State of New Mexico
Oil Conservation Division

Incident ID	NJMW131934923
District RP	
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?	180 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NJMW131934923
District RP	
Facility ID	
Application ID	

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

Printed Name: Dale Woodall Title: EHS Professional

Signature: Dale Woodall Date: 5/19/2023

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NJMW131934923
District RP	
Facility ID	
Application ID	

Closure

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

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

[x] A scaled site and sampling diagram as described in 19.15.29.11 NMAC

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

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

[x] Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Dale Woodall Title: EHS Professional

Signature: Dale Woodall Date: 5/19/2023

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: OCD Date: 5/19/2023

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

Closure Approved by: Ashley Maxwell Date: 5/24/2023

Printed Name: Ashley Maxwell Title: Environmental Specialist

Pima Environmental Services
5614 N. Lovington Highway
Hobbs, NM 88240
575-964-7740

January 26, 2023

NMOCD District 2
811 S. First Street
Artesia, NM 88210

Bureau of Land Management
Mr. Jim Amos
620 East Green Street
Carlsbad, NM 88220

Re: Site Assessment, Remediation, and Closure Report
Rigel 20 Fed Com #1H
API No. 30-015-39393
GPS: Latitude 32.6519922 Longitude -103.8990173
UL -- D, Sec. 20, T19S, R31E
Eddy County, NM
NMOCD Ref. No. NJMW1319349423

Pima Environmental Services, LLC. (Pima) has been contracted by Devon Energy Production Company, LP (Devon) to perform a spill assessment, remediation activities, and submit this closure report for a crude oil release that occurred at the Rigel 20 Fed Com #1H (Rigel). The initial C-141 was submitted on July 5th, 2022 (Appendix C). This incident was assigned Incident ID NJMW1319349423 by the New Mexico Oil Conservation Division (NMOCD).

Site Characterization

The Rigel is located approximately twenty-five (25) miles northeast of Carlsbad, NM. This spill site is in Unit D, Section 20, Township 19S, Range 31E, Latitude 32.6519922 Longitude -103.8990173, Eddy County, NM. Figure 1 references a Location Map.

Per the New Mexico Bureau of Geology and Mineral Resources, the geology is in the Quaternary Formation- Eolian and piedmont deposits (Holocene to middle Pleistocene)-interlayed eolian sands and piedmont-slope deposits (QEP). The soil in this area is made up of Berino loamy fine sand, 0 to 3 percent slopes according to the United States Department of Agriculture Natural Resources Conservation Service soil survey (Appendix B). The drainage courses in this area are well-drained. There is a low potential for karst geology to be present in the area of the Rigel (Figure 3).

According to the New Mexico Office of the State Engineer, depth to the nearest groundwater in this area is 180 feet below grade surface (BGS). According to the United States Geological Survey (USGS), the nearest groundwater is greater than 100 feet BGS. The closest waterway and is the Hackberry Lake, located approximately 2.1 miles to the west of this location. See Appendix A for referenced water surveys.

Table 1 NMAC and Closure Criteria 19.15.29					
Depth to Groundwater (Appendix A)	Constituent & Limits				
	Chlorides	Total TPH	GRO+DRO	BTEX	Benzene
<50' (Lack of GW data)	600 mg/kg	100 mg/kg		50 mg/kg	10 mg/kg
51-100'	10,000 mg/kg	2,500 mg/kg	1,000 mg/kg	50 mg/kg	10 mg/kg
>100'	20,000 mg/kg	2,500 mg/kg	1,000 mg/kg	50 mg/kg	10 mg/kg

Reference Figure 2 for a Topographic Map.

Release Information

NJMW1319349423: On June 21, 2013, an oil hauler truck over filled causing a 46 barrel (bbl) oi spill. On 6-21-13 at approximately 3 am, the night watchman was checking the battery and noticed the truck driver lying on the ground and oil running out of the transport truck. Actions were taken to stop the spill and a vac truck was dispatched and was able to recover 10 bbls of oil.

Remediation Activities, Site Assessment, and Soil Sampling Results

On July 27, 2020, Pima Environmental mobilized personnel to the site to assess the impacted area. Pima sampled areas around the containment in order to determine if contamination was released. An initial site map can be found in Figure 4.

7-27-20 Soil Sample Results

NMOCD Table 1 Closure Criteria 19.15.29 NMAC (Depth to Groundwater is >100')								
Sample Date 7-27-20		NM Approved Laboratory Results						
Sample ID	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
N. Composite	0	ND	ND	ND	ND	ND	ND	544
S. Composite	0	ND	ND	ND	**1370**	363	1370	1970
E. Composite	0	ND	ND	ND	**1860**	**702**	**2562**	1870
W. Composite	0	ND	ND	ND	188	96	284	1500
BG-1	0	ND	ND	ND	ND	ND	ND	288
BG-2	0	ND	ND	ND	ND	ND	ND	288
BG-3	0	ND	ND	ND	ND	ND	ND	ND
BG-4	0	ND	ND	ND	ND	ND	ND	ND

ND- Analyte Not Detected

Initial Remediation Activities: On August 25, 2020, Pima mobilized personnel and equipment to conduct remedial activities. The areas in the vicinity on the east and south sides of the containment were excavated to a depth of 1 foot deep. 5-point bottom and sidewall composite samples were obtained to ensure that the vertical and horizontal extents of the contamination had been removed. Each composite sample was representative of no more than 200 square feet. The laboratory results of this sampling event can be found in the following data table.

8-25-2020 Soil Sample Results

NMOCD Table 1 Closure Criteria 19.15.29 NMAC (Depth to Groundwater is >100')					
Sample Date 8-25-20					
Sample ID	Depth (BGS)	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg
S. Composite	0	ND	44	170	214
E. Composite	0	ND	ND	ND	ND

ND- Analyte Not Detected

Complete laboratory reports can be found in Appendix E.

Countermeasures due to Rejection:

On January 16, 2023, Pima personnel returned to location and samples the area in front and adjacent to the LACT unit. Pima believes this region provides an accurate representation of the impacted area. A total of fifteen (15) samples were collected around the point of release. Laboratory results of this sampling event can be found in the following data table. The previous rejected closure report can be found in Appendix F.

1-16-2023 Soil Sample Results

NMOCD Table 1 Closure Criteria 19.15.29 NMAC (Depth to Groundwater is <50')								
DEVON ENERGY - RIGEL 20 FED COM 1H								
Sample Date: 1/16/2023		NM Approved Laboratory Results						
Sample ID	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
S-1	1'	ND	ND	ND	ND	ND	0	65.9
	2'	ND	ND	ND	ND	ND	0	ND
S-2	1'	ND	ND	ND	ND	ND	0	567
	2'	ND	ND	ND	ND	ND	0	ND
S-3	1'	ND	ND	ND	ND	ND	0	62.3
	2'	ND	ND	ND	ND	ND	0	ND
S-4	1'	ND	ND	ND	25.6	53.9	79.5	186
	2'	ND	ND	ND	ND	ND	0	ND
S-5	1'	ND	ND	ND	ND	ND	0	58.3
	2'	ND	ND	ND	ND	ND	0	ND
SW-1	6"	ND	ND	ND	ND	ND	0	ND
SW-2	6"	ND	ND	ND	ND	ND	0	ND
SW-3	6"	ND	ND	ND	ND	ND	0	ND
BG 1	6"	ND	ND	ND	ND	ND	0	ND
BG 2	6"	ND	ND	ND	ND	ND	0	ND

ND- Analyte Not Detected

Complete laboratory reports can be found in Appendix E.

Pima Environmental believes groundwater levels have been adequately characterized to be less than 50' bgs. Also, horizontal and vertical delineation has been successfully determined. A revised site map can be found in Figure 5.

Based on the sample results, the bottoms and sidewalls were below NMOCD Closure Criteria 19.15.29 NMAC. In combination with the previous excavation of the eastern and southern portion of the release along with natural attenuation, we believe the impacted area has been adequately remediated. See Appendix D for Photographic Documentation.

Closure Request

Due to analytical levels falling below NMOCD closure criteria, no further action is required.

After careful review, Pima requests that this incident, NJMW1319349423 be closed. Devon has complied with the applicable closure requirements set forth in rule 19.15.19.12 NMAC.

Should you have any questions or need additional information, please feel free to contact Sebastian Orozco at 619-721-4813 or Sebastian@pimaoil.com.

Respectfully,

Sebastian Orozco

Sebastian Orozco
Environmental Professional
Pima Environment Services, LLC

Attachments

Figures:
1- Location Map
2- Topographic Map
3- Karst Map
4- Initial Site Map
5- Confirmation Site Map
6- Revised Site Map

Appendices:
Appendix A – Referenced Water Surveys
Appendix B – Soil Survey and Geological Data
Appendix C – C-141 Form and Correspondence
Appendix D – Photographic Documentation
Appendix E – Laboratory Reports
Appendix F – Rejected Closure Report

Pima Environmental Services

Figures:

1-Location Map

2- Topographic Map

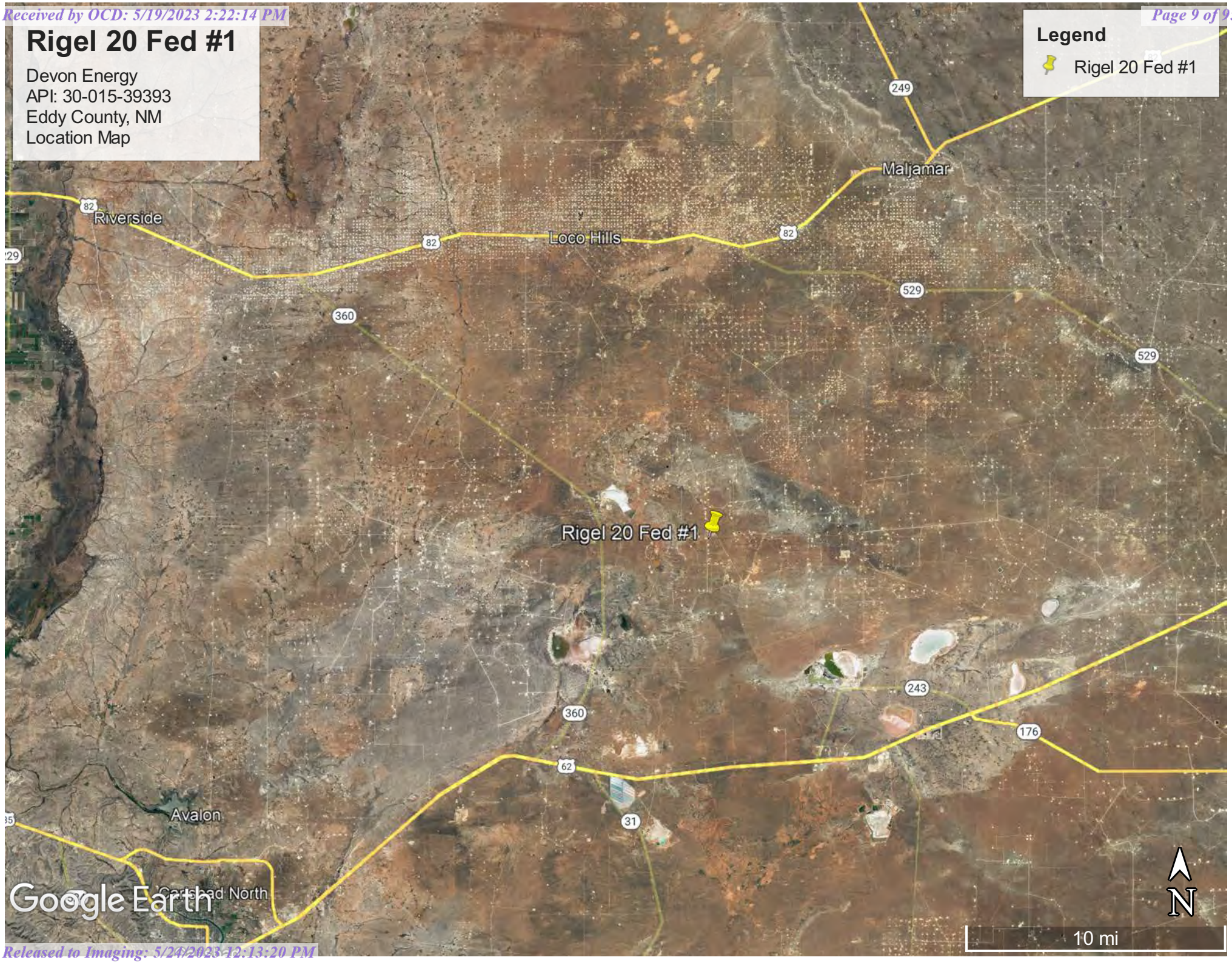
3- Karst Map

4-Initial Site Map

5-Revised Site Map

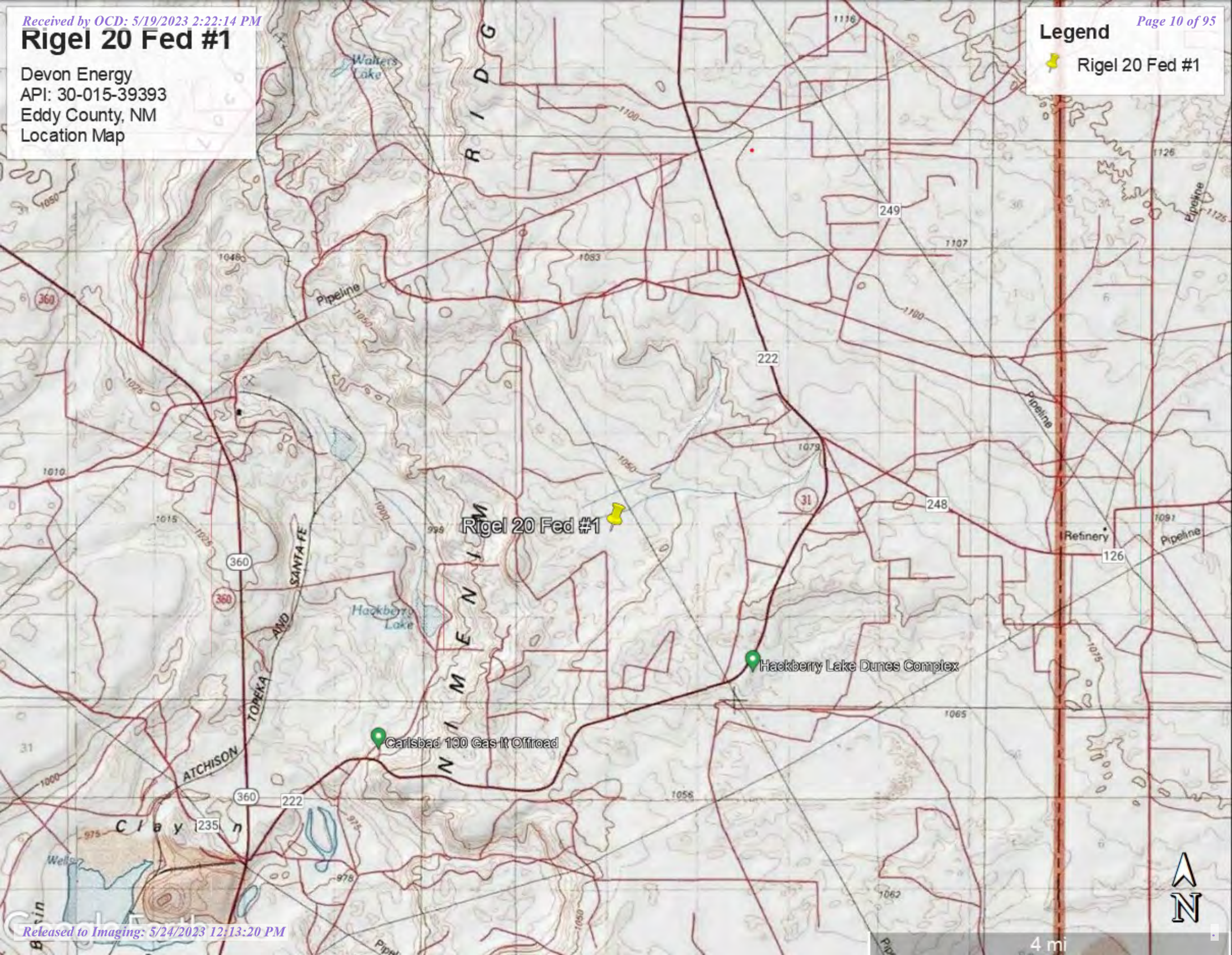
Rigel 20 Fed #1

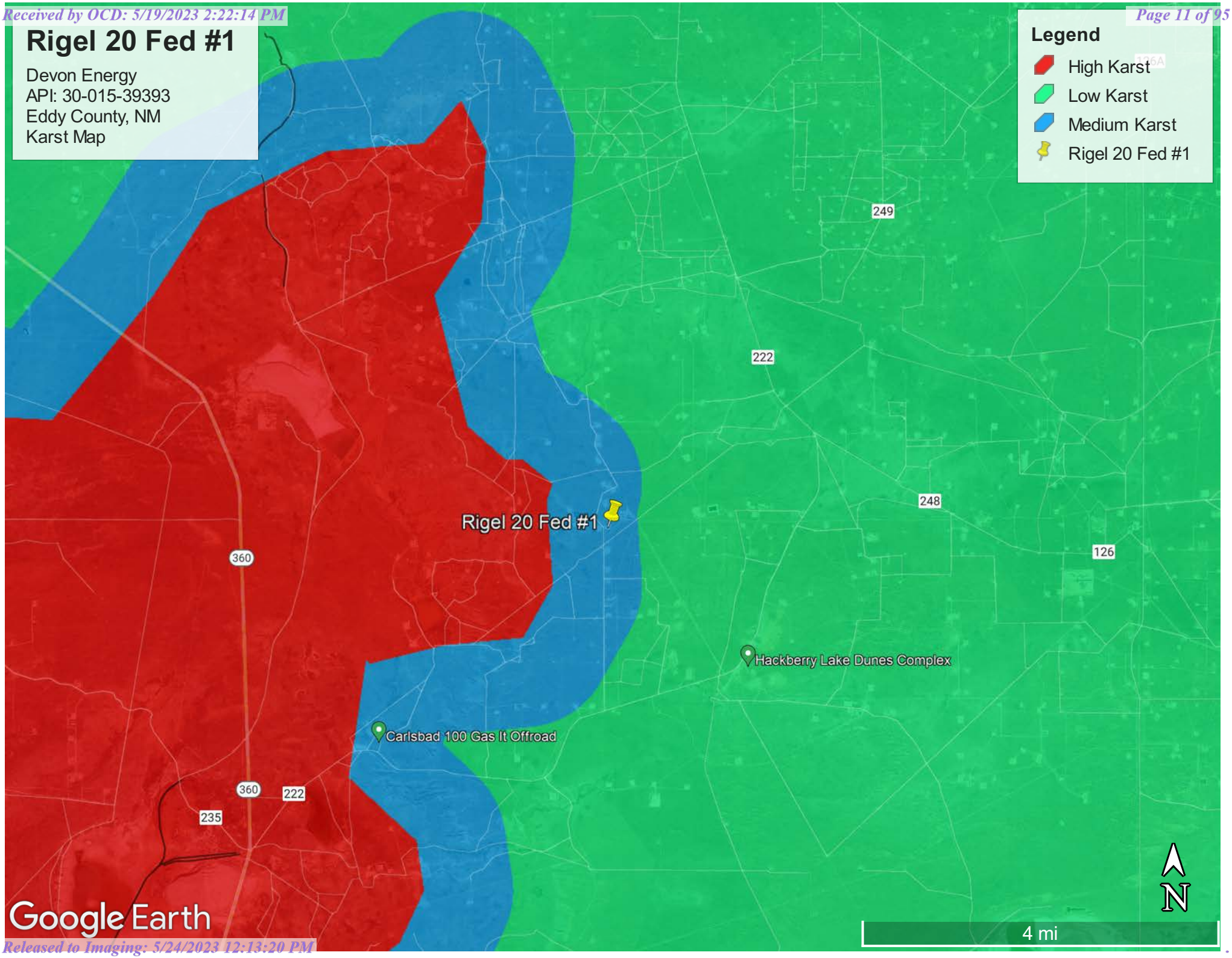
Devon Energy
API: 30-015-39393
Eddy County, NM
Location Map



Rigel 20 Fed #1

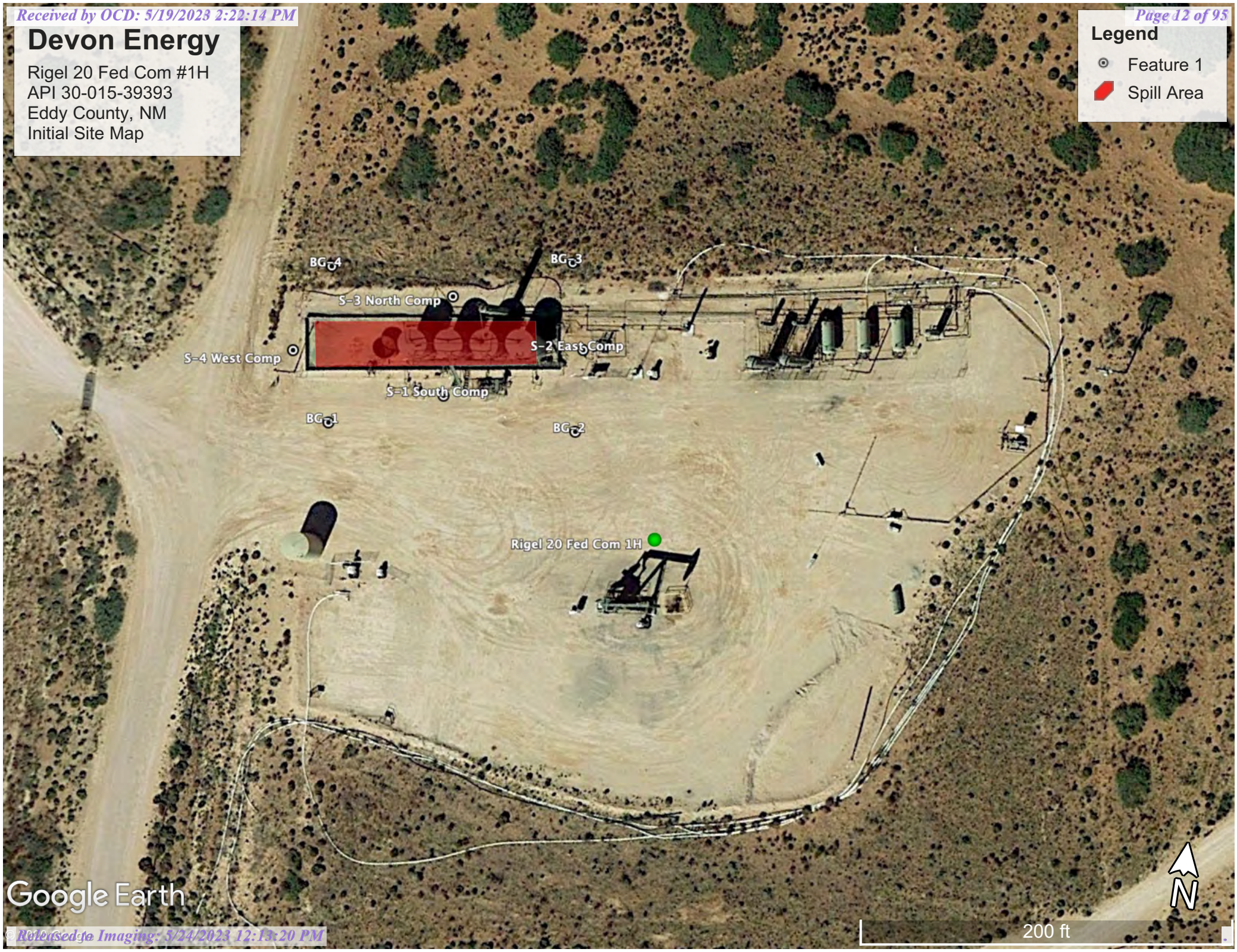
Devon Energy
API: 30-015-39393
Eddy County, NM
Location Map




Rigel 20 Fed #1
Devon Energy
API: 30-015-39393
Eddy County, NM
Karst Map
Legend
High Karst
Low Karst
Medium Karst
Rigel 20 Fed #1
249
222
248
126
360
Rigel 20 Fed #1
Hackberry Lake Dunes Complex
Carlsbad 100 Gas It Offroad
360
222
235
Google Earth
N
4 mi

Devon Energy

Rigel 20 Fed Com #1H
API 30-015-39393
Eddy County, NM
Initial Site Map



Rigel 20 Fed Com #1H

Devon Energy
API: 30-015-39393
Eddy County, NM
Revised Site Map

Pima Environmental Services

Appendix A

Water Surveys:

OSE

USGS

Surface Water Map

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

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 00873 POD1		CP	LE		1	1	19	19S	31E	601772	3613147*	1485	340	180	160
CP 01907 POD1		CP	ED	4	2	2	18	19S	31E	603017	3614737	1513			
CP 00357 POD1		CP	ED	4	4	1	24	19S	30E	600667	3612631*	2658	630		
CP 00829 POD1		CP	LE		2	4	16	19S	31E	606165	3614009*	3009	120		
CP 00357 POD2		CP	ED	4	3	1	24	19S	30E	600265	3612627*	3052	630		
CP 00725 POD1		CP	ED	1	3	3	28	19S	31E	604906	3610473*	3224	231		
CP 00722 POD2		CP	ED	2	1	1	25	19S	30E	600276	3611620*	3391	350	65	285
CP 00722 POD1		CP	LE	4	3	3	28	19S	31E	605106	3610273*	3499	200		
CP 00722 POD1	R	CP	LE	4	3	3	28	19S	31E	605106	3610273*	3499	200		
CP 00723 POD1		CP	ED	2	1	1	33	19S	31E	605111	3610071*	3674	139		
CP 01554 POD2		CP	LE	2	2	1	22	19S	31E	607165	3613322	3911	400		
CP 01554 POD1		CP	LE	2	2	1	22	19S	31E	607166	3613354	3912	400		
CP 00722 POD3		CP	LE	2	4	1	33	19S	31E	605519	3609673*	4227	220	140	80

Average Depth to Water: **128 feet**
Minimum Depth: **65 feet**
Maximum Depth: **180 feet**

Record Count: 13

UTMNAD83 Radius Search (in meters):

Easting (X): 603254.63 **Northing (Y):** 3613242.53 **Radius:** 5000

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

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

- See the Water Data for the Nation Blog for the latest news and updates.

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

site_no list =

- 323734103523901

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

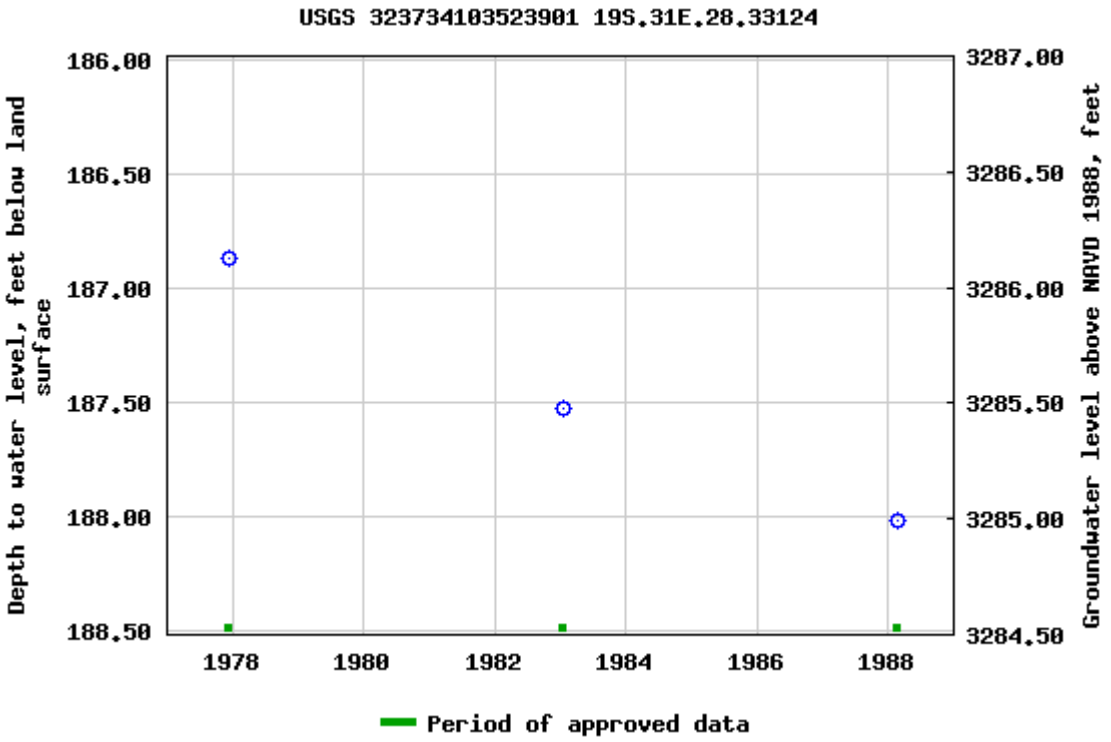
USGS 323734103523901 19S.31E.28.33124

Available data for this site | Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°37'34", Longitude 103°52'39" NAD27
Land-surface elevation 3,473 feet above NAVD88
The depth of the well is 230 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2023-01-18 12:45:33 EST
0.6 0.51 nadww02

ADDENDUM

Location name: RIGEL 20 FEDERAL COM #001H

OCD Spill Number: nJMW1319349423

Spill date: 7/12/2013

From: Dale Woodall, Devon Energy

Date: 5/19/2023

Since the PIMA report for the above referenced spill was written, there has been an update in the status of the PODs for the location.

A review of New Mexico Office of the State Engineers (OSE) online water well database (New Mexico Office of the State Engineer (NMOSE) online water well database https://gis.ose.state.nm.us/gisapps/ose_pod_locations/).

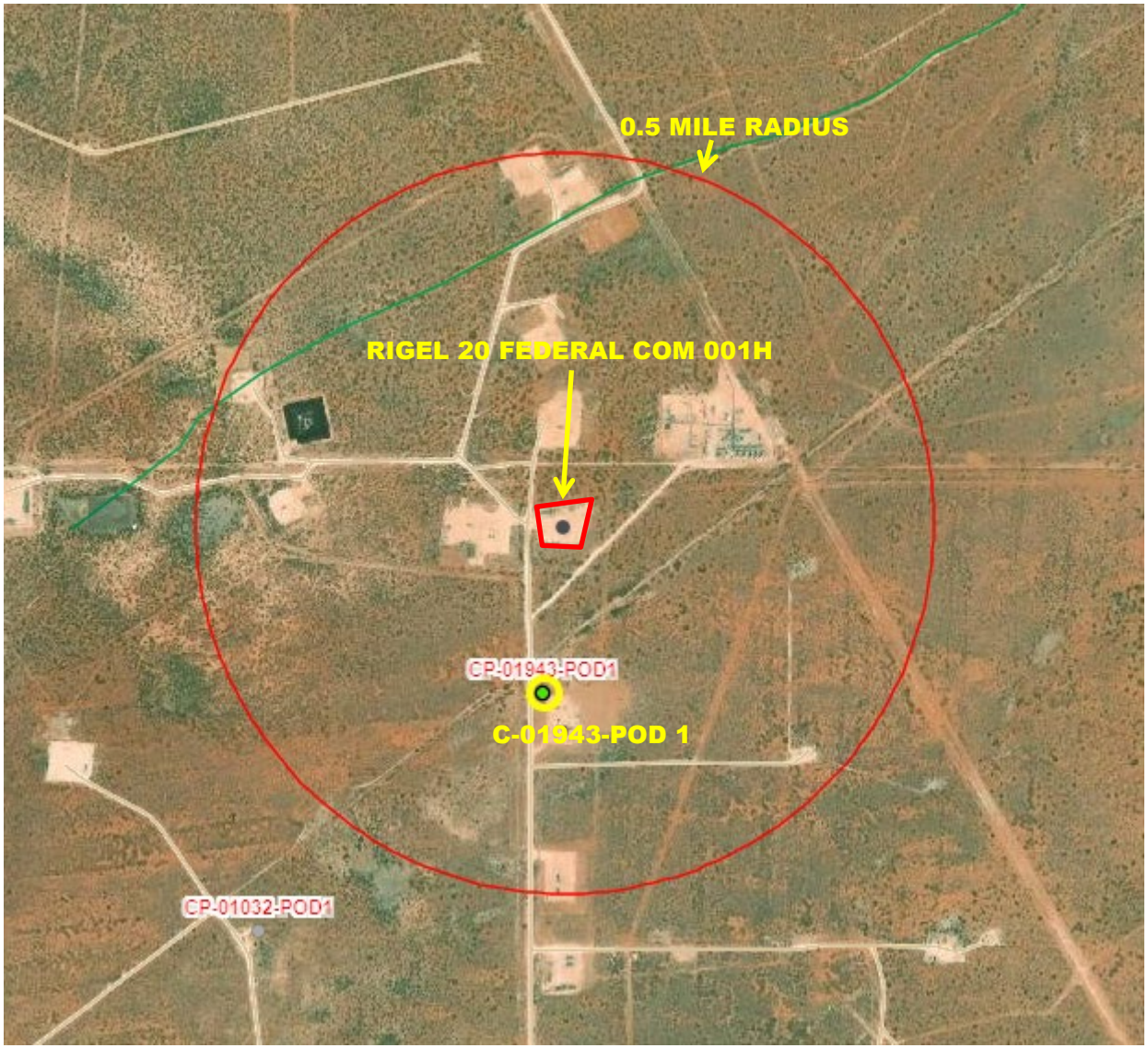
One pod location is within 0.5 miles of the location and is less than 25 years old.

CP-01943 POD 1 (installed 4/6/2023) did not encounter groundwater at 55 feet and is 0.1 miles south of the location

The spill was remediated to criteria for DTW of greater than 51 feet bgs.

Boring log of the well CP-01943 POD1 is attached.

NORTH



C-01943- POD1 (51 feet) = 0.2 miles from location (4/6/2023)

FIGURE 1: NM OSE POD LOCATIONS	
RIGEL 20 FEDERAL COM 001H	
32.6519922, -103.8990173	
drawn by: RDW	Date: 05/2023

SOURCE: OSE NM POD LOCATON GIS MAP

Atkins ENGINEERING ASSOCIATES INC.
2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

April 27, 2023

DII-NMOSE
1900 W 2nd Street
Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record CP-1943 Pod-1

To whom it may concern:

Attached please find a well log & record and a plugging record, in duplicate, for a one (1) soil borings, CP-1943 Pod-1.

If you have any questions, please contact me at 575.499.9244 or lucas@atkinseng.com.

Sincerely,

Lucas Middleton

Enclosures: as noted above

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD 1 (TW-1)	N/A	CP-1943

WELL OWNER NAME(S)	PHONE (OPTIONAL)
Devon Energy	575-748-1838

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6488 7 Rivers Hwy	Artesia	NM	88210

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	38	55.52	N
	LONGITUDE	103	53	58.0	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHJIP, RANGE) WHERE AVAILABLE

NW SW NW Sec.20 T19S R31E NMPM

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
4/6/2023	4/9/2023	Temporary Well Material	±55	N/A

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): N/A

DATE STATIC MEASURED: 4/18/23

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

CHECK HERE IF PITLESS ADAPTER IS INSTALLED ☐

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	55	±6.25	Soil Boring	--	--	--	--

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
			N/A		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES **(attach supplemental sheets to fully describe all units)**	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	4	4	Sand,fine-grained, poorly graded, unconsolidated Brown	Y ✓ N	
4	25	21	Caliche, with very fine- grained sand, Tan off white	Y ✓ N	
25	50	25	Sand,fine-grained, poorly graded, consolidated, Brown	Y ✓ N	
50	55	5	Sand,fine-grained, poorly graded, unconsolidated, Tan	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Temporary well material removed and soil boring backfilled using drill cuttings from total depth to ten feet below ground surface(bgs), then hydrated bentonite chips ten feet bgs to surface.
5
Rigel 20 Fed Com 2H

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Shane Eldridge, Cameron Pruitt

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 4/26/23

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 2 OF 2

PLUGGING RECORD

NOTE: **A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC**

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: CP-1943 POD-1

Well owner: Devon Energy Phone No.: 575-748-1838

Mailing address: 6488 7 Rivers Hwy

City: Artesia State: New Mexico Zip code: 88210

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Jackie D. Atkins (Atkins Engineering Associates Inc.)

2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/25

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Shane Eldridge, Cameron Pruitt

4) Date well plugging began: 4/18/2023 Date well plugging concluded: 4/18/2023

5) GPS Well Location: Latitude: 32 deg, 38 min, 55.52 sec
Longitude: 103 deg, 53 min, 58 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 55 ft below ground level (bgl), by the following manner: weighted tape

7) Static water level measured at initiation of plugging: n/a ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 1/11/2023

9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

Version: September 8, 2009
Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	0-10' Hydrated Bentonite	Approx. 15 gallons	15 gallons	Augers	
	10'-55' Drill Cuttings	Approx. 71 gallons	71 gallons	Boring	

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Jackie D. Atkins, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Jack Atkins — Signature of Well Driller

4/26/2023 — Date

Version: September 8, 2009
Page 2 of 2

5-CP-1943-WR-20 Well Record and Log-forsign

Final Audit Report 2023-04-26

Created:	2023-04-26
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAn3M6xOlg-t6yNQI8viEbQUdHXqVs7Hgo

"5-CP-1943-WR-20 Well Record and Log-forsign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2023-04-26 - 8:18:33 PM GMT- IP address: 64.17.82.146

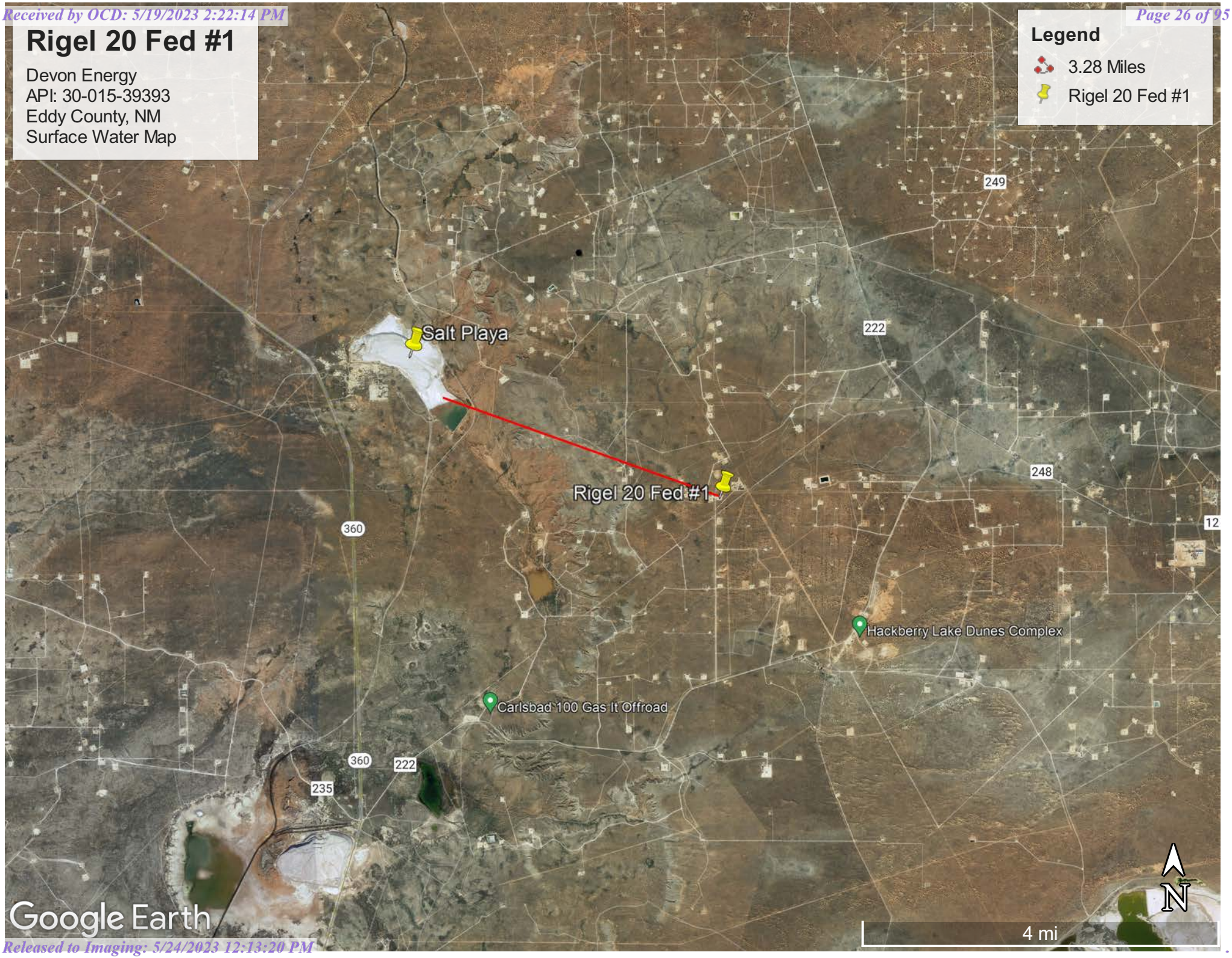
Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2023-04-26 - 8:19:07 PM GMT

Email viewed by Jack Atkins (jack@atkinseng.com)
2023-04-26 - 8:23:05 PM GMT- IP address: 64.90.153.232

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2023-04-26 - 8:23:43 PM GMT - Time Source: server- IP address: 64.90.153.232

Agreement completed.
2023-04-26 - 8:23:43 PM GMT

Adobe Acrobat Sign


Rigel 20 Fed #1
Devon Energy
API: 30-015-39393
Eddy County, NM
Surface Water Map
Legend
3.28 Miles
Rigel 20 Fed #1
Salt Playa
Rigel 20 Fed #1
Hackberry Lake Dunes Complex
Carlsbad 100 Gas It Offroad
249
222
248
12
360
360
222
235
Google Earth
4 mi
N

Pima Environmental Services

Appendix B

Soil Survey & Geological Data

FEMA Flood Map

Wetlands Map

Eddy Area, New Mexico

BA—Berino loamy fine sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w42
Elevation: 2,000 to 5,700 feet
Mean annual precipitation: 6 to 14 inches
Mean annual air temperature: 57 to 70 degrees F
Frost-free period: 180 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Berino and similar soils: 99 percent
Minor components: 1 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berino

Setting

Landform: Plains, fan piedmonts
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 12 inches: loamy fine sand
H2 - 12 to 58 inches: sandy clay loam
H3 - 58 to 60 inches: clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B
Ecological site: R070BC007NM - Loamy
Hydric soil rating: No

Minor Components

Pajarito
Percent of map unit: 1 percent
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 18, Sep 8, 2022

National Flood Hazard Layer FIRMette

FEMA

103°54'15"W 32°39'22"N

103°53'38"W 32°38'52"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- **SPECIAL FLOOD HAZARD AREAS**
  - Without Base Flood Elevation (BFE) *Zone A, V, A99*
  - With BFE or Depth *Zone AE, AO, AH, VE, AR*
  - Regulatory Floodway
- **OTHER AREAS OF FLOOD HAZARD**
  - 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
  - Future Conditions 1% Annual Chance Flood Hazard *Zone X*
  - Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
  - Area with Flood Risk due to Levee *Zone D*
- **OTHER AREAS**
  - NO SCREEN Area of Minimal Flood Hazard *Zone X*
  - Effective LOMRs
  - Area of Undetermined Flood Hazard *Zone D*
- **GENERAL STRUCTURES**
  - Channel, Culvert, or Storm Sewer
  - Levee, Dike, or Floodwall
- **OTHER FEATURES**
  - 20.2 Cross Sections with 1% Annual Chance
  - 17.5 Water Surface Elevation
  - Coastal Transect
  - Base Flood Elevation Line (BFE)
  - Limit of Study
  - Jurisdiction Boundary
  - Coastal Transect Baseline
  - Profile Baseline
  - Hydrographic Feature
- **MAP PANELS**
  - Digital Data Available
  - No Digital Data Available
  - Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

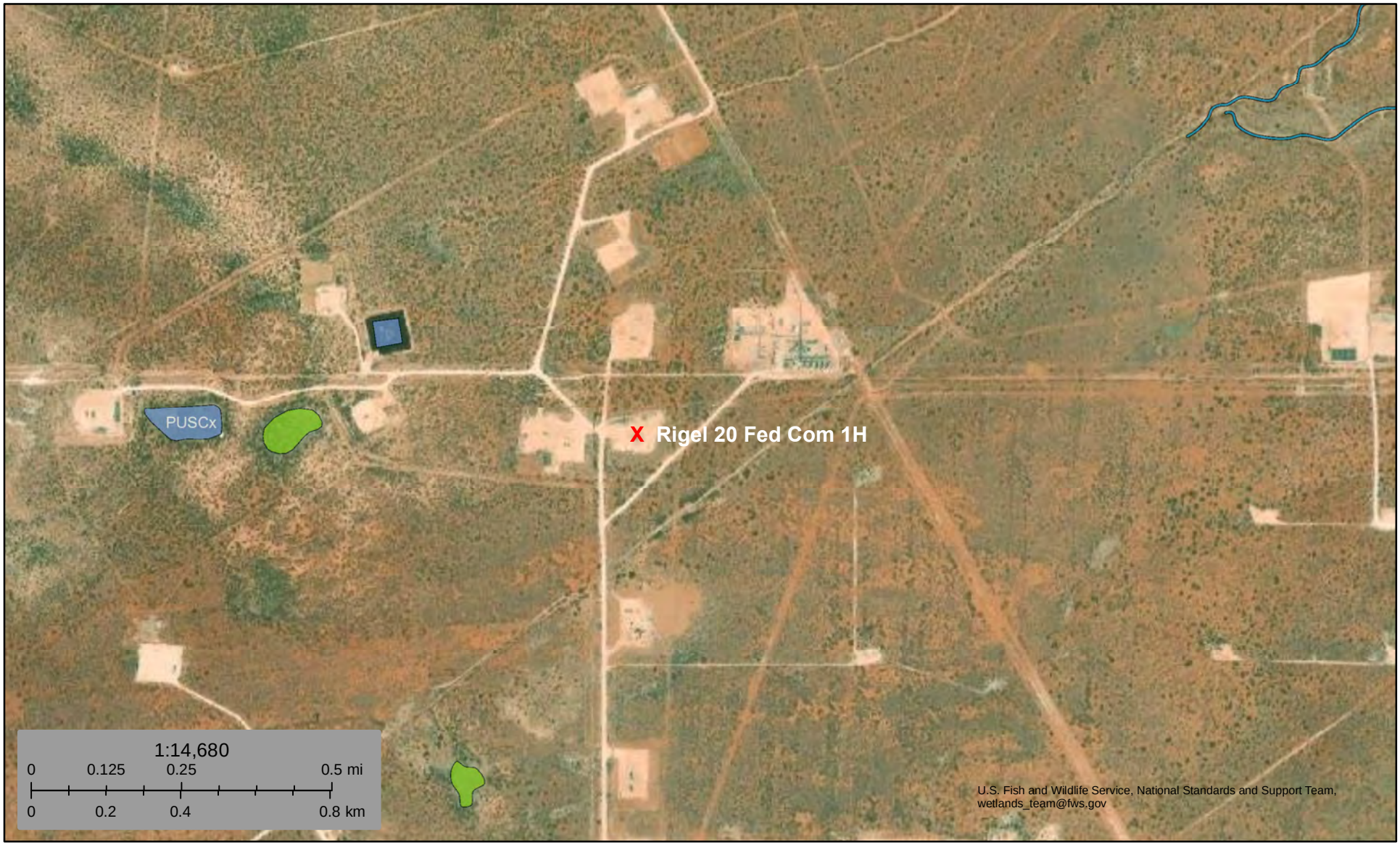
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/18/2023 at 1:55 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands Map



January 18, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Pima Environmental Services

Appendix C

C-141 Form

Correspondence

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised March 17, 1999

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

Release Notification and Corrective Action

nJMW1319349423

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Devon Energy 6137	Contact Mike McMahan, Assistant Foreman
Address P. O. Box 250 Artesia, NM 88211	Telephone No. 575-706-4165
Facility Name Rigel 20 Fed #1	Facility Type Oil Well

Surface Owner	Mineral Owner	Lease ~~No.~~ API# 30-015-39393

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	20	19S	31E	425	North	330	West	Eddy County

NATURE OF RELEASE

Type of Release Oil Spill	Volume of Release 46 bbls	Volume Recovered 10bbls
Source of Release Overflow	Date and Hour of Occurrence 6/21/13, 3:00AM	Date and Hour of Discovery 6/21/13, 3:00AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? BLM (general voicemail) OCD/ Laura Tulk	
By Whom? Mike McMahan, Assistant Foreman	Date and Hour 06/24/13, BLM 2:00PM, OCD 2:10PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RECEIVED
JUL 05 2013
NMOCD ARTESIA

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*
Class II NO SIF - At the Rigel 20-1 battery, oil hauler truck over filled causing a 46bbls oil spill.

Describe Area Affected and Cleanup Action Taken.* On 6-21-2013 @ approx 3:00 AM night watchmen was checking battery and location and noticed oil hauler lying on the ground and oil running out of the transport truck. Immediately the drivers condition was evaluated and actions to stop spill was taken. All foremen and lease operators were contacted and spill investigation was conducted. According to transport driver operator was loading oil, after truck was loaded (driver) went over the dike stairs to shut valve on oil tank and clear load line tripped and fell twisting and spranging his leg. After injury driver tryed to crawl to truck to call for help, during the injury/Accident oil began to flow out of the vent on the transport trailer spilling approximatly 46bbls of produced oil.

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

Signature: Graciela C. Bustamante	OIL CONSERVATION DIVISION
Printed Name: Graciela C. Bustamante	Approved by District Supervisor: Signed By Mike Bratcher
Title: Field Admin. Support	Approval Date: JUL 12 2013 / Expiration Date:
Date: 07/01/2013 Phone: (575) 746-5561	Conditions of Approval: Attached ☐

Remediation per OCD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION PROPOSAL NO LATER THAN: August 12, 2013

2RP-1717

* Attach Additional Sheets If Necessary

State of New Mexico
Oil Conservation Division

Incident ID	NJMW131934923
District RP	
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?	180 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NJMW131934923
District RP	
Facility ID	
Application ID	

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

Printed Name: Dale Woodall Title: EHS Professional

Signature: Dale Woodall Date: 5/19/2023

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NJMW131934923
District RP	
Facility ID	
Application ID	

Closure

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

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

[x] A scaled site and sampling diagram as described in 19.15.29.11 NMAC

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

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

[x] Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Dale Woodall Title: EHS Professional

Signature: Dale Woodall Date: 5/19/2023

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: OCD Date: 5/19/2024

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

Closure Approved by: Ashley Maxwell Date: 5/24/2023

Printed Name: Ashley Maxwell Title: Environmetal Specialist

Spill nJMW1319349423

The nearest pod is 1 mile away with DTW at 180 feet (1/4/1998)

Dale Woodall

Environmental Professional

Hobbs, NM

Office: 575-748-1838

Mobile: 405-318-4697

Dale.Woodall@dvn.com

From: OCDOnline@state.nm.us <OCDOnline@state.nm.us>
Sent: Thursday, January 12, 2023 8:10 AM
To: Woodall, Dale <Dale.Woodall@dvn.com>
Subject: [EXTERNAL] The Oil Conservation Division (OCD) has rejected the application, Application ID: 10208

To whom it may concern (c/o Dale Woodall for Pima Environmental Services, LLC),

The OCD has rejected the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nJMW1319349423,
for the following reasons:

- **The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.**
- **Horizontal and vertical delineation submitted was incomplete and did not meet the requirements of 19.15.29.11 NMAC. The values for determination of horizontal impact are derived by either approved "background" values or Table I Closure Criteria for releases where groundwater is at a depth of 50 feet or less. This is especially important for "on-pad" releases to ensure the release did not extend to the "off-pad"/pasture area. A visual footprint on the surface is not sufficient to assess the horizontal extent of the release. Laboratory data must be provided as evidence of delineation efforts. Any sample exceeding approved "background" values or Table I Closure Criteria for releases where groundwater is at a depth of 50 feet or less requires additional samples for horizontal delineation.**
- **Submit a work plan via the OCD permitting portal by 04/14/2023.**

The rejected C-141 can be found in the OCD Online: Permitting - Action Status, under the Application ID: 10208.
Please review and make the required correction(s) prior to resubmitting.

If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional C-141.

Thank you,
Ashley Maxwell
Projects Environmental Specialist - A
505-635-5000
Ashley.Maxwell@emnrd.nm.gov

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

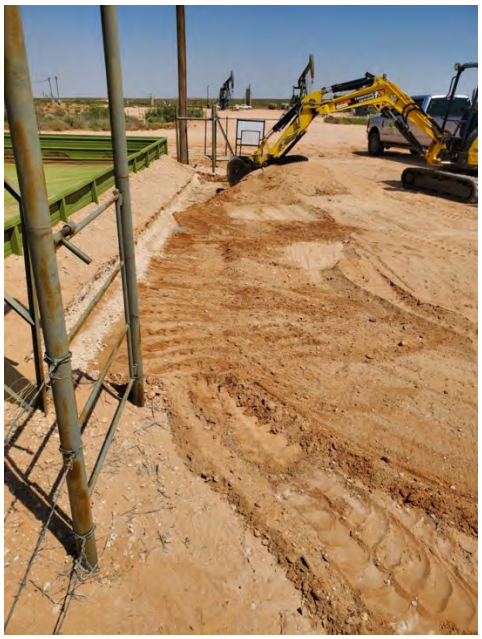
--
Gio Gomez
Project Manager
cell-806-782-1151
Office- 575-964-7740
Pima Environmental Services, LLC.

Pima Environmental Services

Appendix D

Photographic Documentation

Photographs



Completed

SITE PHOTOGRAPHS
PIMA ENVIORNMENTAL

Rigel 20 Federal Com #1H

Pima Environmental Services

Appendix E

Laboratory Reports

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

July 29, 2020

CHRIS JONES

PIMA ENVIROMENTAL

1601 N TURNER STE. 500

HOBBS, NM 88240

RE: RIGEL 20 FED COM 1H

Enclosed are the results of analyses for samples received by the laboratory on 07/28/20 9:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

PIMA ENVIROMENTAL
CHRIS JONES
1601 N TURNER STE. 500
HOBBS NM, 88240
Fax To:

Received:	07/28/2020	Sampling Date:	07/27/2020
Reported:	07/29/2020	Sampling Type:	Soil
Project Name:	RIGEL 20 FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	20754990	Sample Received By:	Tamara Oldaker
Project Location:	DEVON - EDDY CO., NM		

Sample ID: N. COMP (H001949-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/28/2020	ND	1.83	91.5	2.00	4.16	
Toluene*	<0.050	0.050	07/28/2020	ND	1.85	92.5	2.00	3.95	
Ethylbenzene*	<0.050	0.050	07/28/2020	ND	1.86	93.0	2.00	3.90	
Total Xylenes*	<0.150	0.150	07/28/2020	ND	5.33	88.9	6.00	3.97	
Total BTEX	<0.300	0.300	07/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.0 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**544**	16.0	07/28/2020	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/28/2020	ND	208	104	200	0.448	
DRO >C10-C28*	<10.0	10.0	07/28/2020	ND	200	99.8	200	1.20	
EXT DRO >C28-C36	<10.0	10.0	07/28/2020	ND					

Surrogate: 1-Chlorooctane *99.7 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *109 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

PIMA ENVIROMENTAL
CHRIS JONES
1601 N TURNER STE. 500
HOBBS NM, 88240
Fax To:

Received:	07/28/2020	Sampling Date:	07/27/2020
Reported:	07/29/2020	Sampling Type:	Soil
Project Name:	RIGEL 20 FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	20754990	Sample Received By:	Tamara Oldaker
Project Location:	DEVON - EDDY CO., NM		

Sample ID: S. COMP (H001949-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/28/2020	ND	1.83	91.5	2.00	4.16	
Toluene*	<0.050	0.050	07/28/2020	ND	1.85	92.5	2.00	3.95	
Ethylbenzene*	<0.050	0.050	07/28/2020	ND	1.86	93.0	2.00	3.90	
Total Xylenes*	<0.150	0.150	07/28/2020	ND	5.33	88.9	6.00	3.97	
Total BTEX	<0.300	0.300	07/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.6 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1970**	16.0	07/28/2020	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/28/2020	ND	208	104	200	0.448	
DRO >C10-C28*	**1370**	10.0	07/28/2020	ND	200	99.8	200	1.20	
EXT DRO >C28-C36	**363**	10.0	07/28/2020	ND					

Surrogate: 1-Chlorooctane *101 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *166 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

PIMA ENVIROMENTAL
CHRIS JONES
1601 N TURNER STE. 500
HOBBS NM, 88240
Fax To:

Received:	07/28/2020	Sampling Date:	07/27/2020
Reported:	07/29/2020	Sampling Type:	Soil
Project Name:	RIGEL 20 FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	20754990	Sample Received By:	Tamara Oldaker
Project Location:	DEVON - EDDY CO., NM		

Sample ID: E. COMP (H001949-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/28/2020	ND	1.83	91.5	2.00	4.16	
Toluene*	<0.050	0.050	07/28/2020	ND	1.85	92.5	2.00	3.95	
Ethylbenzene*	<0.050	0.050	07/28/2020	ND	1.86	93.0	2.00	3.90	
Total Xylenes*	<0.150	0.150	07/28/2020	ND	5.33	88.9	6.00	3.97	
Total BTEX	<0.300	0.300	07/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.5 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1870**	16.0	07/28/2020	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/28/2020	ND	208	104	200	0.0970	
DRO >C10-C28*	**1860**	10.0	07/28/2020	ND	218	109	200	12.3	QM-07
EXT DRO >C28-C36	**702**	10.0	07/28/2020	ND					

Surrogate: 1-Chlorooctane *105 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *192 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

PIMA ENVIROMENTAL
CHRIS JONES
1601 N TURNER STE. 500
HOBBS NM, 88240
Fax To:

Received:	07/28/2020	Sampling Date:	07/27/2020
Reported:	07/29/2020	Sampling Type:	Soil
Project Name:	RIGEL 20 FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	20754990	Sample Received By:	Tamara Oldaker
Project Location:	DEVON - EDDY CO., NM		

Sample ID: W. COMP (H001949-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/28/2020	ND	1.83	91.5	2.00	4.16	
Toluene*	<0.050	0.050	07/28/2020	ND	1.85	92.5	2.00	3.95	
Ethylbenzene*	<0.050	0.050	07/28/2020	ND	1.86	93.0	2.00	3.90	
Total Xylenes*	<0.150	0.150	07/28/2020	ND	5.33	88.9	6.00	3.97	
Total BTEX	<0.300	0.300	07/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.5 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1500**	16.0	07/28/2020	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/28/2020	ND	208	104	200	0.0970	
DRO >C10-C28*	**188**	10.0	07/28/2020	ND	218	109	200	12.3	
EXT DRO >C28-C36	**98.0**	10.0	07/28/2020	ND					

Surrogate: 1-Chlorooctane *95.0 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *114 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

PIMA ENVIROMENTAL
CHRIS JONES
1601 N TURNER STE. 500
HOBBS NM, 88240
Fax To:

Received:	07/28/2020	Sampling Date:	07/27/2020
Reported:	07/29/2020	Sampling Type:	Soil
Project Name:	RIGEL 20 FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	20754990	Sample Received By:	Tamara Oldaker
Project Location:	DEVON - EDDY CO., NM		

Sample ID: BG 1 (H001949-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/28/2020	ND	1.83	91.5	2.00	4.16	
Toluene*	<0.050	0.050	07/28/2020	ND	1.85	92.5	2.00	3.95	
Ethylbenzene*	<0.050	0.050	07/28/2020	ND	1.86	93.0	2.00	3.90	
Total Xylenes*	<0.150	0.150	07/28/2020	ND	5.33	88.9	6.00	3.97	
Total BTEX	<0.300	0.300	07/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.6 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**288**	16.0	07/28/2020	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/28/2020	ND	208	104	200	0.0970	
DRO >C10-C28*	<10.0	10.0	07/28/2020	ND	218	109	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	07/28/2020	ND					

Surrogate: 1-Chlorooctane *101 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *112 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

PIMA ENVIROMENTAL
CHRIS JONES
1601 N TURNER STE. 500
HOBBS NM, 88240
Fax To:

Received:	07/28/2020	Sampling Date:	07/27/2020
Reported:	07/29/2020	Sampling Type:	Soil
Project Name:	RIGEL 20 FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	20754990	Sample Received By:	Tamara Oldaker
Project Location:	DEVON - EDDY CO., NM		

Sample ID: BG 2 (H001949-06)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/28/2020	ND	1.83	91.5	2.00	4.16	
Toluene*	<0.050	0.050	07/28/2020	ND	1.85	92.5	2.00	3.95	
Ethylbenzene*	<0.050	0.050	07/28/2020	ND	1.86	93.0	2.00	3.90	
Total Xylenes*	<0.150	0.150	07/28/2020	ND	5.33	88.9	6.00	3.97	
Total BTEX	<0.300	0.300	07/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.7 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**288**	16.0	07/28/2020	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/29/2020	ND	208	104	200	0.0970	
DRO >C10-C28*	<10.0	10.0	07/29/2020	ND	218	109	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	07/29/2020	ND					

Surrogate: 1-Chlorooctane *102 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *112 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

PIMA ENVIROMENTAL
CHRIS JONES
1601 N TURNER STE. 500
HOBBS NM, 88240
Fax To:

Received:	07/28/2020	Sampling Date:	07/27/2020
Reported:	07/29/2020	Sampling Type:	Soil
Project Name:	RIGEL 20 FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	20754990	Sample Received By:	Tamara Oldaker
Project Location:	DEVON - EDDY CO., NM		

Sample ID: BG 3 (H001949-07)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/28/2020	ND	1.83	91.5	2.00	4.16	
Toluene*	<0.050	0.050	07/28/2020	ND	1.85	92.5	2.00	3.95	
Ethylbenzene*	<0.050	0.050	07/28/2020	ND	1.86	93.0	2.00	3.90	
Total Xylenes*	<0.150	0.150	07/28/2020	ND	5.33	88.9	6.00	3.97	
Total BTEX	<0.300	0.300	07/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.9 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/28/2020	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/29/2020	ND	208	104	200	0.0970	
DRO >C10-C28*	<10.0	10.0	07/29/2020	ND	218	109	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	07/29/2020	ND					

Surrogate: 1-Chlorooctane *102 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *113 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

PIMA ENVIROMENTAL
CHRIS JONES
1601 N TURNER STE. 500
HOBBS NM, 88240
Fax To:

Received:	07/28/2020	Sampling Date:	07/27/2020
Reported:	07/29/2020	Sampling Type:	Soil
Project Name:	RIGEL 20 FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	20754990	Sample Received By:	Tamara Oldaker
Project Location:	DEVON - EDDY CO., NM		

Sample ID: BG 4 (H001949-08)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/28/2020	ND	1.83	91.5	2.00	4.16	
Toluene*	<0.050	0.050	07/28/2020	ND	1.85	92.5	2.00	3.95	
Ethylbenzene*	<0.050	0.050	07/28/2020	ND	1.86	93.0	2.00	3.90	
Total Xylenes*	<0.150	0.150	07/28/2020	ND	5.33	88.9	6.00	3.97	
Total BTEX	<0.300	0.300	07/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.1 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/28/2020	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/29/2020	ND	208	104	200	0.0970	
DRO >C10-C28*	<10.0	10.0	07/29/2020	ND	218	109	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	07/29/2020	ND					

Surrogate: 1-Chlorooctane *101 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *113 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Pima Environmental
Project Manager:	Chris Jones
Address:	1601 N. Turner Ste 500
City:	Hobbs State: NM Zip: 88240
Phone #:	575-631-6977 Fax #:
Project #:	20754990 Project Owner:
Project Name:	Rigel 20 Fed Com 1H
Project Location:	EDDY, NM
Sampler Name:	Mark Newcomb

BILL TO

P.O. #:	20754990
Company:	Devon
Attn:	Tom Bynum
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX	TPH EXT	Chloride
H001949																	
1	N. Comp	C	1			X					X		7/27/20	810	X	X	X
2	S. Comp	C	1			X					X			815			
3	E. Comp	C	1			X					X			820			
4	W. Comp	C	1			X					X			825			
5	BG 1	C	1			X					X			830			
6	BG 2	C	1			X					X			835			
7	BG 3	C	1			X					X			840			
8	BG 4	C	1			X					X			845			

Relinquished By:	Date: 7-28-20 Time: 0905	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address:
Relinquished By:	Date: Time:	Received By:	REMARKS: Bill to Devon chris@pimaoil.com

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 10.4 Corrected Temp. °C	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) TO	Turnaround Time: Standard ☒ Rush ☐ Thermometer ID #113 Correction Factor None

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.1 06/04/20

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

September 15, 2020

Chris Jones

Pima Environmental Services LLC
1601 N. Turner Ste 500
Hobbs, NM 88240
TEL: (575) 631-6977
FAX:

RE: Rigel 20 Fed 1H OrderNo.: 2009397

Dear Chris Jones:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/5/2020 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 qualifiers 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2009397**
Date Reported: **9/15/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Pima Environmental Services LLC
Client Sample ID: S.Comp
Project: Rigel 20 Fed 1H
Collection Date: 8/25/2020 10:00:00 AM
Lab ID: 2009397-001 **Matrix:** SOIL
Received Date: 9/5/2020 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	4.9	H	mg/Kg	1	9/10/2020 7:48:37 PM	55024
Surr: BFB	102	70-130	H	%Rec	1	9/10/2020 7:48:37 PM	55024
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	44	9.4	H	mg/Kg	1	9/11/2020 9:29:18 PM	55054
Motor Oil Range Organics (MRO)	170	47	H	mg/Kg	1	9/11/2020 9:29:18 PM	55054
Surr: DNOP	82.0	30.4-154	H	%Rec	1	9/11/2020 9:29:18 PM	55054

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2009397**
Date Reported: **9/15/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Pima Environmental Services LLC
Client Sample ID: E-Comp
Project: Rigel 20 Fed 1H
Collection Date: 8/25/2020 10:05:00 AM
Lab ID: 2009397-002 **Matrix:** SOIL
Received Date: 9/5/2020 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	4.8	H	mg/Kg	1	9/10/2020 8:17:11 PM	55024
Surr: BFB	103	70-130	H	%Rec	1	9/10/2020 8:17:11 PM	55024
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.2	H	mg/Kg	1	9/10/2020 10:36:12 PM	55054
Motor Oil Range Organics (MRO)	ND	46	H	mg/Kg	1	9/10/2020 10:36:12 PM	55054
Surr: DNOP	99.1	30.4-154	H	%Rec	1	9/10/2020 10:36:12 PM	55054

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2009397**
15-Sep-20

Client: Pima Environmental Services LLC
Project: Rigel 20 Fed 1H

Sample ID: **MB-55054** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **55054** RunNo: **71762**
Prep Date: **9/9/2020** Analysis Date: **9/10/2020** SeqNo: **2510693** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		96.2	30.4	154			

Sample ID: **LCS-55054** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **55054** RunNo: **71762**
Prep Date: **9/9/2020** Analysis Date: **9/10/2020** SeqNo: **2510719** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.5	70	130			
Surr: DNOP	4.5		5.000		89.2	30.4	154			

Sample ID: **LCS-55091** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **55091** RunNo: **71809**
Prep Date: **9/10/2020** Analysis Date: **9/11/2020** SeqNo: **2512603** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		105	30.4	154			

Sample ID: **MB-55091** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **55091** RunNo: **71809**
Prep Date: **9/10/2020** Analysis Date: **9/11/2020** SeqNo: **2512604** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.8		10.00		97.7	30.4	154			

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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2009397**
15-Sep-20

Client: Pima Environmental Services LLC
Project: Rigel 20 Fed 1H

Sample ID: **mb-55024** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS** Batch ID: **55024** RunNo: **71767**
Prep Date: **9/8/2020** Analysis Date: **9/10/2020** SeqNo: **2511217** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	510		500.0		102	70	130			

Sample ID: **lcs-55024** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS** Batch ID: **55024** RunNo: **71767**
Prep Date: **9/8/2020** Analysis Date: **9/10/2020** SeqNo: **2511218** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.6	70	130			
Surr: BFB	510		500.0		102	70	130			

Sample ID: **mb-55088** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS** Batch ID: **55088** RunNo: **71789**
Prep Date: **9/10/2020** Analysis Date: **9/11/2020** SeqNo: **2511770** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	510		500.0		101	70	130			

Sample ID: **lcs-55088** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS** Batch ID: **55088** RunNo: **71789**
Prep Date: **9/10/2020** Analysis Date: **9/11/2020** SeqNo: **2511771** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	520		500.0		105	70	130			

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
PQL	Practical Quanitative Limit
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 Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Pima Environmental Services LLC | Work Order Number: 2009397 | RcptNo: 1

Received By: **Juan Rojas** 9/5/2020 7:45:00 AM

Completed By: **Juan Rojas** 9/5/2020 9:02:23 AM

Reviewed By: JR 9/5/20

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: SPA 9.5.20

Special Handling (if applicable)

15. 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: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good				
2	1.3	Good				

Chain-of-Custody Record

Client: Pina Environmental

Mailing Address: 1601 N Turner ste 500 Hobbs, NM 88240

Phone #: 575-631-6977

email or Fax#: chris@pinaoil.com

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

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush 5 days

Project Name: Rigel 20 Fed 1H

Project #:

Project Manager: Chris Jones

Sampler: Triston Jones

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): 1.5-0.1=1.4 (°C) 1.4-0.1=1.3

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 7009397	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8/25/20	1000	soil	S-Comp	glass	ice	001		↓								
8/25/20	1005	↓	E-Comp	↓	↓	002		↓								

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
9/4/20	1605				9/4/20	
9/4/20	1900			courier	9/5/20	7:45

Remarks: Bill to Devon

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

Report to:

Tom Bynum

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com

envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Pima Environmental Services-Carlsbad

Project Name:	Rigel 20 Fed Com 1H
Work Order:	E301093
Job Number:	01058-0007
Received:	1/18/2023

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
1/23/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc, holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc, holds the Texas TNI certification T104704557 for data reported.
Envirotech Inc, holds the NM SDWA certification for data reported. (Lab #NM00979)

Date Reported: 1/23/23

Tom Bynum
PO Box 247
Plains, TX 79355-0247

Project Name: Rigel 20 Fed Com 1H
Workorder: E301093
Date Received: 1/18/2023 9:30:00AM

Tom Bynum,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 1/18/2023 9:30:00AM, under the Project Name: Rigel 20 Fed Com 1H.

The analytical test results summarized in this report with the Project Name: Rigel 20 Fed Com 1H apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues reguarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
rainaschwanz@envirotech-inc.com

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ljarboe@envirotech-inc.com

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Rayny Hagan
Technical Representative
Office: 505-421-LABS(5227)

Envirotech Web Address: www.envirotech-inc.com

Table of Contents

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Sample Summary

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	**Reported:**
PO Box 247	Project Number:	01058-0007	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	01/23/23 08:47

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S1 - 1'	E301093-01A	Soil	01/16/23	01/18/23	Glass Jar, 2 oz.
S1 - 2'	E301093-02A	Soil	01/16/23	01/18/23	Glass Jar, 2 oz.
S2 - 1'	E301093-03A	Soil	01/16/23	01/18/23	Glass Jar, 2 oz.
S2 - 2'	E301093-04A	Soil	01/16/23	01/18/23	Glass Jar, 2 oz.
S3 - 1'	E301093-05A	Soil	01/16/23	01/18/23	Glass Jar, 2 oz.
S3 - 2'	E301093-06A	Soil	01/16/23	01/18/23	Glass Jar, 2 oz.
S4 - 1'	E301093-07A	Soil	01/16/23	01/18/23	Glass Jar, 2 oz.
S4 - 2'	E301093-08A	Soil	01/16/23	01/18/23	Glass Jar, 2 oz.
S5 - 1'	E301093-09A	Soil	01/16/23	01/18/23	Glass Jar, 2 oz.
S5 - 2'	E301093-10A	Soil	01/16/23	01/18/23	Glass Jar, 2 oz.
SW1	E301093-11A	Soil	01/16/23	01/18/23	Glass Jar, 2 oz.
SW2	E301093-12A	Soil	01/16/23	01/18/23	Glass Jar, 2 oz.
SW3	E301093-13A	Soil	01/16/23	01/18/23	Glass Jar, 2 oz.
BG1	E301093-14A	Soil	01/16/23	01/18/23	Glass Jar, 2 oz.
BG2	E301093-15A	Soil	01/16/23	01/18/23	Glass Jar, 2 oz.

Sample Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

S1 - 1'

E301093-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Benzene	ND	0.0250	1	01/17/23	01/19/23	
Ethylbenzene	ND	0.0250	1	01/17/23	01/19/23	
Toluene	ND	0.0250	1	01/17/23	01/19/23	
o-Xylene	ND	0.0250	1	01/17/23	01/19/23	
p,m-Xylene	ND	0.0500	1	01/17/23	01/19/23	
Total Xylenes	ND	0.0250	1	01/17/23	01/19/23	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/23	01/19/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*91.3 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2303050
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/23	01/19/23	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/23	01/19/23	
Surrogate: n-Nonane		*106 %*	*50-200*	*01/18/23*	*01/19/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2303053
Chloride	**65.9**	20.0	1	01/18/23	01/19/23	

Sample Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

S1 - 2'

E301093-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Benzene	ND	0.0250	1	01/17/23	01/19/23	
Ethylbenzene	ND	0.0250	1	01/17/23	01/19/23	
Toluene	ND	0.0250	1	01/17/23	01/19/23	
o-Xylene	ND	0.0250	1	01/17/23	01/19/23	
p,m-Xylene	ND	0.0500	1	01/17/23	01/19/23	
Total Xylenes	ND	0.0250	1	01/17/23	01/19/23	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/23	01/19/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*88.3 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2303050
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/23	01/19/23	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/23	01/19/23	
Surrogate: n-Nonane		*109 %*	*50-200*	*01/18/23*	*01/19/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2303053
Chloride	ND	20.0	1	01/18/23	01/19/23	

Sample Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

S2 - 1'

E301093-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Benzene	ND	0.0250	1	01/17/23	01/19/23	
Ethylbenzene	ND	0.0250	1	01/17/23	01/19/23	
Toluene	ND	0.0250	1	01/17/23	01/19/23	
o-Xylene	ND	0.0250	1	01/17/23	01/19/23	
p,m-Xylene	ND	0.0500	1	01/17/23	01/19/23	
Total Xylenes	ND	0.0250	1	01/17/23	01/19/23	
Surrogate: 4-Bromochlorobenzene-PID		*99.9 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/23	01/19/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*91.4 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2303050
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/23	01/19/23	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/23	01/19/23	
Surrogate: n-Nonane		*107 %*	*50-200*	*01/18/23*	*01/19/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2303053
Chloride	**567**	20.0	1	01/18/23	01/19/23	

Sample Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

S2 - 2'

E301093-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Benzene	ND	0.0250	1	01/17/23	01/19/23	
Ethylbenzene	ND	0.0250	1	01/17/23	01/19/23	
Toluene	ND	0.0250	1	01/17/23	01/19/23	
o-Xylene	ND	0.0250	1	01/17/23	01/19/23	
p,m-Xylene	ND	0.0500	1	01/17/23	01/19/23	
Total Xylenes	ND	0.0250	1	01/17/23	01/19/23	
Surrogate: 4-Bromochlorobenzene-PID		*104 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/23	01/19/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*87.1 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2303050
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/23	01/19/23	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/23	01/19/23	
Surrogate: n-Nonane		*105 %*	*50-200*	*01/18/23*	*01/19/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2303053
Chloride	ND	20.0	1	01/18/23	01/19/23	

Sample Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

S3 - 1'

E301093-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Benzene	ND	0.0250	1	01/17/23	01/19/23	
Ethylbenzene	ND	0.0250	1	01/17/23	01/19/23	
Toluene	ND	0.0250	1	01/17/23	01/19/23	
o-Xylene	ND	0.0250	1	01/17/23	01/19/23	
p,m-Xylene	ND	0.0500	1	01/17/23	01/19/23	
Total Xylenes	ND	0.0250	1	01/17/23	01/19/23	
Surrogate: 4-Bromochlorobenzene-PID		*99.6 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/23	01/19/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*92.7 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2303050
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/23	01/19/23	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/23	01/19/23	
Surrogate: n-Nonane		*107 %*	*50-200*	*01/18/23*	*01/19/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2303053
Chloride	**62.3**	20.0	1	01/18/23	01/19/23	

Sample Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

S3 - 2'

E301093-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Benzene	ND	0.0250	1	01/17/23	01/19/23	
Ethylbenzene	ND	0.0250	1	01/17/23	01/19/23	
Toluene	ND	0.0250	1	01/17/23	01/19/23	
o-Xylene	ND	0.0250	1	01/17/23	01/19/23	
p,m-Xylene	ND	0.0500	1	01/17/23	01/19/23	
Total Xylenes	ND	0.0250	1	01/17/23	01/19/23	
Surrogate: 4-Bromochlorobenzene-PID		*106 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/23	01/19/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*90.1 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2303050
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/23	01/19/23	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/23	01/19/23	
Surrogate: n-Nonane		*107 %*	*50-200*	*01/18/23*	*01/19/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2303053
Chloride	ND	20.0	1	01/18/23	01/19/23	

Sample Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

S4 - 1'

E301093-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Benzene	ND	0.0250	1	01/17/23	01/19/23	
Ethylbenzene	ND	0.0250	1	01/17/23	01/19/23	
Toluene	ND	0.0250	1	01/17/23	01/19/23	
o-Xylene	ND	0.0250	1	01/17/23	01/19/23	
p,m-Xylene	ND	0.0500	1	01/17/23	01/19/23	
Total Xylenes	ND	0.0250	1	01/17/23	01/19/23	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/23	01/19/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*88.8 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2303050
Diesel Range Organics (C10-C28)	**25.6**	25.0	1	01/18/23	01/19/23	
Oil Range Organics (C28-C36)	**53.9**	50.0	1	01/18/23	01/19/23	
Surrogate: n-Nonane		*107 %*	*50-200*	*01/18/23*	*01/19/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2303053
Chloride	**186**	20.0	1	01/18/23	01/19/23	

Sample Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

S4 - 2'

E301093-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Benzene	ND	0.0250	1	01/17/23	01/19/23	
Ethylbenzene	ND	0.0250	1	01/17/23	01/19/23	
Toluene	ND	0.0250	1	01/17/23	01/19/23	
o-Xylene	ND	0.0250	1	01/17/23	01/19/23	
p,m-Xylene	ND	0.0500	1	01/17/23	01/19/23	
Total Xylenes	ND	0.0250	1	01/17/23	01/19/23	
Surrogate: 4-Bromochlorobenzene-PID		*103 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/23	01/19/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*90.0 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2303050
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/23	01/19/23	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/23	01/19/23	
Surrogate: n-Nonane		*105 %*	*50-200*	*01/18/23*	*01/19/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2303053
Chloride	ND	20.0	1	01/18/23	01/19/23	

Sample Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

S5 - 1'

E301093-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Benzene	ND	0.0250	1	01/17/23	01/19/23	
Ethylbenzene	ND	0.0250	1	01/17/23	01/19/23	
Toluene	ND	0.0250	1	01/17/23	01/19/23	
o-Xylene	ND	0.0250	1	01/17/23	01/19/23	
p,m-Xylene	ND	0.0500	1	01/17/23	01/19/23	
Total Xylenes	ND	0.0250	1	01/17/23	01/19/23	
Surrogate: 4-Bromochlorobenzene-PID		*100 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/23	01/19/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*90.5 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2303050
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/23	01/19/23	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/23	01/19/23	
Surrogate: n-Nonane		*105 %*	*50-200*	*01/18/23*	*01/19/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2303053
Chloride	**58.3**	20.0	1	01/18/23	01/19/23	

Sample Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

S5 - 2'

E301093-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Benzene	ND	0.0250	1	01/17/23	01/19/23	
Ethylbenzene	ND	0.0250	1	01/17/23	01/19/23	
Toluene	ND	0.0250	1	01/17/23	01/19/23	
o-Xylene	ND	0.0250	1	01/17/23	01/19/23	
p,m-Xylene	ND	0.0500	1	01/17/23	01/19/23	
Total Xylenes	ND	0.0250	1	01/17/23	01/19/23	
Surrogate: 4-Bromochlorobenzene-PID		*105 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/23	01/19/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*86.7 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2303050
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/23	01/19/23	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/23	01/19/23	
Surrogate: n-Nonane		*106 %*	*50-200*	*01/18/23*	*01/19/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2303053
Chloride	ND	20.0	1	01/18/23	01/19/23	

Sample Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

SW1

E301093-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Benzene	ND	0.0250	1	01/17/23	01/19/23	
Ethylbenzene	ND	0.0250	1	01/17/23	01/19/23	
Toluene	ND	0.0250	1	01/17/23	01/19/23	
o-Xylene	ND	0.0250	1	01/17/23	01/19/23	
p,m-Xylene	ND	0.0500	1	01/17/23	01/19/23	
Total Xylenes	ND	0.0250	1	01/17/23	01/19/23	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/23	01/19/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*89.2 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2303050
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/23	01/19/23	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/23	01/19/23	
Surrogate: n-Nonane		*106 %*	*50-200*	*01/18/23*	*01/19/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2303053
Chloride	ND	20.0	1	01/18/23	01/19/23	

Sample Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

SW2

E301093-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Benzene	ND	0.0250	1	01/17/23	01/19/23	
Ethylbenzene	ND	0.0250	1	01/17/23	01/19/23	
Toluene	ND	0.0250	1	01/17/23	01/19/23	
o-Xylene	ND	0.0250	1	01/17/23	01/19/23	
p,m-Xylene	ND	0.0500	1	01/17/23	01/19/23	
Total Xylenes	ND	0.0250	1	01/17/23	01/19/23	
Surrogate: 4-Bromochlorobenzene-PID		*99.1 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/23	01/19/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*91.0 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2303050
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/23	01/19/23	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/23	01/19/23	
Surrogate: n-Nonane		*97.4 %*	*50-200*	*01/18/23*	*01/19/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2303053
Chloride	ND	20.0	1	01/18/23	01/19/23	

Sample Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

SW3

E301093-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Benzene	ND	0.0250	1	01/17/23	01/19/23	
Ethylbenzene	ND	0.0250	1	01/17/23	01/19/23	
Toluene	ND	0.0250	1	01/17/23	01/19/23	
o-Xylene	ND	0.0250	1	01/17/23	01/19/23	
p,m-Xylene	ND	0.0500	1	01/17/23	01/19/23	
Total Xylenes	ND	0.0250	1	01/17/23	01/19/23	
Surrogate: 4-Bromochlorobenzene-PID		*106 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/23	01/19/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*92.9 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2303050
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/23	01/19/23	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/23	01/19/23	
Surrogate: n-Nonane		*103 %*	*50-200*	*01/18/23*	*01/19/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2303053
Chloride	ND	20.0	1	01/18/23	01/19/23	

Sample Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

BG1

E301093-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Benzene	ND	0.0250	1	01/17/23	01/19/23	
Ethylbenzene	ND	0.0250	1	01/17/23	01/19/23	
Toluene	ND	0.0250	1	01/17/23	01/19/23	
o-Xylene	ND	0.0250	1	01/17/23	01/19/23	
p,m-Xylene	ND	0.0500	1	01/17/23	01/19/23	
Total Xylenes	ND	0.0250	1	01/17/23	01/19/23	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/23	01/19/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*89.4 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2303050
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/23	01/19/23	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/23	01/19/23	
Surrogate: n-Nonane		*108 %*	*50-200*	*01/18/23*	*01/19/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2303053
Chloride	ND	20.0	1	01/18/23	01/19/23	

Sample Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

BG2

E301093-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Benzene	ND	0.0250	1	01/17/23	01/19/23	
Ethylbenzene	ND	0.0250	1	01/17/23	01/19/23	
Toluene	ND	0.0250	1	01/17/23	01/19/23	
o-Xylene	ND	0.0250	1	01/17/23	01/19/23	
p,m-Xylene	ND	0.0500	1	01/17/23	01/19/23	
Total Xylenes	ND	0.0250	1	01/17/23	01/19/23	
Surrogate: 4-Bromochlorobenzene-PID		*99.4 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2303039
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/23	01/19/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*92.4 %*	*70-130*	*01/17/23*	*01/19/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2303050
Diesel Range Organics (C10-C28)	ND	25.0	1	01/18/23	01/19/23	
Oil Range Organics (C28-C36)	ND	50.0	1	01/18/23	01/19/23	
Surrogate: n-Nonane		*107 %*	*50-200*	*01/18/23*	*01/19/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: KL			Batch: 2303053
Chloride	ND	20.0	1	01/18/23	01/19/23	

QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	**Reported:**
PO Box 247	Project Number:	01058-0007	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

Volatile Organics by EPA 8021B

Analyst: SL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2303039-BLK1)									Prepared: 01/17/23 Analyzed: 01/19/23
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	*7.58*		*8.00*		*94.8*	*70-130*			
LCS (2303039-BS1)									Prepared: 01/17/23 Analyzed: 01/19/23
Benzene	4.66	0.0250	5.00		93.2	70-130			
Ethylbenzene	5.03	0.0250	5.00		101	70-130			
Toluene	5.07	0.0250	5.00		101	70-130			
o-Xylene	5.17	0.0250	5.00		103	70-130			
p,m-Xylene	10.2	0.0500	10.0		102	70-130			
Total Xylenes	15.4	0.0250	15.0		102	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7.72*		*8.00*		*96.5*	*70-130*			
LCS Dup (2303039-BSD1)									Prepared: 01/17/23 Analyzed: 01/19/23
Benzene	4.82	0.0250	5.00		96.5	70-130	3.46	20	
Ethylbenzene	5.24	0.0250	5.00		105	70-130	4.14	20	
Toluene	5.26	0.0250	5.00		105	70-130	3.78	20	
o-Xylene	5.38	0.0250	5.00		108	70-130	4.01	20	
p,m-Xylene	10.6	0.0500	10.0		106	70-130	4.14	20	
Total Xylenes	16.0	0.0250	15.0		107	70-130	4.10	20	
Surrogate: 4-Bromochlorobenzene-PID	*7.74*		*8.00*		*96.7*	*70-130*			

QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	**Reported:**
PO Box 247	Project Number:	01058-0007	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2303039-BLK1)									Prepared: 01/17/23 Analyzed: 01/19/23
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.59*		*8.00*		*94.9*	*70-130*			
LCS (2303039-BS2)									Prepared: 01/17/23 Analyzed: 01/19/23
Gasoline Range Organics (C6-C10)	54.1	20.0	50.0		108	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.25*		*8.00*		*90.6*	*70-130*			
LCS Dup (2303039-BSD2)									Prepared: 01/17/23 Analyzed: 01/20/23
Gasoline Range Organics (C6-C10)	46.3	20.0	50.0		92.6	70-130	15.5	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.70*		*8.00*		*96.2*	*70-130*			

QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	**Reported:**
PO Box 247	Project Number:	01058-0007	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2303050-BLK1)									Prepared: 01/18/23 Analyzed: 01/19/23
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*55.7*		*50.0*		*111*	*50-200*			
LCS (2303050-BS1)									Prepared: 01/18/23 Analyzed: 01/19/23
Diesel Range Organics (C10-C28)	264	25.0	250		105	38-132			
Surrogate: n-Nonane	*53.1*		*50.0*		*106*	*50-200*			
Matrix Spike (2303050-MS1)				**Source: E301093-02**					Prepared: 01/18/23 Analyzed: 01/19/23
Diesel Range Organics (C10-C28)	276	25.0	250	ND	111	38-132			
Surrogate: n-Nonane	*51.4*		*50.0*		*103*	*50-200*			
Matrix Spike Dup (2303050-MSD1)				**Source: E301093-02**					Prepared: 01/18/23 Analyzed: 01/19/23
Diesel Range Organics (C10-C28)	276	25.0	250	ND	110	38-132	0.175	20	
Surrogate: n-Nonane	*53.2*		*50.0*		*106*	*50-200*			

QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	**Reported:**
PO Box 247	Project Number:	01058-0007	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	1/23/2023 8:47:29AM

Anions by EPA 300.0/9056A

Analyst: KL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2303053-BLK1)									Prepared: 01/18/23 Analyzed: 01/19/23
Chloride	ND	20.0							
LCS (2303053-BS1)									Prepared: 01/18/23 Analyzed: 01/19/23
Chloride	250	20.0	250		100	90-110			
Matrix Spike (2303053-MS1)				**Source: E301093-01**					Prepared: 01/18/23 Analyzed: 01/19/23
Chloride	308	20.0	250	65.9	97.0	80-120			
Matrix Spike Dup (2303053-MSD1)				**Source: E301093-01**					Prepared: 01/18/23 Analyzed: 01/19/23
Chloride	311	20.0	250	65.9	98.1	80-120	0.905	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Definitions and Notes

Pima Environmental Services-Carlsbad	Project Name:	Rigel 20 Fed Com 1H	
PO Box 247	Project Number:	01058-0007	**Reported:**
Plains TX, 79355-0247	Project Manager:	Tom Bynum	01/23/23 08:47

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
DNI	Did Not Ignite

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

Project Information | Chain of Custody | Page 1 of 2

Client: Pima Environmental Services	Bill To
Project: Rigel 20 Fed com 1H	Attention: Devon
Project Manager: Tom Bynum	Address:
Address: 5614 N. Lovington Hwy.	City, State, Zip
City, State, Zip Hobbs, NM, 88240	Phone:
Phone: 580-748-1613	Email:
Email: tom@pimaoil.com	Pima Project # 1-30-2
Report due by:	

Lab Use Only		TAT				EPA Program	
Lab WO#	Job Number	1D	2D	3D	Standard	CWA	SDWA
E301093	01058-0007				X		
							RCRA

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0			BGDOC NM	BGDOC TX			Remarks
9:45	1/16/23	S	1	S1-1'	1									X				
9:50				S1-2'	2													
9:55				S2-1'	3													
10:00				S2-2'	4													
10:05				S3-1'	5													
10:10				S3-2'	6													
10:15				S4-1'	7													
10:20				S4-2'	8													
10:25				S5-1'	9													
10:30				S5-2'	10													

Analysis and Method

State: NM X | CO | UT | AZ | TX

Additional Instructions: Bill to Devon

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Adriana Benavidez

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	1-17-23	2:00	Michelle Cuyle	1-17-23	1400
Michelle Cuyle	1-17-23	1700	Lorenzo Lei	1-17-23	1715
Lorenzo Lei	1-17-23	2345	Caitlin Chatt	1/18/23	9:30

Lab Use Only
Received on ice: (Y) N
T1 T2 T3
AVG Temp °C 4

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other
Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech

Project Information | Chain of Custody | Page 2 of 2

Client: Pima Environmental Services	Bill To
Project: Pigel 20 Fed COM 1H	Attention: Devon
Project Manager: Tom Bynum	Address:
Address: 5614 N. Lovington Hwy.	City, State, Zip
City, State, Zip Hobbs, NM, 88240	Phone:
Phone: 580-748-1613	Email:
Email: tom@pimaoil.com	Pima Project #
Report due by:	

Lab Use Only: Lab WO# E301093 | Job Number 01058-0007

TAT: 1D | 2D | 3D | Standard X

EPA Program: CWA | SDWA | RCRA

State: NM X | CO | UT | AZ | TX

Analysis and Method: DRO/ORO by 8015 | GRO/DRO by 8015 | BTEX by 8021 | VOC by 8260 | Metals 6010 | Chloride 300.0 | BGDOC NM X | BGDOC TX

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Remarks
10:40	1/10/23	S	1	SW1	11	
10:45				SW2	12	
10:50				SW3	13	
10:55				BG1	14	
11:00				BG2	15	

Additional Instructions: Bill to Devon

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Adriana Benavides

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
AB	1-17-23	2:00	Michelle Gayala	1-17-23	1400
Michelle Gayala	1-17-23	1700	Lorenzo Lee	1-17-23	1715
Lorenzo Lee	1-17-23	2345	Cecilia Chata	1/18/23	9:30

Lab Use Only: Received on ice: (Y) / N

T1 _____ T2 _____ T3 _____

AVG Temp °C 4

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _____

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech

Envirotech Analytical Laboratory

Printed: 1/18/2023 11:58:23AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.
If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Pima Environmental Services-Carlsbad	Date Received:	01/18/23 09:30	Work Order ID:	E301093
Phone:	(575) 631-6977	Date Logged In:	01/17/23 14:44	Logged In By:	Caitlin Christian
Email:	tom@pimaoil.com	Due Date:	01/24/23 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC?	Yes	
2. Does the number of samples per sampling site location match the COC	Yes	
3. Were samples dropped off by client or carrier?	Yes	Carrier: Courier
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

Comments/Resolution

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT?	Yes	

Sample Cooler

7. Was a sample cooler received?	Yes	
8. If yes, was cooler received in good condition?	Yes	
9. Was the sample(s) received intact, i.e., not broken?	Yes	
10. Were custody/security seals present?	No	
11. If yes, were custody/security seals intact?	NA	
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling	Yes	
13. If no visible ice, record the temperature. Actual sample temperature: 4°C		

Sample Container

14. Are aqueous VOC samples present?	No	
15. Are VOC samples collected in VOA Vials?	NA	
16. Is the head space less than 6-8 mm (pea sized or less)?	NA	
17. Was a trip blank (TB) included for VOC analyses?	NA	
18. Are non-VOC samples collected in the correct containers?	Yes	
19. Is the appropriate volume/weight or number of sample containers collected?	Yes	

Field Label

20. Were field sample labels filled out with the minimum information:		
Sample ID?	Yes	
Date/Time Collected?	Yes	
Collectors name?	No	

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved?	No	
22. Are sample(s) correctly preserved?	NA	
24. Is lab filteration required and/or requested for dissolved metals?	No	

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase?	No	
27. If yes, does the COC specify which phase(s) is to be analyzed?	NA	

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory?	No	
29. Was a subcontract laboratory specified by the client and if so who?	NA	Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date

envirotech Inc.

Pima Environmental Services

Appendix F

Rejected Closure Report

Pima Environmental Services, LLC
1601 N. Turner Ste 500
Hobbs, NM 88240
575-964-7740

September 15, 2020

NMOCD District 2
Mr. Mike Bratcher
811 S. First Street
Artesia, NM 88210

Bureau of Land Management
Mr. Jim Amos
620 East Green Street
Carlsbad, NM 88220

Re: Site Remediation and Closure Report
Rigel 20 Fed Com #1H
API No. 30-015-39393
GPS: Latitude 32.6519922 Longitude -103.8990173
UL "D", Sec. 20, T19S, R31E
Eddy County, NM
NMOCD Ref. No. 2RP-1717

Dear Mr. Bratcher and Mr. Amos,

Pima Environmental Services, LLC (Pima) has been contracted by Devon Energy Production Company (Devon) to perform a spill assessment and to perform remediation activities for an oil release that occurred at the Rigel 20 Fed Com #1H (Rigel). The initial C-141 was submitted on (Appendix C). This incident was assigned 2RP-1717, Incident ID NJMW1319349423, by the New Mexico Oil Conservation Division (NMOCD).

Site Characterization

The Rigel is located approximately twenty-five (25) miles northeast of Carlsbad, NM. This spill site is in Unit D, Section 20, Township 19S, Range 31E, Latitude 32.6519922, Longitude -103.8990173, Eddy County, NM. Figure 1 references a location map.

Per the New Mexico Bureau of Geology and Mineral Resources, the geology is in the Quaternary Formation- Eolian and piedmont deposits (Holocene to middle Pleistocene)-interlayed eolian sands and piedmont-slope deposits (QEP). The soil in this area is made up of Berino loamy fine sand, 0 to 3 percent slopes according to the United States Department of Agriculture Natural Resources Conservation Service soil survey (Appendix B). The drainage courses in this area are well-drained. There is a low potential for karst geology to be present in the area of the Rigel (Figure 3).

According to the New Mexico Office of the State Engineer, depth to the nearest groundwater in this area is 180 feet below grade surface (BGS). According to the United States Geological Survey (USGS), the nearest groundwater is greater than 100 feet BGS. The closest waterway and is the Hackberry lake, located approximately 2.1 miles to the west of this location. See Appendix A for referenced water surveys.

Table 1 NMAC and Closure Criteria 19.15.29					
Depth to Groundwater (Appendix B)	Constituent & Limits				
	Chlorides	Total TPH	GRO+DRO	BTEX	Benzene
180'	20,000 mg/kg	2,500 mg/kg	1,000 mg/kg	50 mg/kg	10 mg/kg
If the release occurred within any of the following areas, the responsible party would treat the release as if the groundwater was less than 50 feet per Rule 19.15.29					
Water Issues				Yes	No
Within **300** feet of any continuously flowing watercourse or any other significant watercourse					x
Within **200** feet of any lakebed, sinkhole, or playa lake (measures from the ordinary high-water mark					x
Within **300** feet from an occupied permanent residence, school, hospital, institution, or church					x
Within **500** feet of a spring or a private, domestic freshwater well used by less than five households for domestic or stock water purposes					x
Within **1000** feet of any freshwater well or spring					x
Within incorporated municipal boundaries or within a defined municipal freshwater well field					x
Within **300** feet of a wetlands					x
Within the area overlying a subsurface mine					x
Within an unstable area (Karst)					x
Within a 100-year floodplain					x

Reference Figure 2 for a TOPO Map.

Release Information

2RP-1717: On June 21, 2013, an oil hauler truck over filled causing a 46 barrel (bbl) oi spill. On 6-21-13 at approximately 3 am, the night watchman was checking the battery and noticed the truck driver lying on the ground and oil running out of the transport truck. Actions were taken to stop the spill and a vac truck was dispatched and was able to recover 10 bbls of oil.

Site Assessment and Soil Sampling Results

On July 27, 2020, Pima Environmental conducted a site assessment and obtained soil samples to get a more in-depth picture of the horizontal extent of the contamination. The laboratory results of this sampling event can be found in the following data table.

7-27-20 Soil Sample Results

NMOCD Table 1 Closure Criteria 19.15.29 NMAC (Depth to Groundwater is >100')								
Sample Date 7-27-20		NM Approved Laboratory Results						
Sample ID	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
N. Composite	0	ND	ND	ND	ND	ND	ND	544
S. Composite	0	ND	ND	ND	**1370**	363	1370	1970
E. Composite	0	ND	ND	ND	**1860**	**702**	**2562**	1870
W. Composite	0	ND	ND	ND	188	96	284	1500
BG-1	0	ND	ND	ND	ND	ND	ND	288
BG-2	0	ND	ND	ND	ND	ND	ND	288
BG-3	0	ND	ND	ND	ND	ND	ND	ND
BG-4	0	ND	ND	ND	ND	ND	ND	ND

ND- Analyte Not Detected

Remediation Activities

On August 25, 2020, Pima mobilized personnel and equipment to conduct remedial activities. The areas in the vicinity on the east and south sides of the containment was excavated to a depth of 1 foot deep. 5-point bottom and sidewall composite samples were obtained to ensure that the vertical and horizontal extents of the contamination had been removed. Each composite sample was representative of no more than 200 square feet. The laboratory results of this sampling event can be found in the following data table.

8-25-20 Soil Sample Results

NMOCD Table 1 Closure Criteria 19.15.29 NMAC (Depth to Groundwater is >100')					
Sample Date 8-25-20					
Sample ID	Depth (BGS)	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg
S. Composite	0	ND	44	170	214
E. Composite	0	ND	ND	ND	ND

ND- Analyte Not Detected

Complete Laboratory Reports are attached in Appendix C.

Based on the sample results, the bottom and sidewall composite samples were below NMOCD Closure Criteria 19.15.29 NMAC.

The contaminated material was transported to Lea Land, an NMOCD approved disposal site. The excavation was then backfilled with clean like material, machine compacted and contoured to match the surrounding terrain.

Closure Request

After careful review, Pima requests that this incident, NJMW1319349423, be closed. Devon has complied with the applicable closure requirements.

Should you have any questions or need additional information, please feel free to contact Chris Jones at 575-964-7740 or chris@pimaoil.com.

Respectfully,

Chris Jones
Environmental Professional
Pima Environmental Services, LLC

Attachments

Figures:
1- Location Map
2- TOPO Map
3- Karst Map
4- Site Map

Appendices:
Appendix A- Referenced Water Surveys
Appendix B- Soil Survey and Geological Data
Appendix C- C-141's
Appendix D- Photographic Documentation
Appendix E- Laboratory Reports

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

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

CONDITIONS

Action 218647

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 218647
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	5/24/2023