088210-20-022916-SP-06 Matrix: AQUEOUS

Result

EPA METHOD 300.0: ANIONS Analyst: LGT

PQL Qual Units

Chloride 17 7.5 mg/Kg 3/9/2016 2:37:18 AM 24147

Collection Date: 2/29/2016 4:10:00 PM Lab ID: 1603190-007

Client Sample ID: S-088210-20-022916-SP-07 Matrix: AQUEOUS

Result **PQL Qual Units** DF Date Analyzed **Batch ID Analyses**

EPA METHOD 300.0: ANIONS Analyst: LGT Chloride ND 7.5 mg/Kg 3/9/2016 3:02:08 AM 24147

Lab ID: 1603190-008 **Collection Date:** 2/29/2016 4:15:00 PM

Matrix: AQUEOUS Client Sample ID: S-088210-20-022916-SP-08

POL Qual Units DF Date Analyzed **Analyses** Result **Batch ID**

EPA METHOD 300.0: ANIONS Analyst: LGT Chloride 7.5

3/9/2016 3:26:57 AM 24 mg/Kg 24147

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

Qualifiers: Value exceeds Maximum Contaminant Level.

> Sample Diluted Due to Matrix D

Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Е Value above quantitation range

Analyte detected below quantitation limits Page 2 of 3

P Sample pH Not In Range

RLReporting Detection Limit

W Sample container temperature is out of limit as specified

OC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603190**

Page 3 of 3

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.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified



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

agged By Ashley Gallegos	03/03/1	2			
		P			
	3/3/2016 9:50:00 AM		AZ		
Completed By: Ashley Galleges	3/3/2016 1:50:15 PM		A		
Reviewed By:	03/03/16		0		
hain of Custody	(3/03/14				
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			
-ôg lâ					
4. Was an attempt made to cool the sample	s?	Yes 🗸	No 🗆	NA \square	
5 Were all samples received at a temperatu	ire 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 tes	t(s)?	Yes 🗸	No 🗌		
8. Are samples (except VOA and ONG) prop	erly preserved?	Yes 🗸	No 🗀		
9. Was preservative added to bottles?		Yes 🗌	No 🗸	NA 🗆	
0.VOA vials have zero headspace?		Yes 🗔	No 🗆	No VOA Vials	
1. Were any sample containers received bro	oken?	Yes	No 🗸	# of preserved bottles checked	
2. Does paperwork match bottle labels?		Yes 🗸	No 🗆	for pH:	unless noted
(Note discrepancies on chain of custody)	of Contains	Yas V	No 🗆	Adjusted?	uniess noted
 Are matrices correctly identified on Chain Is it clear what analyses were requested? 		Yes V	No 🗆	CVT.	
5. Were all holding times able to be met?		Yes 🔽	No 🗍	Checked by:	
(If no, notify customer for authorization)					
pecial Handling (if applicable) 6. Was client notified of all discrepancies wi	th this order?	Yes	No 🗆	NA 🗸	
Person Notified:	Date	198.00	***************************************	11.00.0000	
By Whom:	Via:	oMail _	Phone Fax	In Person	
Regarding:	7,000	The store of	A 4505 (24)	E1111111111111111111111111111111111111	
Client Instructions:				-	
17. Additional remarks.					
8. Cooler Information					
Cooler No Temp °C Condition	Seal Intact Seal No	Seal Date	Signed By		

FENVIRONMENTAL YSIS LABORATORY environmental.com Albuquerque, NM 87109 Fax 505-345-4107	S260B (VOA) (Semi-VOA) (AOV-i›んと ふのこの (A) (N 10 Y) səldduð nif	2 × - × v	Page 80 of
HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request	3TEX + MTBE + TPH (Gas only) 1PH 8015B (GRO / DRO / MRO) 5DB (Method 504.1) 6AH's (8310 or 8270 SIMS) 7CRA 8 Metals 7CRA 8 Metals 70RA 8 Metals	9T	5 5 of this nossibility. Any sub-contracted data will be clearly notated on the analytical report
Turn-Around Time: Standard Rush Project Name: North Young Fed 12-i Project #: 088210/20	Project Manager: Bernard Pockisch 505-280-0572 Sampler: Steve (1022 On loe: Original Disposition of Type and # Type Type and # Type Preservative	Te -023/78 -023 -023 -023 -023 -023 -023 -023 -023	
Chain-of-Custody Record Chain-of-Custody Record	sch ઉનુમને . ઉજત્ત 4 (Full Validation)	1520 Sil 1540 Sil 1550 Sil 1600 1610 1610 1610 1610 1610 1610 1610	late: Time: Relinquished by: Received by: A pococoon samples submitted to Hall Environmental may be subcontracted to differ according



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

OrderNo.: 1604B57

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

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

andsl

4901 Hawkins NE

Albuquerque, NM 87109

Analyses

Batch ID

Analytical Report

Lab Order: 1604B57

DF Date Analyzed

Date Reported: 4/29/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 1604B57

Project: North Young Fed 12-1

Lab ID: 1604B57-001 **Collection Date:** 4/25/2016 4:00:00 PM

Client Sample ID: S-088210-20-042516-SP-01 Matrix: SOIL

Result

EPA METHOD 300.0: ANIONS

Analyst: SRM

PQL Qual Units

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.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits Page 1 of 2

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1604B57

Page 2 of 2

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

HighLimit SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result LowLimit Qual

Chloride 14 1.5 15.00 0 94.5 110

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 FEL: 505-345-3975 FAX, 305-345-4107

Website: www hallenvironmental com

Sample Log-In Check List

Received by/date: Logged By: Ashley Gallegos 4/27/2016 9:30:00 A Completed By Ashley Gallegos 4/27/2016 10:05:22 Reviewed By: 04/21/6		A	
Completed By Ashley Gallegos 4/27/2016 10:05:22 Reviewed By: 04/21/6		AZ	
Reviewed By: 9 04/21/16	AM	A	
JA 21/01/12		Ä	
Their of Custody			
main of custody			
1. Custody seals intact on sample buildes?	Yes 🗌	No T	Not Present
2 Is Chain of Custody complete?	Yes 🗸	No L	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 V	No.	
g. Are samples (except VOA and ONG) properly preserved?	Ves 🗸	No	
Was preservative added to bottles?	Yes 🗌	No 🗸	NA 🗆
10.VOA viats have zero headspace?	Yes 🗌	No 🗆	No VOA Vials
11. Were any sample containers received broken?	Yes 🗌	No V	4.4.000.00
	-		# of preserved bottles checked
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🔽	No _	for pH (<2 or >12 unless note
3 Are matrices correctly identified on Chain of Custody?	Yes V	No 🗔	Adjusted?
14. Is it clear what analyses were requested?	Yes V	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	

Chain-of-Custody Record Turn-Acourd Time: Chair-of-Custody Record Turn-Acourd Time: Chair-of-Custody Record Turn-Acourd Time: Chair-of-Custody Record Turn-Acourd Time: Chair-of-Custody Record Chair-of-Custody Record Continue Chair-of-Custody Record Chair-of-Custody R	Received	by O	CD:	10/2	1/20	21 3	:41:28	PM .													1	Page 91	of 95
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ATTACHMENT D Photographic Documentation

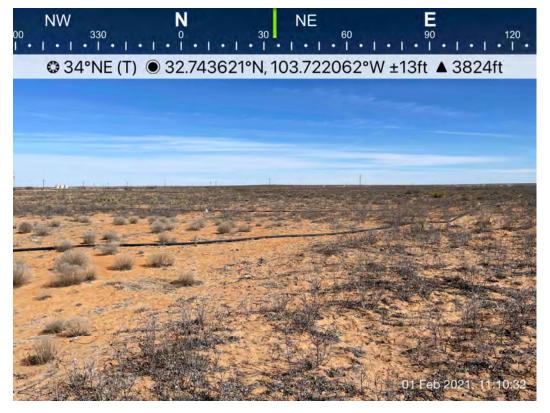
EOG Resources Shinnery Federal #001 Lea County, New Mexico







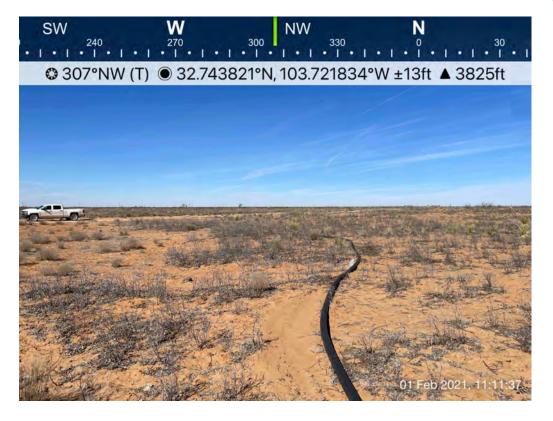
View of Remediated Area - View Southeast



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

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 57368

CONDITIONS

Operator:	OGRID:
EOG RESOURCES INC	7377
P.O. Box 2267	Action Number:
Midland, TX 79702	57368
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By		Condition Date
bhall	None	1/4/2023