

## 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

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

State of New Mexico  
Oil Conservation Division

Page 2

Incident ID	NAB1513157754
District RP	2RP-2998
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: Wes Mathews Title: EHS Professional  
Signature: *Wesley Mathews* Date: 12/6/2022  
email: wesley.mathews@dvn.com Telephone: 575-513-8608

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	NAB1513157754
District RP	2RP-2998
Facility ID	
Application ID	

## Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Wes Mathews Title: EHS Professional  
Signature: Wesley Mathews Date: 12/6/2022  
email: wesley.mathews@dvn.com Telephone: 575-513-8608

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Closure Approved by: Brittany Hall Date: 12/9/2022  
Printed Name: Brittany Hall Title: Environmental Specialist



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

December 6, 2022

Bureau of Land Management  
 620 East Green St  
 Carlsbad, NM, 88220

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

**RE: Site Assessment and Closure Report**  
**Arcturus 18 Federal #005H**  
**API No. 30-015-41802**  
**GPS: Latitude 32.6653332 Longitude -103.9008789**  
**UL-A, Section 18, Township 19S, Range 31E**  
**NMOCD Reference No. NAB1513157754**

Devon Energy Production Company (Devon) has contracted Pima Environmental Services, LLC (Pima) to perform a site assessment and prepare this closure report for a crude oil/produced water mixed release that happened at the Arcturus 18 Federal #005H (Arcturus). An initial C-141 was submitted on May 11, 2015, and can be found in Appendix C. This incident was assigned Incident ID NAB1513157754, by the New Mexico Oil Conservation Division (NMOCD).

#### Site Information and Site Characterization

The Arcturus is located approximately twelve (12) miles South of Loco Hills, NM. This spill site is in Unit A, Section 18, Township 19S, Range 31E, Latitude 32.6653332 Longitude -103.9008789, Eddy County, NM. A Location Map can be found in Figure 1.

Per the New Mexico Bureau of Geology and Mineral Resources, the geology is made up of Eolian and piedmont deposits-Interlayered eolian sands and piedmont-slope deposits along the eastern flank of the Pecos River valley, primarily between Roswell and Carlsbad. Typically capped by thin eolian deposits. 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 medium potential for karst geology to be present around the Arcturus (Figure 3).

Based upon New Mexico Office of the State Engineer well water data, depth to the nearest groundwater in this area is 180 feet below -grade surface (BGS). According to the United States Geological Survey well water data, depth to the nearest groundwater in this area is 204 feet BGS. See Appendix A for referenced water surveys.

**Table 1 NMAC and Closure Criteria 19.15.29**

Depth to Groundwater	Constituent & Limits				
	Chlorides	Total TPH	GRO+DRO	BTEX	Benzene
<50'	600 mg/kg	100 mg/kg		50 mg/kg	10 mg/kg
51-100' (C 01907 POD1)	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

A Topographic Map can be found in Figure 2.

**Release Information**

**NAB1513157754:** On May 6, 2015, the Lease Operator was contacted and told that the Arcturus 18 Fed 5H was leaking from the wellhead. Upon Lease Operator's arrival to the location, he discovered a H.F. back pressure valve had washed out releasing 20 bbls of oil and produced water mix onto location. The affected area was 48x85 with all fluids contained on location. Legendary Trucking recovered all 20 bbls of oil and produced water mix and the contaminated dirt will be removed from location and replaced with fresh dirt.

**Site Assessment and Soil Sampling Results**

On August 31, 2020, Pima Environmental conducted a site assessment and obtained soil samples. The laboratory results of this sampling event can be found in the following data table. A Site Map can be found in Figure 4.

8-31-20 Soil Sample Results

NMOCD Table 1 Closure Criteria 19.15.29 NMAC (Depth to Groundwater is 51-100')								
Devon Energy - Arcturus 18 Fed 5H								
Date 8-31-20		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
S1	0-6"	ND	ND	ND	ND	ND	0	48
S2	0-6"	ND	ND	ND	ND	ND	ND	112
	1'	ND	ND	ND	ND	ND	ND	48
	2'	ND	ND	ND	ND	ND	0	32
	3'	ND	ND	ND	ND	ND	0	32
S3	0-6"	ND	ND	ND	164	297	461	112
	1'	ND	ND	ND	25	ND	25	32
	2'	ND	ND	ND	ND	ND	0	ND
	3'	ND	ND	ND	ND	ND	0	32
S4	0-6"	ND	ND	ND	ND	ND	0	48
	1'	ND	ND	ND	ND	ND	0	48
	2'	ND	ND	ND	ND	ND	0	48
	3'	ND	ND	ND	ND	ND	0	64
S5	0-6"	ND	ND	ND	ND	ND	0	240
	1'	ND	ND	ND	ND	ND	0	48
	2'	ND	ND	ND	ND	ND	0	48
	3'	ND	ND	ND	ND	ND	0	48
S6	0-6"	ND	ND	ND	ND	ND	0	2360
	1'	ND	ND	ND	ND	ND	0	144
	2'	ND	ND	ND	ND	ND	0	112
	3'	ND	ND	ND	ND	ND	0	80
S7	0-6"	ND	ND	ND	ND	ND	0	208
	1'	ND	ND	ND	ND	ND	0	64
	2'	ND	ND	ND	ND	ND	0	32
	3'	ND	ND	ND	ND	ND	0	32
S8	0-6"	ND	ND	ND	ND	ND	0	96
	1'	ND	ND	ND	ND	ND	0	16
	2'	ND	ND	ND	ND	ND	0	16
	3'	ND	ND	ND	ND	ND	0	ND
S9	0-6"	ND	ND	ND	ND	ND	0	144
	1'	ND	ND	ND	ND	ND	0	64
	2'	ND	ND	ND	ND	ND	0	32
	3'	ND	ND	ND	ND	ND	0	64

S10	0-6"	ND	ND	ND	ND	ND	0	6560
	1'	ND	ND	ND	ND	ND	0	416
	2'	ND	ND	ND	ND	ND	0	256
	3'	ND	ND	ND	ND	ND	0	128
S11	0-6"	ND	ND	ND	31.8	ND	31.8	432
	1'	ND	ND	ND	ND	ND	0	112
	2'	ND	ND	ND	ND	ND	0	80
	3'	ND	ND	ND	ND	ND	0	96
S12	0-6"	ND	ND	ND	ND	ND	0	192
	1'	ND	ND	ND	ND	ND	0	48
	2'	ND	ND	ND	ND	ND	0	64
	3'	ND	ND	ND	ND	ND	0	64
S13	0-6"	ND	ND	ND	ND	ND	0	80
	1'	ND	ND	ND	ND	ND	0	48
	2'	ND	ND	ND	ND	ND	0	32
	3'	ND	ND	ND	ND	ND	0	48
S14	0-6"	ND	ND	ND	ND	ND	0	96
	1'	ND	ND	ND	ND	ND	0	112
	2'	ND	ND	ND	ND	ND	0	160
	3'	ND	ND	ND	ND	ND	0	160
S15	0-6"	ND	ND	ND	ND	ND	0	32
	1'	ND	ND	ND	ND	ND	0	64
	2'	ND	ND	ND	ND	ND	0	48
	3'	ND	ND	ND	ND	ND	0	48
S16	0-6"	ND	ND	ND	ND	ND	0	2000
	1'	ND	ND	ND	ND	ND	0	448
	2'	ND	ND	ND	ND	ND	0	128
	3'	ND	ND	ND	ND	ND	0	80

ND – Analyte Not Detected

Complete Laboratory reports can be found in Appendix D.

#### **Remediation Activities**

On July 13, 2022, Atkins Engineering personnel arrived on site to drill a test boring to determine depth to ground water. This drilling event was completed and registered with the OSE on 8-4-2022. The hole was bored to a depth of 55' bgs and ground water was not encountered during or after the 72-hour time period.

All sample results on this site are below NMOCD closure criteria per Table 1 of 19.15.29 NMAC. Based on these events, no remediation is necessary at this location.

#### **Closure Request**

After careful review, Pima requests that this incident, NAB1513157754 be closed. Devon has complied with the applicable closure requirements.

Should you have any questions or need additional information, please feel free to contact Tom Bynum at 575-964-7740 or [tom@pimaoil.com](mailto:tom@pimaoil.com).

**Attachments**

Figures:

- 1- Location Map
- 2- Topographic Map
- 3- Karst Map
- 4- Site Map

Appendices:

- Appendix A- Referenced Water Surveys
- Appendix B- Soil Survey and Geological Data
- Appendix C- C-141 Form
- Appendix D- Laboratory Reports



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**Figures:**

- 1 - Location Map
- 2 - Topographic Map
- 3 - Karst Map
- 4 - Site Map

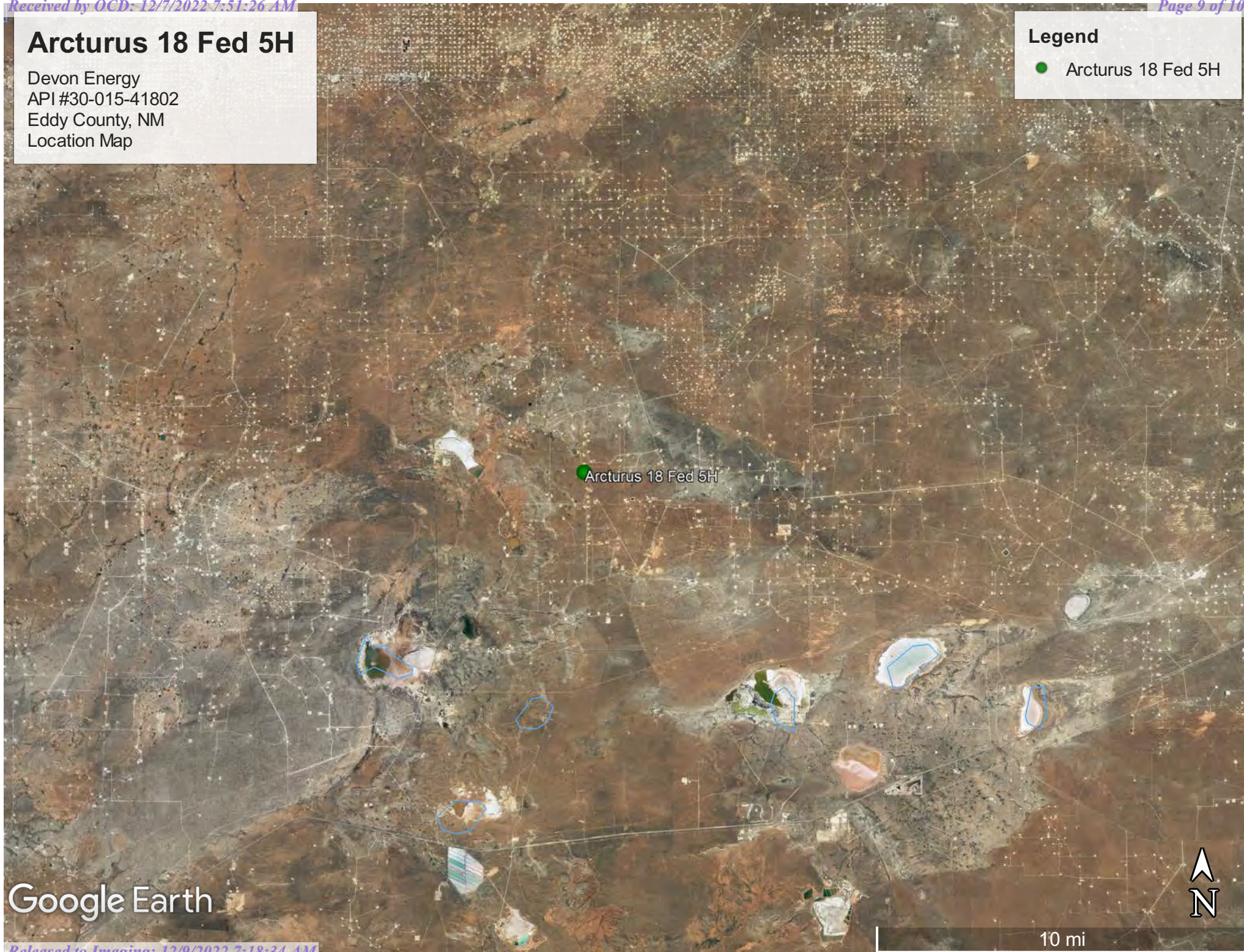


# Arcturus 18 Fed 5H

Devon Energy  
API #30-015-41802  
Eddy County, NM  
Location Map

## Legend

● Arcturus 18 Fed 5H



Google Earth

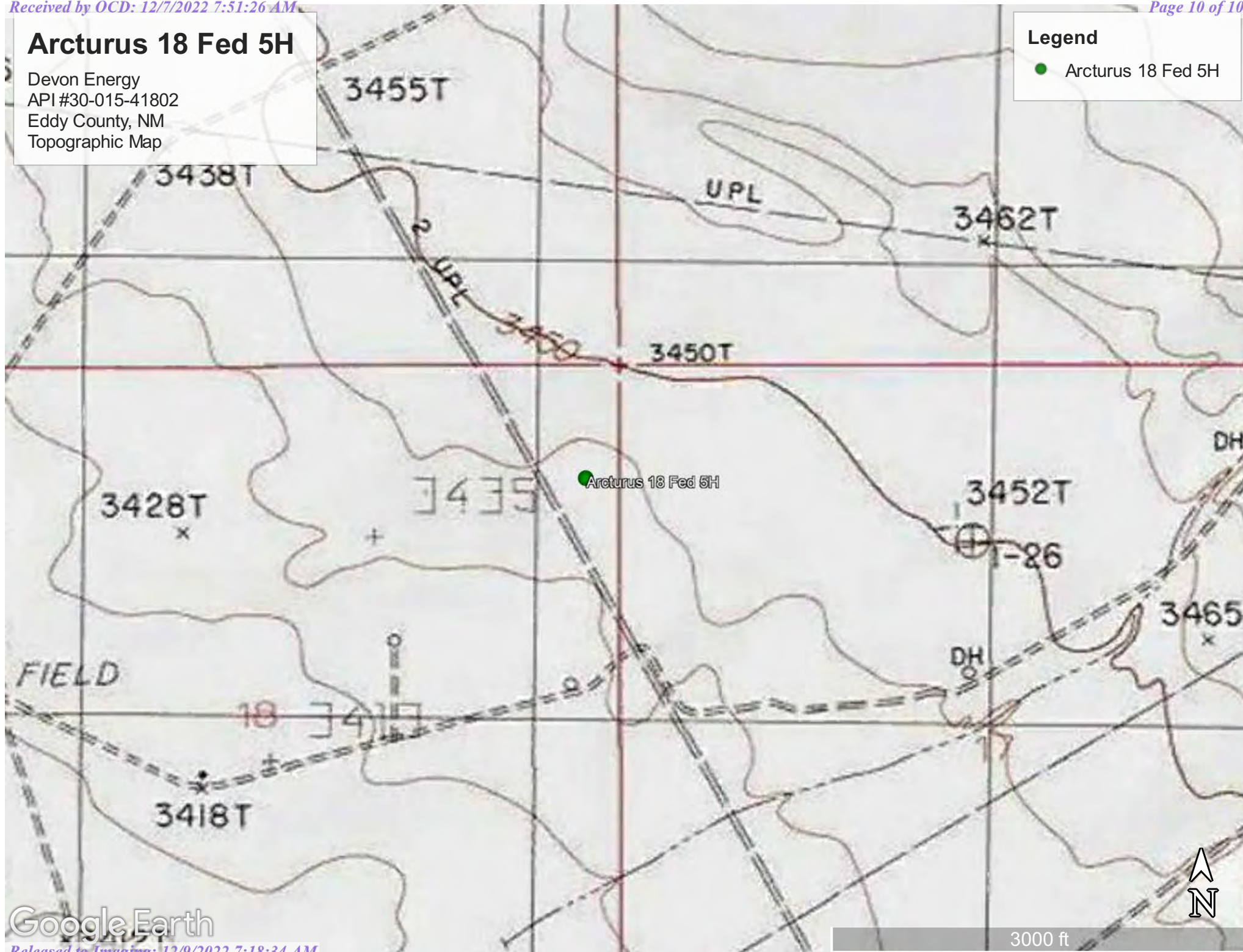


# Arcturus 18 Fed 5H

Devon Energy  
API #30-015-41802  
Eddy County, NM  
Topographic Map

## Legend

● Arcturus 18 Fed 5H



# Arcturus 18 Fed 5H

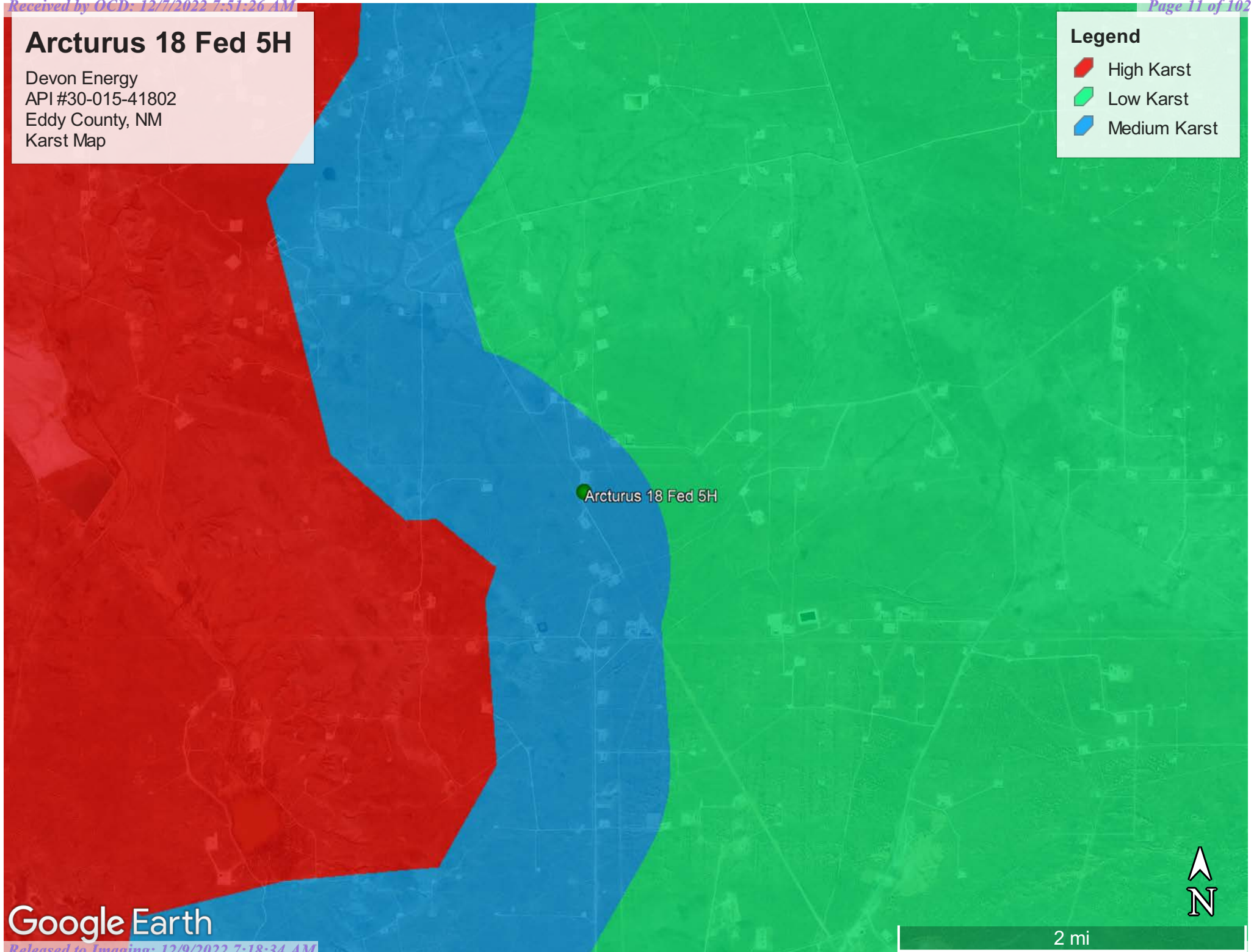
Devon Energy  
API #30-015-41802  
Eddy County, NM  
Karst Map

Legend

 High Karst

 Low Karst

 Medium Karst





# Devon Energy

Arcturus 18 Fed #5H  
API 30-015-41802  
Eddy County, NM  
Site Map

## Legend

○ Sample

S-16 S-15 S-14 S-13  
S-9 S-10 S-11 S-12  
Arcturus 18 Fed #5H  
S-8 S-7 S-6 S-5  
S-1 S-2 S-3 S-4



100 ft





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	Tw	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<a href="#">CP 01907 POD1</a>		CP	ED	4	2	2	18	19S	31E	603017	3614737	8			
<a href="#">CP 00873 POD1</a>		CP	LE	1	1	19	19S	31E	601772	3613147*		2024	340	180	160
<a href="#">CP 00357 POD1</a>		CP	ED	4	4	1	24	19S	30E	600667	3612631*	3159	630		
<a href="#">CP 00829 POD1</a>		CP	LE	2	4	16	19S	31E	606165	3614009*		3234	120		
<a href="#">CP 00357 POD2</a>		CP	ED	4	3	1	24	19S	30E	600265	3612627*	3471	630		

Average Depth to Water: **180 feet**

Minimum Depth: **180 feet**

Maximum Depth: **180 feet**

**Record Count:** 5

### UTM NAD83 Radius Search (in meters):

**Easting (X):** 603015.3

**Northing (Y):** 3614745.15

**Radius:** 4000

\*UTM location was derived from PLSS - see Help

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

12/6/22 1:21 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER



# New Mexico Office of the State Engineer

## Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tw	Rng	X	Y
NA	CP 01907 POD1	4	2	2	18	19S	31E	603017	3614737

**Driller License:** 1249 **Driller Company:** ATKINS ENGINEERING ASSOC. INC.

**Driller Name:** JACKIE ATKINS

**Drill Start Date:** 07/13/2022 **Drill Finish Date:** 07/13/2022 **Plug Date:**

**Log File Date:** 08/11/2022 **PCW Rev Date:** **Source:**

**Pump Type:** **Pipe Discharge Size:** **Estimated Yield:**

**Casing Size:** **Depth Well:** **Depth Water:**

Casing Perforations:	Top	Bottom
	0	55

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

12/6/22 1:21 PM

POINT OF DIVERSION SUMMARY



# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD 1 (TW-1)		WELL TAG ID NO. N/A		OSE FILE NO(S). CP-1907			
	WELL OWNER NAME(S) Devon Energy				PHONE (OPTIONAL) 575-748-1838			
	WELL OWNER MAILING ADDRESS 6488 7 Rivers Hwy				CITY Artesia	STATE NM	ZIP 88210	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 39	SECONDS 55.76 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
		LONGITUDE 103	54	4.95 W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SE NE NE Sec.18 T19S R31S NMPM								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 7/13/2022		DRILLING ENDED 7/13/2022		DEPTH OF COMPLETED WELL (FT) Temporary Well	BORE HOLE DEPTH (FT) ±55	DEPTH WATER FIRST ENCOUNTERED (FT) N/A	
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) N/A	DATE STATIC MEASURED 7/13/2022, 7/1/2022	
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger						CHECK HERE IF PITLESS ADAPTER IS INSTALLED <input type="checkbox"/>	
	DEPTH (feet bgl)		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)
	FROM	TO						
	0	55	±6.5	Boring-HSA	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						

FOR OSE INTERNAL USE

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

FILE NO. CP-1907-POD1 TW-1	POD NO. 1	TRN NO. 726167
LOCATION 19.31.18.422	WELL TAG ID NO.	PAGE 1 OF 2



#### 4. HYDROGEOLOGIC LOG OF WELL

### 5. TEST: RIG SUPERVISION

### 5. SIGNATURE

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 01/28/2022)	
FILE NO.	CP-1907-P001 TW-1	POD NO.	1
LOCATION	19.31.18.422	TRN NO.	726167
		WELL TAG ID NO.	
		PAGE 2 OF 2	



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## National Water Information System: Web Interface

USGS Water Resources

Data Category:

Groundwater

Geographic Area:

United States

GO

Click to hide News 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 =

- 323810103511401

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

## USGS 323810103511401 19S.31E.27.214121

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°38'10", Longitude 103°51'14" NAD27

Land-surface elevation 3,480 feet above NGVD29

The depth of the well is 210.00 feet below land surface.

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

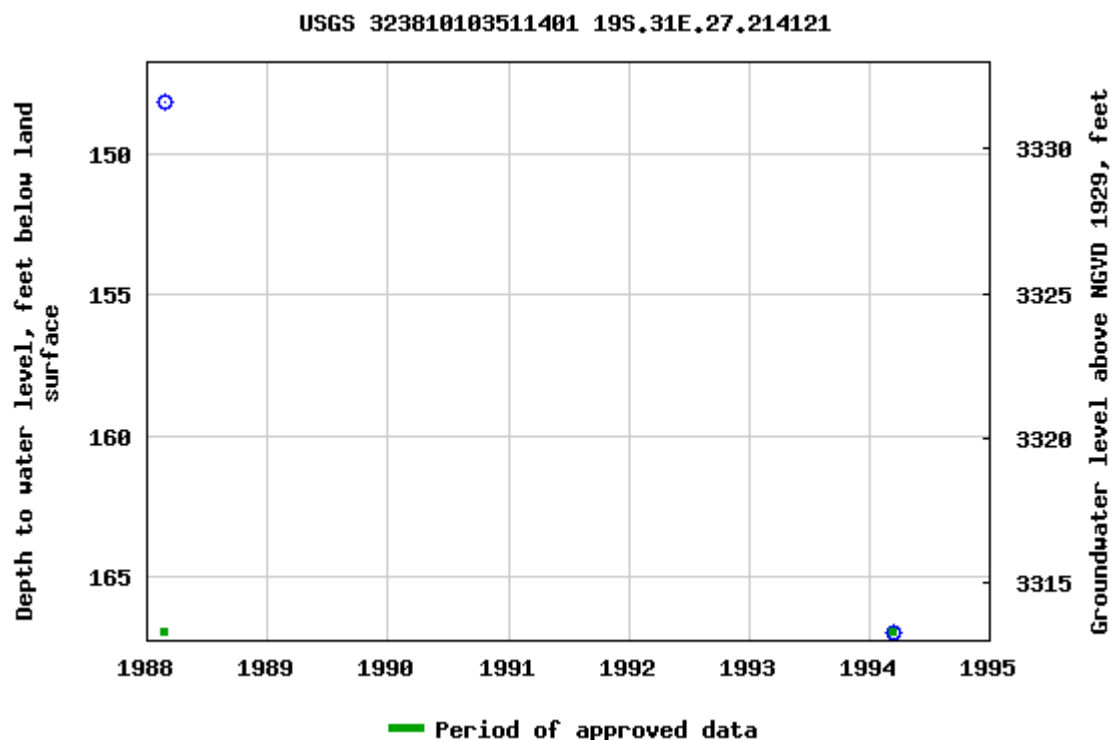
### Output formats

[Table of data](#)

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**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: 2022-12-06 15:24:07 EST



0.53 0.46 nadww01

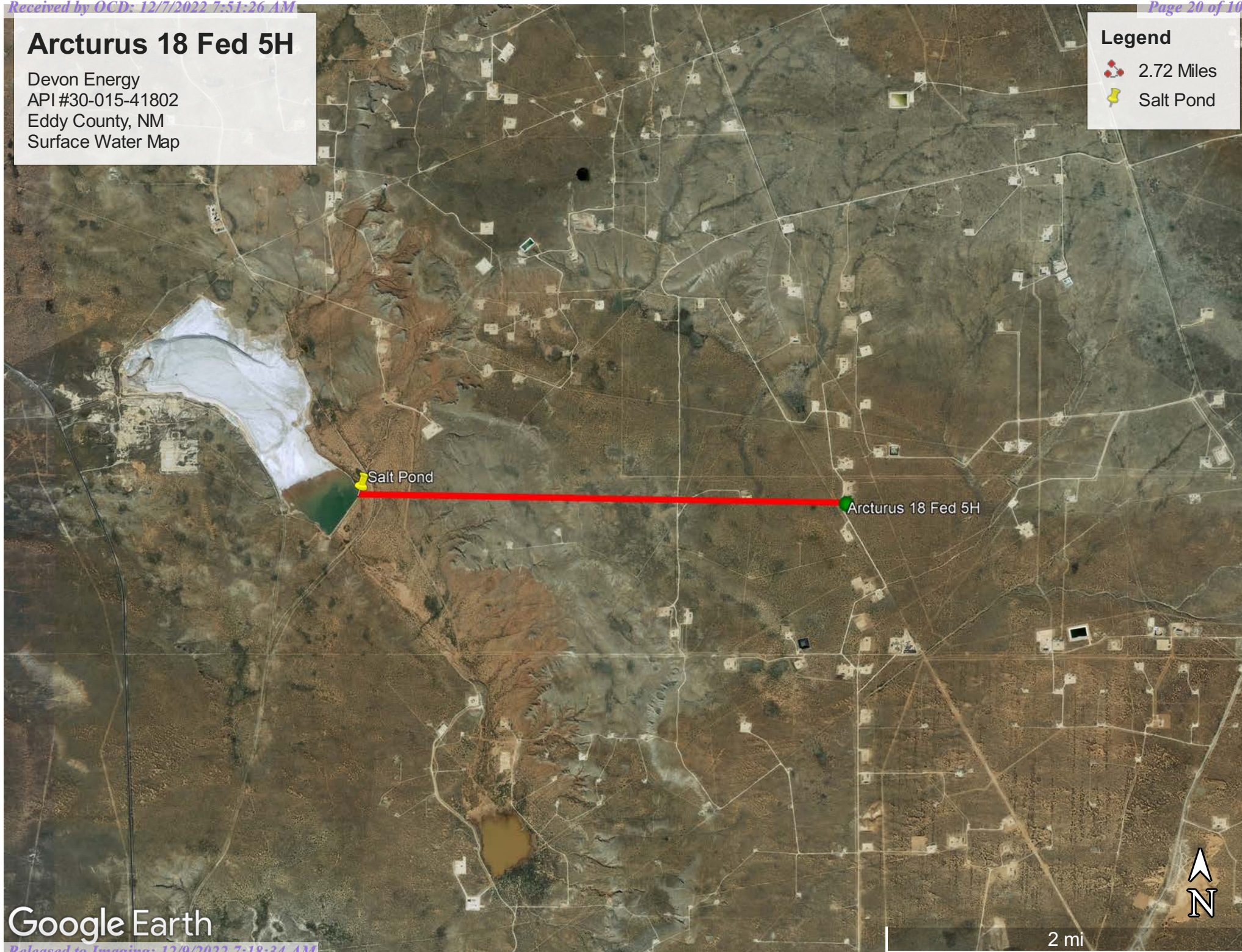


# Arcturus 18 Fed 5H

Devon Energy  
API #30-015-41802  
Eddy County, NM  
Surface Water Map

## Legend

-  2.72 Miles
-  Salt Pond



Google Earth

2 mi





Pima Environmental Services

**Appendix B**

Soil Survey & Geological Data

FEMA Flood Map

Wetlands Map

Map Unit Description: Berino loamy fine sand, 0 to 3 percent slopes---Eddy Area, New Mexico

---

## 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:* Fan piedmonts, plains

*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 capacity:* Moderate (about 8.4 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 3e

*Land capability classification (nonirrigated):* 7e

*Hydrologic Soil Group:* B

Map Unit Description: Berino loamy fine sand, 0 to 3 percent slopes---Eddy Area, New Mexico

---

*Ecological site:* R042XC007NM - Loamy  
*Hydric soil rating:* No

#### **Minor Components**

##### **Pajarito**

*Percent of map unit:* 1 percent  
*Ecological site:* R042XC003NM - Loamy Sand  
*Hydric soil rating:* No

## **Data Source Information**

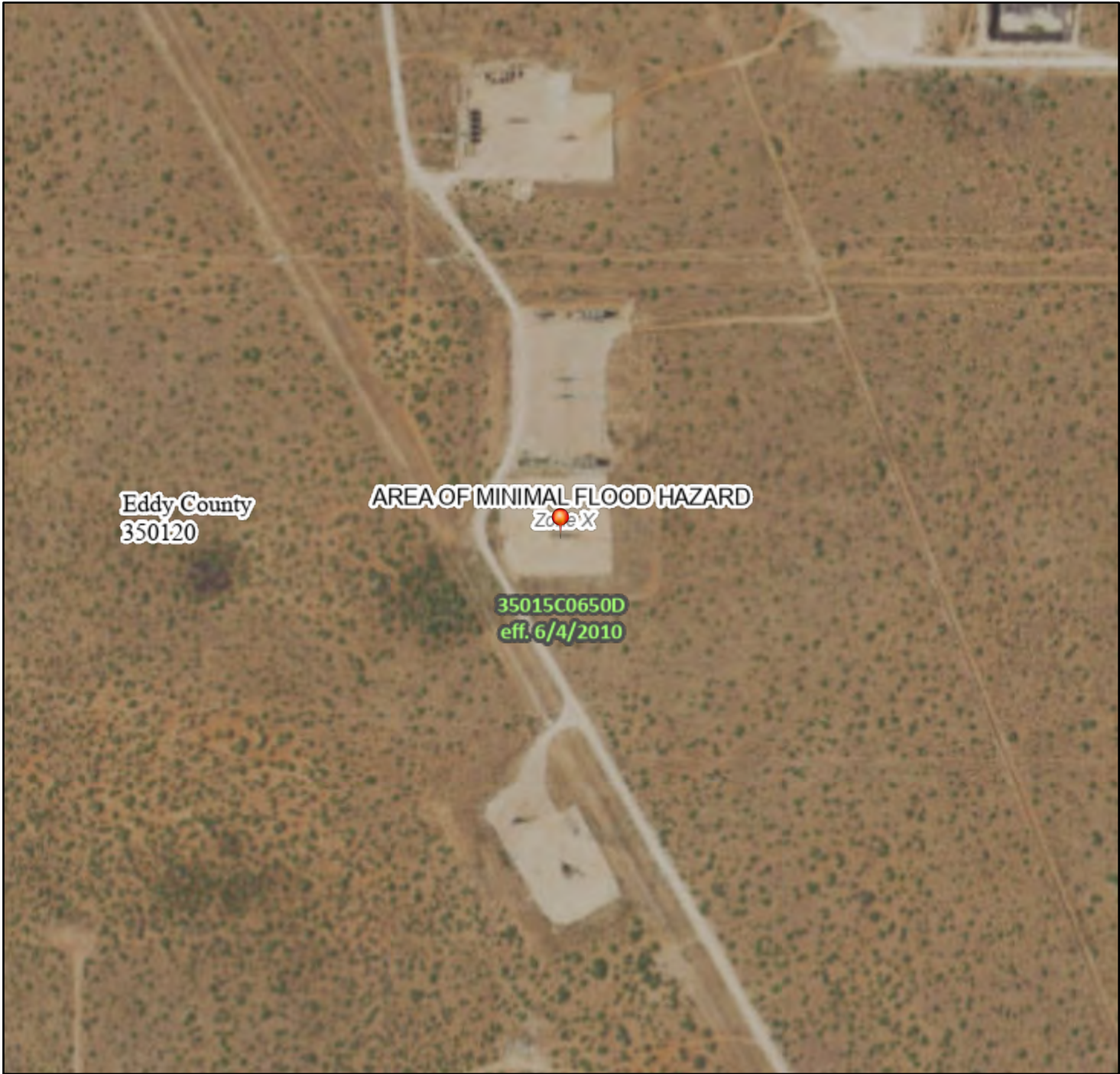
Soil Survey Area: Eddy Area, New Mexico  
Survey Area Data: Version 16, Jun 8, 2020



# National Flood Hazard Layer FIRMette



103°54'22"W 32°40'10"N



## 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 Water Surface Elevation
		17.5
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



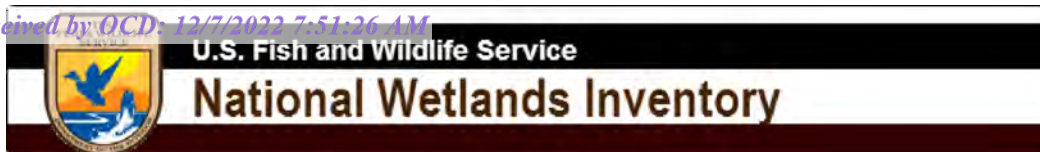
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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

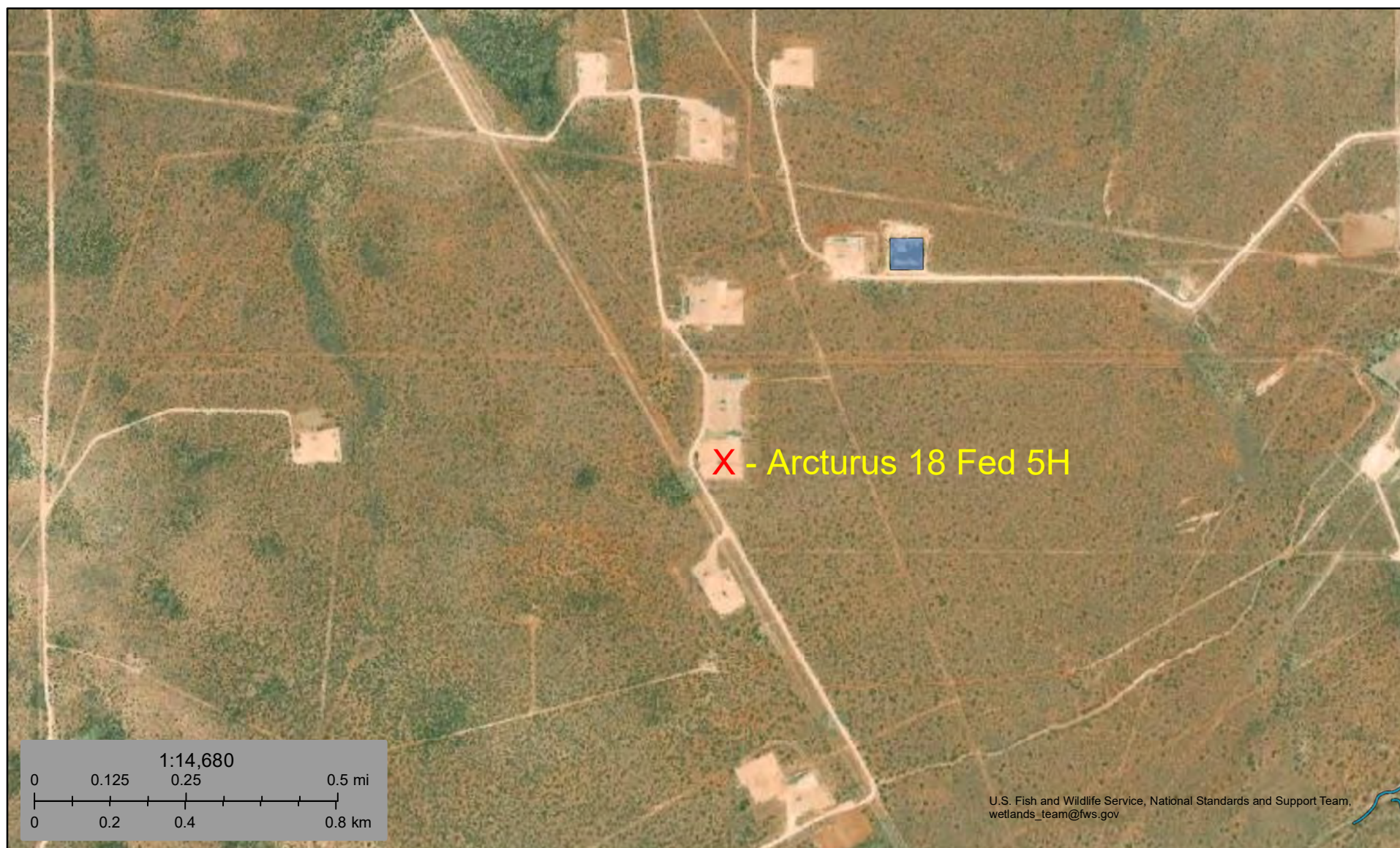
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/6/2022 at 3:27 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by 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.





## Wetlands Map



December 6, 2022

**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.



Pima Environmental Services

**Appendix C**

C-141 Form

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

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

## NM OIL CONSERVATION

ARTESIA DISTRICT

Form C-141

Revised August 8, 2011

MAY 11 2015

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

RECEIVED

## Release Notification and Corrective Action

NAB1513157754

## OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Devon Energy Production	Contact Rudy Zuniga, Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88220	Telephone No. 575-390-5435
Facility Name Arcturus 18 Fed 5H	Facility Type Oil

Surface Owner Federal	Mineral Owner Federal	API No. 30-015-41802
-----------------------	-----------------------	----------------------

## LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	18	19S	31E	845	FNL	250	FEL	Eddy

Latitude: 32.6653332°N

Longitude: 103.9008789°W

## NATURE OF RELEASE

Type of Release Oil & Produced Water	Volume of Release 20bbls	Volume Recovered 20bbls
Source of Release H.F. back pressure valve	Date and Hour of Occurrence May 6, 2015 6:30 AM	Date and Hour of Discovery May 6, 2015 6:30 AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Jeff Robertson, BLM Mike Bratcher, OCD	
By Whom? Lynn Smith, Asst. Production Foreman	Date and Hour Jeff Robertson, BLM May 6, 2015 8:57 AM Mike Bratcher, OCD May 6, 2015 8:59 AM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse N/A	

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

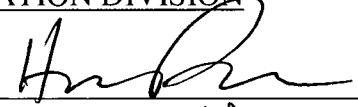
## Describe Cause of Problem and Remedial Action Taken.\*

On May 6, 2015 6:30 AM the Lease Operator was contacted and told that the Arcturus 18 Fed 5H was leaking from the well head, upon Lease Operator's arrival to the location he discovered a H. F. back pressure valve had washed out releasing 20bbls of oil and produced water mix onto location.

## Describe Area Affected and Cleanup Action Taken.\*

The affected area was 48x85 with all fluids contained on location. Legendary Trucking recovered all 20bbls of oil and produced water mix and the contaminated dirt will be removed from location and replaced with fresh dirt.

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: Sheila Fisher	OIL CONSERVATION DIVISION	
Printed Name: Sheila Fisher	Approved by Environmental Specialist: 	
Title: Field Admin Support	Approval Date: 5/11/15	Expiration Date: N/A
E-mail Address: Sheila.Fisher@dmn.com	Conditions of Approval: Mediation per O.C.D. Rules & Guidelines Attached <input type="checkbox"/>	
Date: Phone: 575.748.1829	SUBMIT REMEDIATION PROPOSAL NO	

\* Attach Additional Sheets If Necessary

LATER THAN: 01/21/15

2RP-2998



## 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

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

State of New Mexico  
Oil Conservation Division

Page 2

Incident ID	NAB1513157754
District RP	2RP-2998
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: Wes Mathews Title: EHS Professional  
Signature: *Wesley Mathews* Date: 12/6/2022  
email: wesley.mathews@dvn.com Telephone: 575-513-8608

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	NAB1513157754
District RP	2RP-2998
Facility ID	
Application ID	

## Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Wes Mathews Title: EHS Professional  
Signature: Wesley Mathews Date: 12/6/2022  
email: wesley.mathews@dvn.com Telephone: 575-513-8608

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_



Pima Environmental Services

## **Appendix D**

Laboratory Reports



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

September 03, 2020

CHRIS JONES

PIMA ENVIROMENTAL

1601 N TURNER STE. 500

HOBBS, NM 88240

RE: ARCTURUS 18 FED 5H

Enclosed are the results of analyses for samples received by the laboratory on 09/01/20 8:12.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager





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: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S1 - 0-6" (H002305-01)**

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	09/01/2020	ND	1.94	96.9	2.00	3.75	
Toluene*	<0.050	0.050	09/01/2020	ND	1.97	98.3	2.00	2.88	
Ethylbenzene*	<0.050	0.050	09/01/2020	ND	1.94	97.2	2.00	1.75	
Total Xylenes*	<0.150	0.150	09/01/2020	ND	5.93	98.8	6.00	1.50	
Total BTEx	<0.300	0.300	09/01/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 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	48.0	16.0	09/02/2020	ND	416	104	400	3.92	

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 123 % 44.3-144

Surrogate: 1-Chlorooctadecane 133 % 42.2-156

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S2 - 0-6" (H002305-02)**

BTX 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	09/01/2020	ND	1.94	96.9	2.00	3.75	
Toluene*	<0.050	0.050	09/01/2020	ND	1.97	98.3	2.00	2.88	
Ethylbenzene*	<0.050	0.050	09/01/2020	ND	1.94	97.2	2.00	1.75	
Total Xylenes*	<0.150	0.150	09/01/2020	ND	5.93	98.8	6.00	1.50	
Total BTX	<0.300	0.300	09/01/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	09/02/2020	ND	416	104	400	3.92	

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 127 % 44.3-144

Surrogate: 1-Chlorooctadecane 136 % 42.2-156

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S2 - 1' (H002305-03)**

BTX 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	09/01/2020	ND	1.94	96.9	2.00	3.75	
Toluene*	<0.050	0.050	09/01/2020	ND	1.97	98.3	2.00	2.88	
Ethylbenzene*	<0.050	0.050	09/01/2020	ND	1.94	97.2	2.00	1.75	
Total Xylenes*	<0.150	0.150	09/01/2020	ND	5.93	98.8	6.00	1.50	
Total BTX	<0.300	0.300	09/01/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/02/2020	ND	416	104	400	3.92		

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 124 % 44.3-144

Surrogate: 1-Chlorooctadecane 136 % 42.2-156

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S2 - 2' (H002305-04)**

BTX 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	09/01/2020	ND	1.96	97.8	2.00	1.47	QR-03
Toluene*	<0.050	0.050	09/01/2020	ND	1.97	98.3	2.00	0.895	QR-03
Ethylbenzene*	<0.050	0.050	09/01/2020	ND	1.92	95.9	2.00	0.956	QR-03
Total Xylenes*	<0.150	0.150	09/01/2020	ND	5.93	98.8	6.00	0.879	QR-03
Total BTX	<0.300	0.300	09/01/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/02/2020	ND	416	104	400	3.92		

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 135 % 44.3-144

Surrogate: 1-Chlorooctadecane 148 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S2 - 3' (H002305-05)**

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	09/01/2020	ND	1.96	97.8	2.00	1.47		
Toluene*	<0.050	0.050	09/01/2020	ND	1.97	98.3	2.00	0.895		
Ethylbenzene*	<0.050	0.050	09/01/2020	ND	1.92	95.9	2.00	0.956		
Total Xylenes*	<0.150	0.150	09/01/2020	ND	5.93	98.8	6.00	0.879		
Total BTEx	<0.300	0.300	09/01/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/02/2020	ND	416	104	400	3.92		

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 131 % 44.3-144

Surrogate: 1-Chlorooctadecane 141 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S3 - 0-6" (H002305-06)**

BTX 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	09/01/2020	ND	1.96	97.8	2.00	1.47	
Toluene*	<0.050	0.050	09/01/2020	ND	1.97	98.3	2.00	0.895	
Ethylbenzene*	<0.050	0.050	09/01/2020	ND	1.92	95.9	2.00	0.956	
Total Xylenes*	<0.150	0.150	09/01/2020	ND	5.93	98.8	6.00	0.879	
Total BTX	<0.300	0.300	09/01/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	112	16.0	09/02/2020	ND	416	104	400	3.92	

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	164	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	297	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 115 % 44.3-144

Surrogate: 1-Chlorooctadecane 130 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S3 - 1' (H002305-07)**

BTX 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	09/01/2020	ND	1.96	97.8	2.00	1.47		
Toluene*	<0.050	0.050	09/01/2020	ND	1.97	98.3	2.00	0.895		
Ethylbenzene*	<0.050	0.050	09/01/2020	ND	1.92	95.9	2.00	0.956		
Total Xylenes*	<0.150	0.150	09/01/2020	ND	5.93	98.8	6.00	0.879		
Total BTX	<0.300	0.300	09/01/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/02/2020	ND	416	104	400	3.92		

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	25.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 125 % 44.3-144

Surrogate: 1-Chlorooctadecane 139 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S3 - 2' (H002305-08)**

BTX 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	09/01/2020	ND	1.96	97.8	2.00	1.47		
Toluene*	<0.050	0.050	09/01/2020	ND	1.97	98.3	2.00	0.895		
Ethylbenzene*	<0.050	0.050	09/01/2020	ND	1.92	95.9	2.00	0.956		
Total Xylenes*	<0.150	0.150	09/01/2020	ND	5.93	98.8	6.00	0.879		
Total BTX	<0.300	0.300	09/01/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-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	09/02/2020	ND	416	104	400	3.92		

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 120 % 44.3-144

Surrogate: 1-Chlorooctadecane 130 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S3 - 3' (H002305-09)**

BTX 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	09/01/2020	ND	1.96	97.8	2.00	1.47	
Toluene*	<0.050	0.050	09/01/2020	ND	1.97	98.3	2.00	0.895	
Ethylbenzene*	<0.050	0.050	09/01/2020	ND	1.92	95.9	2.00	0.956	
Total Xylenes*	<0.150	0.150	09/01/2020	ND	5.93	98.8	6.00	0.879	
Total BTX	<0.300	0.300	09/01/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/02/2020	ND	400	100	400	3.92		

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 129 % 44.3-144

Surrogate: 1-Chlorooctadecane 141 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S4 - 0-6" (H002305-10)**

BTX 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	09/01/2020	ND	1.96	97.8	2.00	1.47		
Toluene*	<0.050	0.050	09/01/2020	ND	1.97	98.3	2.00	0.895		
Ethylbenzene*	<0.050	0.050	09/01/2020	ND	1.92	95.9	2.00	0.956		
Total Xylenes*	<0.150	0.150	09/01/2020	ND	5.93	98.8	6.00	0.879		
Total BTX	<0.300	0.300	09/01/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/02/2020	ND	400	100	400	3.92		

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 118 % 44.3-144

Surrogate: 1-Chlorooctadecane 131 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S4 - 1' (H002305-11)**

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	09/01/2020	ND	1.96	97.8	2.00	1.47	
Toluene*	<0.050	0.050	09/01/2020	ND	1.97	98.3	2.00	0.895	
Ethylbenzene*	<0.050	0.050	09/01/2020	ND	1.92	95.9	2.00	0.956	
Total Xylenes*	<0.150	0.150	09/01/2020	ND	5.93	98.8	6.00	0.879	
Total BTEx	<0.300	0.300	09/01/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/02/2020	ND	400	100	400	3.92	

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 114 % 44.3-144

Surrogate: 1-Chlorooctadecane 124 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S4 - 2' (H002305-12)**

BTX 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	09/01/2020	ND	1.96	97.8	2.00	1.47	
Toluene*	<0.050	0.050	09/01/2020	ND	1.97	98.3	2.00	0.895	
Ethylbenzene*	<0.050	0.050	09/01/2020	ND	1.92	95.9	2.00	0.956	
Total Xylenes*	<0.150	0.150	09/01/2020	ND	5.93	98.8	6.00	0.879	
Total BTX	<0.300	0.300	09/01/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/02/2020	ND	400	100	400	3.92		

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 125 % 44.3-144

Surrogate: 1-Chlorooctadecane 138 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S4 - 3' (H002305-13)**

BTX 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	09/01/2020	ND	1.96	97.8	2.00	1.47	
Toluene*	<0.050	0.050	09/01/2020	ND	1.97	98.3	2.00	0.895	
Ethylbenzene*	<0.050	0.050	09/01/2020	ND	1.92	95.9	2.00	0.956	
Total Xylenes*	<0.150	0.150	09/01/2020	ND	5.93	98.8	6.00	0.879	
Total BTX	<0.300	0.300	09/01/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/02/2020	ND	400	100	400	3.92	

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 130 % 44.3-144

Surrogate: 1-Chlorooctadecane 136 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S5 - 0-6" (H002305-14)**

BTX 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	09/01/2020	ND	1.96	97.8	2.00	1.47		
Toluene*	<0.050	0.050	09/01/2020	ND	1.97	98.3	2.00	0.895		
Ethylbenzene*	<0.050	0.050	09/01/2020	ND	1.92	95.9	2.00	0.956		
Total Xylenes*	<0.150	0.150	09/01/2020	ND	5.93	98.8	6.00	0.879		
Total BTX	<0.300	0.300	09/01/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	240	16.0	09/02/2020	ND	400	100	400	3.92		

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 123 % 44.3-144

Surrogate: 1-Chlorooctadecane 133 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S5 - 1' (H002305-15)**

BTX 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	09/01/2020	ND	1.96	97.8	2.00	1.47		
Toluene*	<0.050	0.050	09/01/2020	ND	1.97	98.3	2.00	0.895		
Ethylbenzene*	<0.050	0.050	09/01/2020	ND	1.92	95.9	2.00	0.956		
Total Xylenes*	<0.150	0.150	09/01/2020	ND	5.93	98.8	6.00	0.879		
Total BTX	<0.300	0.300	09/01/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	48.0	16.0	09/02/2020	ND	400	100	400	3.92		

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 138 % 44.3-144

Surrogate: 1-Chlorooctadecane 151 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S5 - 2' (H002305-16)**

BTX 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	09/02/2020	ND	1.96	97.8	2.00	1.47		
Toluene*	<0.050	0.050	09/02/2020	ND	1.97	98.3	2.00	0.895		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.92	95.9	2.00	0.956		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.93	98.8	6.00	0.879		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/02/2020	ND	400	100	400	3.92		

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 128 % 44.3-144

Surrogate: 1-Chlorooctadecane 140 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S5 - 3' (H002305-17)**

BTX 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	09/02/2020	ND	1.96	97.8	2.00	1.47		
Toluene*	<0.050	0.050	09/02/2020	ND	1.97	98.3	2.00	0.895		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.92	95.9	2.00	0.956		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.93	98.8	6.00	0.879		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/02/2020	ND	400	100	400	3.92		

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 127 % 44.3-144

Surrogate: 1-Chlorooctadecane 139 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S6 - 0-6" (H002305-18)**

BTX 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	09/02/2020	ND	1.96	97.8	2.00	1.47		
Toluene*	<0.050	0.050	09/02/2020	ND	1.97	98.3	2.00	0.895		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.92	95.9	2.00	0.956		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.93	98.8	6.00	0.879		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	2360	16.0	09/02/2020	ND	400	100	400	3.92		

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 124 % 44.3-144

Surrogate: 1-Chlorooctadecane 136 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S6 - 1' (H002305-19)**

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	09/02/2020	ND	1.96	97.8	2.00	1.47		
Toluene*	<0.050	0.050	09/02/2020	ND	1.97	98.3	2.00	0.895		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.92	95.9	2.00	0.956		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.93	98.8	6.00	0.879		
Total BTEX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	09/02/2020	ND	400	100	400	3.92	

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 133 % 44.3-144

Surrogate: 1-Chlorooctadecane 144 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S6 - 2' (H002305-20)**

BTX 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	09/02/2020	ND	1.96	97.8	2.00	1.47		
Toluene*	<0.050	0.050	09/02/2020	ND	1.97	98.3	2.00	0.895		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.92	95.9	2.00	0.956		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.93	98.8	6.00	0.879		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	09/02/2020	ND	400	100	400	3.92	

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	09/01/2020	ND	214	107	200	0.909	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	227	113	200	1.28	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 128 % 44.3-144

Surrogate: 1-Chlorooctadecane 141 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S6 - 3' (H002305-21)**

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	09/02/2020	ND	1.96	97.8	2.00	1.47		
Toluene*	<0.050	0.050	09/02/2020	ND	1.97	98.3	2.00	0.895		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.92	95.9	2.00	0.956		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.93	98.8	6.00	0.879		
Total BTEx	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/02/2020	ND	400	100	400	3.92		

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 133 % 44.3-144

Surrogate: 1-Chlorooctadecane 142 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S7 - 0-6" (H002305-22)**

BTX 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	09/02/2020	ND	1.96	97.8	2.00	1.47		
Toluene*	<0.050	0.050	09/02/2020	ND	1.97	98.3	2.00	0.895		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.92	95.9	2.00	0.956		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.93	98.8	6.00	0.879		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	09/02/2020	ND	400	100	400	3.92	

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 139 % 44.3-144

Surrogate: 1-Chlorooctadecane 150 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S7 - 1' (H002305-23)**

BTX 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	09/02/2020	ND	1.96	97.8	2.00	1.47		
Toluene*	<0.050	0.050	09/02/2020	ND	1.97	98.3	2.00	0.895		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.92	95.9	2.00	0.956		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.93	98.8	6.00	0.879		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/02/2020	ND	400	100	400	3.92	

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 136 % 44.3-144

Surrogate: 1-Chlorooctadecane 149 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S7 - 2' (H002305-24)**

BTX 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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/02/2020	ND	400	100	400	3.92	

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 132 % 44.3-144

Surrogate: 1-Chlorooctadecane 144 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S7 - 3' (H002305-25)**

BTX 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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/02/2020	ND	400	100	400	3.92		

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 129 % 44.3-144

Surrogate: 1-Chlorooctadecane 140 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S8 - 0-6" (H002305-26)**

BTX 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	09/02/2020	ND	1.90	94.9	2.00	7.76	
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94	
Total BTX	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	09/02/2020	ND	400	100	400	3.92	

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 112 % 44.3-144

Surrogate: 1-Chlorooctadecane 118 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S8 - 1' (H002305-27)**

BTX 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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-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	09/02/2020	ND	400	100	400	3.92	

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 133 % 44.3-144

Surrogate: 1-Chlorooctadecane 136 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S8 - 2' (H002305-28)**

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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTEx	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 73.3-129

Chloride, SM4500CI-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	09/02/2020	ND	400	100	400	3.92	

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 140 % 44.3-144

Surrogate: 1-Chlorooctadecane 143 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S8 - 3' (H002305-29)**

BTX 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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	09/02/2020	ND	432	108	400	7.69		

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 145 % 44.3-144

Surrogate: 1-Chlorooctadecane 149 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S9 - 0-6" (H002305-30)**

BTX 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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	09/02/2020	ND	432	108	400	7.69		

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 141 % 44.3-144

Surrogate: 1-Chlorooctadecane 142 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S9 - 1' (H002305-31)**

BTX 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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/02/2020	ND	432	108	400	7.69	

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 133 % 44.3-144

Surrogate: 1-Chlorooctadecane 139 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S9 - 2' (H002305-32)**

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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTEx	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/02/2020	ND	432	108	400	7.69	

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 130 % 44.3-144

Surrogate: 1-Chlorooctadecane 138 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S9 - 3' (H002305-33)**

BTX 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	09/02/2020	ND	1.90	94.9	2.00	7.76	
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94	
Total BTX	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/02/2020	ND	432	108	400	7.69	

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 139 % 44.3-144

Surrogate: 1-Chlorooctadecane 146 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S10 - 0-6" (H002305-34)**

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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTEx	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6560	16.0	09/02/2020	ND	432	108	400	7.69		

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 135 % 44.3-144

Surrogate: 1-Chlorooctadecane 142 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S10 - 1' (H002305-35)**

BTX 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	09/02/2020	ND	1.90	94.9	2.00	7.76	
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94	
Total BTX	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	416	16.0	09/02/2020	ND	432	108	400	7.69	

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 133 % 44.3-144

Surrogate: 1-Chlorooctadecane 140 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S10 - 2' (H002305-36)**

BTX 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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	256	16.0	09/02/2020	ND	432	108	400	7.69		

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 141 % 44.3-144

Surrogate: 1-Chlorooctadecane 148 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S10 - 3' (H002305-37)**

BTX 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	09/02/2020	ND	1.90	94.9	2.00	7.76	
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94	
Total BTX	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/02/2020	ND	432	108	400	7.69	

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 138 % 44.3-144

Surrogate: 1-Chlorooctadecane 144 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S11 - 0-6" (H002305-38)**

BTX 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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	432	16.0	09/02/2020	ND	432	108	400	7.69		

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	31.8	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 136 % 44.3-144

Surrogate: 1-Chlorooctadecane 153 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S11 - 1' (H002305-39)**

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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTEx	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	112	16.0	09/02/2020	ND	432	108	400	7.69		

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 143 % 44.3-144

Surrogate: 1-Chlorooctadecane 152 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S11 - 2' (H002305-40)**

BTX 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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	80.0	16.0	09/02/2020	ND	432	108	400	7.69		

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	09/02/2020	ND	164	82.0	200	7.76	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	168	84.0	200	5.47	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 141 % 44.3-144

Surrogate: 1-Chlorooctadecane 152 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S11 - 3' (H002305-41)**

BTX 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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 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	96.0	16.0	09/02/2020	ND	432	108	400	7.69		

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	09/01/2020	ND	189	94.7	200	1.20	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	206	103	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 134 % 44.3-144

Surrogate: 1-Chlorooctadecane 146 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S12 - 0-6" (H002305-42)**

BTX 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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	192	16.0	09/02/2020	ND	432	108	400	7.69		

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	09/01/2020	ND	189	94.7	200	1.20	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	206	103	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 120 % 44.3-144

Surrogate: 1-Chlorooctadecane 135 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S12 - 1' (H002305-43)**

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	09/02/2020	ND	1.90	94.9	2.00	7.76		
Toluene*	<0.050	0.050	09/02/2020	ND	1.89	94.5	2.00	8.25		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.88	93.8	2.00	8.05		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.82	97.0	6.00	6.94		
Total BTEx	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	48.0	16.0	09/02/2020	ND	432	108	400	7.69		

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	09/01/2020	ND	189	94.7	200	1.20	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	206	103	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 143 % 44.3-144

Surrogate: 1-Chlorooctadecane 164 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S12 - 2' (H002305-44)**

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	09/02/2020	ND	2.07	103	2.00	5.26		
Toluene*	<0.050	0.050	09/02/2020	ND	2.08	104	2.00	5.59		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	2.06	103	2.00	4.93		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.96	99.3	6.00	4.77		
Total BTEx	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	64.0	16.0	09/02/2020	ND	432	108	400	7.69		

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	09/01/2020	ND	189	94.7	200	1.20	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	206	103	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 134 % 44.3-144

Surrogate: 1-Chlorooctadecane 153 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S12 - 3' (H002305-45)**

BTX 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	09/02/2020	ND	2.07	103	2.00	5.26		
Toluene*	<0.050	0.050	09/02/2020	ND	2.08	104	2.00	5.59		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	2.06	103	2.00	4.93		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.96	99.3	6.00	4.77		
Total BTX	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	64.0	16.0	09/02/2020	ND	432	108	400	7.69	

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	09/01/2020	ND	189	94.7	200	1.20	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	206	103	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 127 % 44.3-144

Surrogate: 1-Chlorooctadecane 146 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S13- 0-6" (H002305-46)**

BTX 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	09/02/2020	ND	2.07	103	2.00	5.26	
Toluene*	<0.050	0.050	09/02/2020	ND	2.08	104	2.00	5.59	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	2.06	103	2.00	4.93	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.96	99.3	6.00	4.77	
Total BTX	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	80.0	16.0	09/02/2020	ND	432	108	400	7.69		

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	09/01/2020	ND	189	94.7	200	1.20	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	206	103	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 121 % 44.3-144

Surrogate: 1-Chlorooctadecane 135 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S13- 1' (H002305-47)**

BTX 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	09/02/2020	ND	2.07	103	2.00	5.26	
Toluene*	<0.050	0.050	09/02/2020	ND	2.08	104	2.00	5.59	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	2.06	103	2.00	4.93	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.96	99.3	6.00	4.77	
Total BTX	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/02/2020	ND	432	108	400	7.69	

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	09/01/2020	ND	189	94.7	200	1.20	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	206	103	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 138 % 44.3-144

Surrogate: 1-Chlorooctadecane 154 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S13- 2' (H002305-48)**

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	09/02/2020	ND	2.07	103	2.00	5.26	
Toluene*	<0.050	0.050	09/02/2020	ND	2.08	104	2.00	5.59	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	2.06	103	2.00	4.93	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.96	99.3	6.00	4.77	
Total BTEX	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/02/2020	ND	432	108	400	7.69		

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	09/01/2020	ND	189	94.7	200	1.20	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	206	103	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 127 % 44.3-144

Surrogate: 1-Chlorooctadecane 139 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S13- 3' (H002305-49)**

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	09/02/2020	ND	2.07	103	2.00	5.26	
Toluene*	<0.050	0.050	09/02/2020	ND	2.08	104	2.00	5.59	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	2.06	103	2.00	4.93	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.96	99.3	6.00	4.77	
Total BTEx	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/02/2020	ND	416	104	400	0.00		

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	09/02/2020	ND	189	94.7	200	1.20	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	206	103	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 131 % 44.3-144

Surrogate: 1-Chlorooctadecane 144 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S14- 0-6" (H002305-50)**

BTX 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	09/02/2020	ND	2.07	103	2.00	5.26	
Toluene*	<0.050	0.050	09/02/2020	ND	2.08	104	2.00	5.59	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	2.06	103	2.00	4.93	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.96	99.3	6.00	4.77	
Total BTX	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	09/02/2020	ND	416	104	400	0.00	

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	09/02/2020	ND	189	94.7	200	1.20	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	206	103	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 130 % 44.3-144

Surrogate: 1-Chlorooctadecane 146 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S14- 1' (H002305-51)**

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	09/02/2020	ND	2.07	103	2.00	5.26	
Toluene*	<0.050	0.050	09/02/2020	ND	2.08	104	2.00	5.59	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	2.06	103	2.00	4.93	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.96	99.3	6.00	4.77	
Total BTEx	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	09/02/2020	ND	416	104	400	0.00		

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	09/02/2020	ND	189	94.7	200	1.20	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	206	103	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 116 % 44.3-144

Surrogate: 1-Chlorooctadecane 129 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S14- 2' (H002305-52)**

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	09/02/2020	ND	2.07	103	2.00	5.26	
Toluene*	<0.050	0.050	09/02/2020	ND	2.08	104	2.00	5.59	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	2.06	103	2.00	4.93	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.96	99.3	6.00	4.77	
Total BTEX	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	160	16.0	09/02/2020	ND	416	104	400	0.00	

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	09/02/2020	ND	189	94.7	200	1.20	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	206	103	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 123 % 44.3-144

Surrogate: 1-Chlorooctadecane 134 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S14- 3' (H002305-53)**

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	09/02/2020	ND	2.07	103	2.00	5.26	
Toluene*	<0.050	0.050	09/02/2020	ND	2.08	104	2.00	5.59	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	2.06	103	2.00	4.93	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.96	99.3	6.00	4.77	
Total BTEx	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/02/2020	ND	416	104	400	0.00	

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	09/02/2020	ND	189	94.7	200	1.20	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	206	103	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 137 % 44.3-144

Surrogate: 1-Chlorooctadecane 152 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S15- 0-6" (H002305-54)**

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	09/02/2020	ND	2.07	103	2.00	5.26	
Toluene*	<0.050	0.050	09/02/2020	ND	2.08	104	2.00	5.59	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	2.06	103	2.00	4.93	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.96	99.3	6.00	4.77	
Total BTEx	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	32.0	16.0	09/02/2020	ND	416	104	400	0.00	

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	09/02/2020	ND	189	94.7	200	1.20	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	206	103	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 126 % 44.3-144

Surrogate: 1-Chlorooctadecane 139 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S15- 1' (H002305-55)**

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	09/02/2020	ND	2.07	103	2.00	5.26	
Toluene*	<0.050	0.050	09/02/2020	ND	2.08	104	2.00	5.59	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	2.06	103	2.00	4.93	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.96	99.3	6.00	4.77	
Total BTEx	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/02/2020	ND	416	104	400	0.00	

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	09/02/2020	ND	189	94.7	200	1.20	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	206	103	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 133 % 44.3-144

Surrogate: 1-Chlorooctadecane 146 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S15- 2' (H002305-56)**

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	09/02/2020	ND	2.07	103	2.00	5.26	
Toluene*	<0.050	0.050	09/02/2020	ND	2.08	104	2.00	5.59	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	2.06	103	2.00	4.93	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.96	99.3	6.00	4.77	
Total BTEx	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 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	48.0	16.0	09/02/2020	ND	416	104	400	0.00	

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	09/02/2020	ND	194	96.8	200	1.21	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	203	101	200	0.0513	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 114 % 44.3-144

Surrogate: 1-Chlorooctadecane 124 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S15- 3' (H002305-57)**

BTX 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	09/02/2020	ND	2.07	103	2.00	5.26	
Toluene*	<0.050	0.050	09/02/2020	ND	2.08	104	2.00	5.59	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	2.06	103	2.00	4.93	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.96	99.3	6.00	4.77	
Total BTX	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	48.0	16.0	09/02/2020	ND	416	104	400	0.00	

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	09/02/2020	ND	194	96.8	200	1.21	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	203	101	200	0.0513	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 126 % 44.3-144

Surrogate: 1-Chlorooctadecane 135 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S16- 0-6" (H002305-58)**

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	09/02/2020	ND	2.07	103	2.00	5.26	
Toluene*	<0.050	0.050	09/02/2020	ND	2.08	104	2.00	5.59	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	2.06	103	2.00	4.93	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.96	99.3	6.00	4.77	
Total BTEx	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2000	16.0	09/02/2020	ND	416	104	400	0.00		

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	09/02/2020	ND	194	96.8	200	1.21	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	203	101	200	0.0513	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 123 % 44.3-144

Surrogate: 1-Chlorooctadecane 132 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S16- 1' (H002305-59)**

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	09/02/2020	ND	1.90	94.8	2.00	7.17		
Toluene*	<0.050	0.050	09/02/2020	ND	1.92	96.0	2.00	6.59		
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.91	95.6	2.00	6.32		
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.87	97.9	6.00	6.24		
Total BTEx	<0.300	0.300	09/02/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	448	16.0	09/02/2020	ND	416	104	400	0.00		

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	09/02/2020	ND	194	96.8	200	1.21	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	203	101	200	0.0513	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 126 % 44.3-144

Surrogate: 1-Chlorooctadecane 134 % 42.2-156

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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S16- 2' (H002305-60)**

BTX 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	09/02/2020	ND	1.90	94.8	2.00	7.17	
Toluene*	<0.050	0.050	09/02/2020	ND	1.92	96.0	2.00	6.59	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.91	95.6	2.00	6.32	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.87	97.9	6.00	6.24	
Total BTX	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/02/2020	ND	416	104	400	0.00	

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	09/02/2020	ND	194	96.8	200	1.21	
DRO >C10-C28*	<10.0	10.0	09/02/2020	ND	203	101	200	0.0513	
EXT DRO >C28-C36	<10.0	10.0	09/02/2020	ND					

Surrogate: 1-Chlorooctane 128 % 44.3-144

Surrogate: 1-Chlorooctadecane 137 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/01/2020  
Reported: 09/03/2020  
Project Name: ARCTURUS 18 FED 5H  
Project Number: 46  
Project Location: DEVON - EDDY CO NM

Sampling Date: 08/31/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S16- 3' (H002305-61)**

BTX 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	09/02/2020	ND	1.90	94.8	2.00	7.17	
Toluene*	<0.050	0.050	09/02/2020	ND	1.92	96.0	2.00	6.59	
Ethylbenzene*	<0.050	0.050	09/02/2020	ND	1.91	95.6	2.00	6.32	
Total Xylenes*	<0.150	0.150	09/02/2020	ND	5.87	97.9	6.00	6.24	
Total BTX	<0.300	0.300	09/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	09/02/2020	ND	416	104	400	0.00	

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	09/01/2020	ND	174	86.9	200	3.71	
DRO >C10-C28*	<10.0	10.0	09/01/2020	ND	177	88.6	200	3.40	
EXT DRO >C28-C36	<10.0	10.0	09/01/2020	ND					

Surrogate: 1-Chlorooctane 134 % 44.3-144

Surrogate: 1-Chlorooctadecane 142 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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### 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.
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

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <b>Pima Environmental</b>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>	
Project Manager: <b>Chris Jones</b>		P.O. #: <b>20869482</b>			
Address: <b>1601 N. Turner Ste 500</b>		Company: <b>Devon</b>			
City: <b>Hobbs</b>		Attn: <b>Tom Bynum</b>			
Phone #: <b>575-631-6977</b> Fax #:		Address:			
Project #: <b>46</b> Project Owner: <b>Devon</b>		City:			
Project Name: <b>Arcturus 18 FED SH</b>		State: Zip:			
Project Location: <b>EDDY County</b>		Phone #:			
Sampler Name: <b>Mark Newcomb</b>		Fax #:			

FOR LAB USE ONLY	Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING	DATE	TIME	TPH	EXT	BTEX	Chloride
	HD02304	51-0-6"	C	1	GROUNDWATER			8/31/20		+			
	1	52-0-6"			WASTEWATER					+			
	2	52-0-6"			SOIL					+			
	3	52-0-6"			OIL					+			
	4	52-0-6"			SLUDGE					+			
	5	52-0-6"			OTHER:					+			
	6	52-0-6"			ACID/BASE:					+			
	7	52-0-6"			ICE / COOL					+			
	8	52-0-6"			OTHER:					+			
	9	53-0-6"								+			
	10	53-0-6"								+			

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Relinquished By:	Date: <b>8/11/20</b>	Received By: <b>Bill TD Devon</b>	Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:
Relinquished By:	Date:	Received By:	All Results are emailed. Please provide Email address:
Delivered By: (Circle One)	Observed Temp. °C: <b>-3.9</b>	Sample Condition: <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Cool <input type="checkbox"/> Yes <input type="checkbox"/> No	Turnaround Time: <b>Standard</b> <input type="checkbox"/> Rush <input type="checkbox"/> Bacteria (only) <input type="checkbox"/> Sample Condition <input type="checkbox"/> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No
Sampler - UPS - Bus - Other:	Corrected Temp. °C:	CHECKED BY: <b>[Signature]</b>	Thermometer ID #113 <input type="checkbox"/> Correction Factor None <input type="checkbox"/> Observed Temp. °C: <b>-3.9</b>

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





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(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <b>Pima Environmental</b>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>	
Project Manager: <b>Chris Jones</b>		P.O. #: <b>20869482</b>			
Address: <b>1601 N. Turner St</b>		Company: <b>Devon</b>			
City: <b>Hobbs</b>		Attn: <b>Tom Bynum</b>			
Phone #: <b>575-631-6977</b>		Address:			
Project #: <b>46</b>		City:			
Project Name: <b>Arcturus 18 Fed SH</b>		State:			
Project Location: <b>Eddy County</b>		Zip:			
Sample Name: <b>Mark Newcomb</b>		Phone #:			
Fax #:					

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING	DATE	TIME	TPH EXT	BTEX	Chloride
<b>HD02304</b>											
11	54-1'	C					8/31/20				
12	54-2'										
13	54-3'										
14	55-0-6"										
15	55-1'										
16	55-2'										
17	55-3'										
18	56-0-6"										
19	56-1'										
20	56-2'										

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising from this report shall be limited to the amount paid by the client for the service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: <b>9/1/20</b>	Received By:	Date: <b>8/31/20</b>
Relinquished By:	Date:	Received By:	Date:
Time:		Time:	

Delivered By: (Circle One) **Observed Temp. °C - 3.9**

Sampler - UPS - Bus - Other: **Corrected Temp. °C**

Sample Condition: ☒ Intact ☐ Broken

Thermometer ID #113

Turnaround Time: **Standard** ☐ Rush ☐

Bacteria (only) ☐ Sample Condition ☐

Corrected Temp. °C

REMARKS: **Bill to Devon**

Verbal Result: ☐ Yes ☐ No ☐ Add'l Phone #:

All Results are emailed. Please provide Email address:





**BILL TO**

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**BILL TO**

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Released to Imaging: 12/9/2022 7:18:34 AM



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

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <b>Pfuna Environmental</b>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>	
Project Manager: <b>Chris Jones</b>		P.O. #: <b>20869482</b>			
Address: <b>1601 N. Turner Ste 500</b>		Company: <b>Devon</b>			
City: <b>Hobbs</b> State: <b>Nm</b> zip: <b>88240</b>		Attn: <b>Tina Bynum</b>			
Phone #: <b>575-631-6977</b> Fax #:		Address:			
Project #: <b>46</b> Project Owner: <b>Devon</b>		City:			
Project Name: <b>Arcturus 18 Fed SH</b>		State:			
Project Location: <b>Eddy County</b>		Zip:			
Sample Name: <b>Mark Newcombs</b>		Phone #:			
FOR LAB USE ONLY		Fax #:			
Lab I.D.		Sample I.D.			
<b>H002304</b> <b>51</b> 514-1' <b>52</b> 514-2' <b>53</b> 514-3' <b>54</b> 515-0-6" <b>55</b> 515-1' <b>56</b> 515-2' <b>57</b> 515-3' <b>58</b> 516-0-6" <b>59</b> 516-1' <b>60</b> 516-2'		(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER:		DATE TIME	
		MATRIX PRESERV SAMPLING		TPH EXT BTEX Chloride	
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.					
Relinquished By:		Received By:		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:	
Time: <b>8:12</b>		Time: <b>8:12</b>		All Results are emailed. Please provide Email address:	
Date: <b>8/31/20</b>		Date: <b>8/31/20</b>			
Relinquished By:		Received By:		REMARKS:	
Time:		Time:		<b>Bill to Devon</b>	
Delivered By: (Circle One)		Observed Temp. °C: <b>-3.9</b>		Turnaround Time: <b>Standard</b> <input type="checkbox"/> <b>Rush</b> <input type="checkbox"/>	
Sampler - UPS - Bus - Other:		Corrected Temp. °C:		Bacteria (only) Sample Condition	
				Cool Intact <input type="checkbox"/> Observed Temp. °C	
				Thermometer ID #113 <input type="checkbox"/> Corrected Temp. °C	
				Correction Factor None <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/>	

† Cardinal cannot accept verbal changes. Please email changes to [celey.keene@cardinallabsnm.com](mailto:celey.keene@cardinallabsnm.com)





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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

**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 164708

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 164708
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	The site must meet the requirements in 19.15.29.13 NMAC at time of plugging and abandonment.	12/9/2022