

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 Department

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

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party: BPX Energy	OGRID: 778	Initial/Final Report
Contact Name: Steve Moskal	Contact Telephone: (505) 330-9179	
Contact email: steven.moskal@bpx.com	Incident # (assigned by OCD)	NC18 33832851
Contact mailing address: 1199 Main Ave. Suite 101, Durango CO, 81301		

### Location of Release Source

Latitude: 36.850052° Longitude: -107.630781°  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: NORTHEAST BLANCO UNIT #409A	Site Type: Salt Water Disposal Well
Date Release Discovered: November 19, 2018	API#: 30-045-27340

Unit Letter	Section	Township	Range	County
N	36	T31N	R08W	San Juan

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name: \_\_\_\_\_)

NMOC

NOV 28 2018

DISTRICT III

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls): <u>55 bbls</u>	Volume Recovered (bbls): <u>25 bbls</u>
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls):	Volume Recovered (bbls):
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:

Failure of a 1" steel nipple on suction side of injection pump. All water released remained on pad and in secondary containment berms. The water had been filtered prior to entering the suction line of the pump.

28


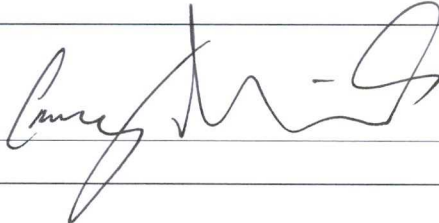
State of New Mexico  
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?   
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?  Cory Smith with the NMOCD was contacted by Jeff Blagg in person at the NEBU 409A during a sampling event.	

**Initial Response**

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:  Approximately 25 bbls of water was recovered via vac truck.	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
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: <u>Steve Moskal</u>	Title: <u>Environmental Coordinator</u>
Signature: 	Date: <u>November 27, 2018</u>
email: <u>steven.moskal@bpx.com</u>	Telephone: <u>(505) 330-9179</u>
<b>OCD Only</b> Received by: 	
Date: <u>12/4/18</u>	

Incident ID	
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>500</u> (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 (Non-Applicable; surficial water release with no further action based on lab results)
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

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



State of New Mexico  
Oil Conservation Division

Incident ID	
District RP	
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: Steve Moskal Title: Environmental Coordinator

Signature:  Date: November 27, 2018

email: steven.moskal@bpx.com Telephone: (505) 330-9179

**OCD Only**

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



Incident ID	
District RP	
Facility ID	
Application ID	

## Remediation Plan

**Remediation Plan Checklist:** *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only:** *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

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

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	
District RP	
Facility ID	
Application ID	

## Closure

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

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

- ☒ 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: Steve Moskal Title: Environmental Coordinator

Signature:  Date: November 27, 2018

email: steven.moskal@bpx.com Telephone: (505) 330-9179

**OCD Only**

Received by: OCD

Date: 11/28/18

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: 12/4/18

Printed Name: Cory Title: Environmental Spec.

## **Figures & Depth To Water Information**



# Pump Mesa SWD 1

Spill Sampling  
Nov 19, 2018

Pump Mesa SWD 1

Source Area 5-pt Composite Zone

Release Surface Footprint

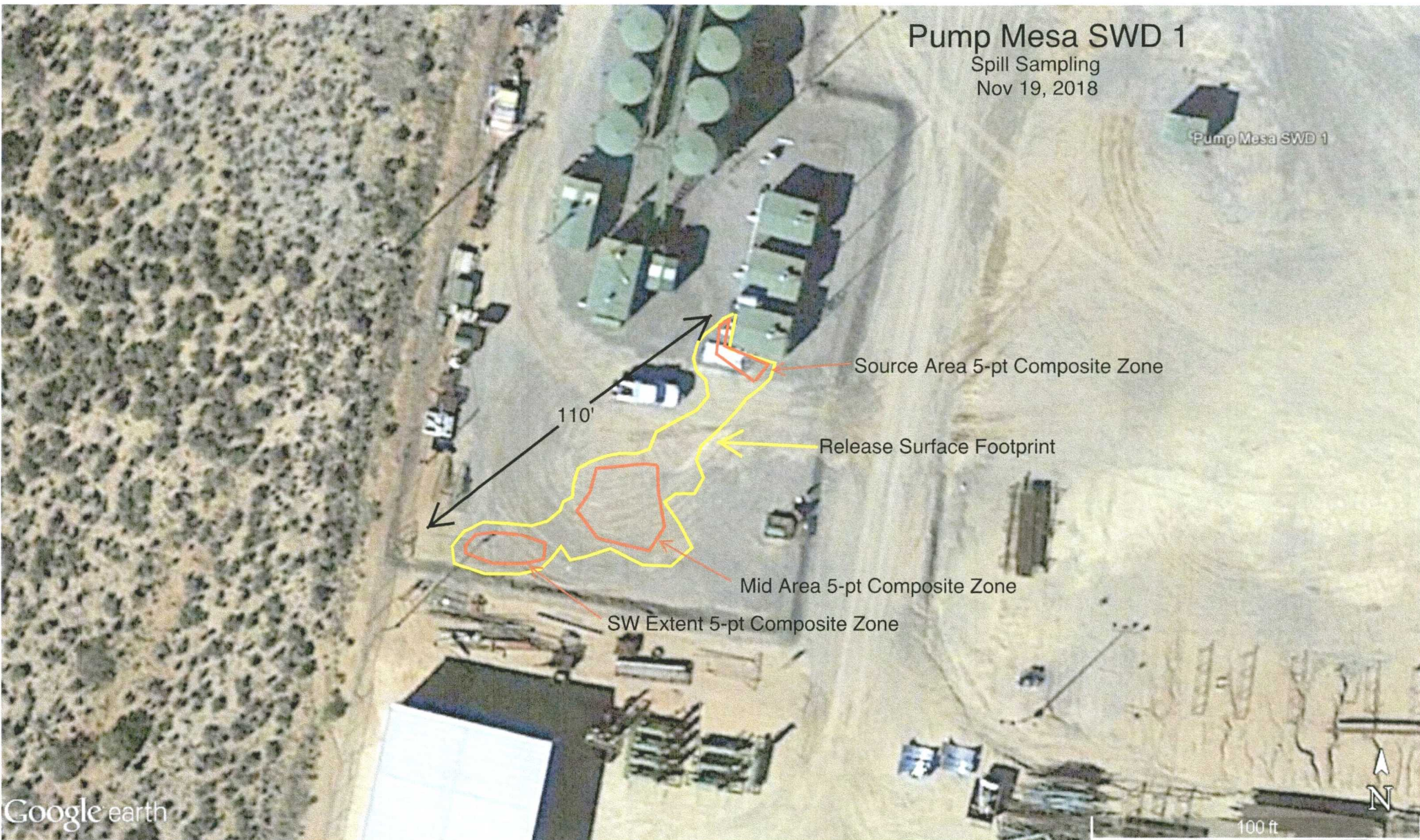
Mid Area 5-pt Composite Zone

SW Extent 5-pt Composite Zone

110'

N

100 ft





# NEBU PUMP MESA SWD 001

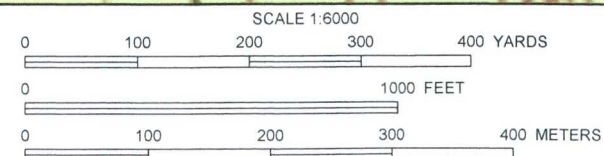
1,000 ft. radius  
from POR

Point of Release (POR)  
GPS Coordinates:  
36.850028, -107.630765  
Ground Level Elevation: 6,868 ft.

300 ft. radius  
from POR

Surface gradient  
direction: SW

**Proximity to Watercourses**





(N) Section 36, T31N, R8W  
API #: 3004527340

MESA SWD 001

Imagery date: 10/5/2016

Point of Release (POR) GPS Coord.: 36.850028,-107.630765

300 ft. radius  
from POR

POR

511

Google Earth

© Google





# Depth to Water

Surface Elevation at Release Point 6,435'

## Legend

- 7,266 Feet
- NEBU Pump Mesa SWD 001 Release Point
- SJ 03306 - Elev. 6,447 - DTW 500'



Google Earth

© 2018 Google

4000 ft

N





# New Mexico Office of the State Engineer

## Wells Without Well Log Information

(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)

POD Number	POD		County	Source	q q q			Sec	Tws	Rng	X	Y	Distance
	Code	Subbasin			64	16	4						
<a href="#">SJ 02094</a>		SJM2	SJ		1	3	1	03	30N	11W	264310	4080788	1320
<a href="#">SJ 00614</a>		SJ	SJ		3	3	25	31N	08W		265228	4082969*	1514
<a href="#">SJ 00615</a>		SJ	SJ		3	4	25	31N	08W		266023	4082942*	1583
<a href="#">SJ 01818</a>		SJ	SJ		3	4	25	31N	08W		266023	4082942*	1583
<a href="#">SJ 02029</a>		SJ	SJ		1	1	3	25	31N	08W	265134	4083462*	2016
<a href="#">SJ 01812</a>		SJ	SJ					25	31N	08W	265831	4083572*	2138
<a href="#">SD 06419</a>		SJPR	SJ		1	4	06	30N	07W		267239	4080285*	2152
<a href="#">SJ 01011</a>		SJ	SJ		3	3	24	31N	08W		265257	4084545*	3081

Record Count: 8

### UTMNAD83 Radius Search (in meters):

Easting (X): 265441.31

Northing (Y): 4081469.25

Radius: 3200

\*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.



---

## *New Mexico Office of the State Engineer* **Point of Diversion with Meter Attached**

---

No PODs found.

**UTMNAD83 Radius Search (in meters):**

**Easting (X):** 265441.31

**Northing (Y):** 4081469.25

**Radius:** 3200





## New Mexico Office of the State Engineer Wells with Well Log Information

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

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

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

(NAD83 UTM in meters)

(in feet)

POD Number	POD Sub-Code	basin	County	Source	q	q	q	Sec	Tws	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
<a href="#">SJ 03306</a>	SJ	SJ	Shallow	4	4	1	25	31N	08W		265739	4083645*	2196	11/03/2003	11/17/2003	11/26/2003	600	500	MARK BAILEY	1357
<a href="#">SJ 01822</a>	SJ	SJ	Shallow	2	2	2	25	31N	08W		266540	4084216*	2958	10/25/1996	10/26/1996	01/10/1997	550	500	HARGIS, JOHN C.	724
<a href="#">SJ 01167</a>	SJ	SJ	Shallow	3	4	4	24	31N	08W		266352	4084410*	3078	02/21/1981	02/28/1981	03/03/1981	465	390	JOHN MATTICS	777

Record Count: 3

### UTMNA83 Radius Search (in meters):

Easting (X): 265441.31

Northing (Y): 4081469.25

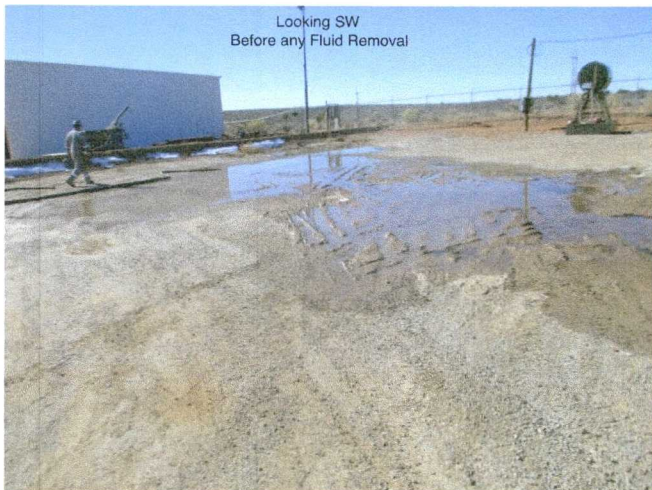
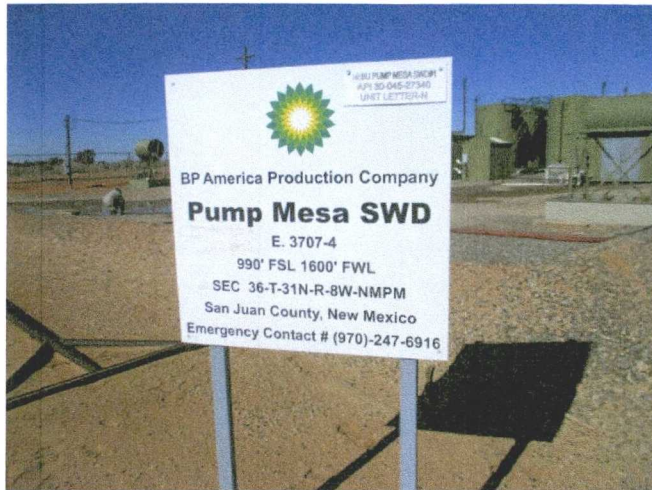
Radius: 3200

\*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.

# Photographic Log







# Laboratory Report

## Analytical Report

### Report Summary

Client: BP America Production Co.

Chain Of Custody Number:

Samples Received: 11/19/2018 3:07:00PM

Job Number: 03143-0424

Work Order: P811057

Project Name/Location: Pump Mesa SWD

Report Reviewed By:



Date: 11/26/18

Walter Hinchman, Laboratory Director



Date: 11/26/18

Tim Cain, Project Manager



Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.  
Statement of Data Authenticity: Envirotech, Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.  
Envirotech, Inc. currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

BP America Production Co.  
PO Box 22024  
Tulsa OK, 74121-2024

Project Name: Pump Mesa SWD  
Project Number: 03143-0424  
Project Manager: Steve Moskal

**Reported:**  
11/26/18 15:38

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Source Area 5-Pt	P811057-01A	Soil	11/19/18	11/19/18	Glass Jar, 4 oz.
Mid Area 5-Pt	P811057-02A	Soil	11/19/18	11/19/18	Glass Jar, 4 oz.
SW Extent 5-Pt	P811057-03A	Soil	11/19/18	11/19/18	Glass Jar, 4 oz.

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

BP America Production Co.  
 PO Box 22024  
 Tulsa OK, 74121-2024

 Project Name: Pump Mesa SWD  
 Project Number: 03143-0424  
 Project Manager: Steve Moskal

**Reported:**  
 11/26/18 15:38

**Source Area 5-Pt**  
**P811057-01 (Solid)**

Analyte	Reporting							
	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
<b>Volatile Organics by EPA 8021</b>								
Benzene	ND	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B
Toluene	ND	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B
Ethylbenzene	ND	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B
p,m-Xylene	<b>381</b>	200	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B
o-Xylene	<b>103</b>	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B
Total Xylenes	<b>484</b>	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B
Total BTEX	<b>484</b>	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		99.3 %		50-150	1847017	11/20/18	11/21/18	EPA 8021B
<b>Nonhalogenated Organics by 8015</b>								
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1847017	11/20/18	11/21/18	EPA 8015D
Diesel Range Organics (C10-C28)	<b>494</b>	25.0	mg/kg	1	1847016	11/20/18	11/20/18	EPA 8015D
Oil Range Organics (C28-C40+)	<b>1260</b>	50.0	mg/kg	1	1847016	11/20/18	11/20/18	EPA 8015D
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		104 %		50-150	1847017	11/20/18	11/21/18	EPA 8015D
<i>Surrogate: n-Nonane</i>		93.1 %		50-200	1847016	11/20/18	11/20/18	EPA 8015D
<b>Anions by 300.0/9056A</b>								
Chloride	<b>364</b>	20.0	mg/kg	1	1847012	11/20/18	11/20/18	EPA 300.0/9056A

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.



BP America Production Co.  
 PO Box 22024  
 Tulsa OK, 74121-2024

 Project Name: Pump Mesa SWD  
 Project Number: 03143-0424  
 Project Manager: Steve Moskal

**Reported:**  
 11/26/18 15:38

**Mid Area 5-Pt  
 P811057-02 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		99.9 %	50-150		1847017	11/20/18	11/21/18	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1847017	11/20/18	11/21/18	EPA 8015D	
Diesel Range Organics (C10-C28)	440	25.0	mg/kg	1	1847016	11/20/18	11/21/18	EPA 8015D	
Oil Range Organics (C28-C40+)	461	50.0	mg/kg	1	1847016	11/20/18	11/21/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		104 %	50-150		1847017	11/20/18	11/21/18	EPA 8015D	
Surrogate: n-Nonane		90.4 %	50-200		1847016	11/20/18	11/21/18	EPA 8015D	
<b>Anions by 300.0/9056A</b>									
Chloride	776	20.0	mg/kg	1	1847012	11/20/18	11/20/18	EPA 300.0/9056A	

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

BP America Production Co.  
 PO Box 22024  
 Tulsa OK, 74121-2024

 Project Name: Pump Mesa SWD  
 Project Number: 03143-0424  
 Project Manager: Steve Moskal

**Reported:**  
 11/26/18 15:38

**SW Extent 5-Pt  
 P811057-03 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B	
p,m-Xylene	307	200	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B	
Total Xylenes	307	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B	
Total BTEX	307	100	ug/kg	1	1847017	11/20/18	11/21/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		99.6 %		50-150	1847017	11/20/18	11/21/18	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1847017	11/20/18	11/21/18	EPA 8015D	
Diesel Range Organics (C10-C28)	365	25.0	mg/kg	1	1847016	11/20/18	11/21/18	EPA 8015D	
Oil Range Organics (C28-C40+)	270	50.0	mg/kg	1	1847016	11/20/18	11/21/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		105 %		50-150	1847017	11/20/18	11/21/18	EPA 8015D	
Surrogate: n-Nonane		93.9 %		50-200	1847016	11/20/18	11/21/18	EPA 8015D	
<b>Anions by 300.0/9056A</b>									
Chloride	1020	20.0	mg/kg	1	1847012	11/20/18	11/20/18	EPA 300.0/9056A	

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.



BP America Production Co.  
 PO Box 22024  
 Tulsa OK, 74121-2024

 Project Name: Pump Mesa SWD  
 Project Number: 03143-0424  
 Project Manager: Steve Moskal

**Reported:**  
 11/26/18 15:38

**Volatile Organics by EPA 8021 - Quality Control**
**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 1847017 - Purge and Trap EPA 5030A**
**Blank (1847017-BLK1)**

Prepared: 11/20/18 0 Analyzed: 11/20/18 1

Benzene	ND	100	ug/kg							
Toluene	ND	100	"							
Ethylbenzene	ND	100	"							
p,m-Xylene	ND	200	"							
o-Xylene	ND	100	"							
Total Xylenes	ND	100	"							
Total BTEX	ND	100	"							
Surrogate: 4-Bromochlorobenzene-PID	7900		"	8000		98.8	50-150			

**LCS (1847017-BS1)**

Prepared: 11/20/18 0 Analyzed: 11/20/18 1

Benzene	5070	100	ug/kg	5000		101	70-130			
Toluene	5180	100	"	5000		104	70-130			
Ethylbenzene	5260	100	"	5000		105	70-130			
p,m-Xylene	10800	200	"	10000		108	70-130			
o-Xylene	5230	100	"	5000		105	70-130			
Total Xylenes	16000	100	"	15000		107	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7980		"	8000		99.8	50-150			

**Matrix Spike (1847017-MS1)**

Source: P811050-01

Prepared: 11/20/18 0 Analyzed: 11/21/18 0

Benzene	5370	100	ug/kg	5000	ND	107	54.3-133			
Toluene	5500	100	"	5000	ND	110	61.4-130			
Ethylbenzene	5600	100	"	5000	ND	112	61.4-133			
p,m-Xylene	11400	200	"	10000	ND	114	63.3-131			
o-Xylene	5520	100	"	5000	ND	110	63.3-131			
Total Xylenes	17000	100	"	15000	ND	113	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	8000		"	8000		100	50-150			

**Matrix Spike Dup (1847017-MSD1)**

Source: P811050-01

Prepared: 11/20/18 0 Analyzed: 11/20/18 2

Benzene	5270	100	ug/kg	5000	ND	105	54.3-133	1.89	20	
Toluene	5410	100	"	5000	ND	108	61.4-130	1.76	20	
Ethylbenzene	5510	100	"	5000	ND	110	61.4-133	1.54	20	
p,m-Xylene	11300	200	"	10000	ND	113	63.3-131	1.43	20	
o-Xylene	5470	100	"	5000	ND	109	63.3-131	0.982	20	
Total Xylenes	16800	100	"	15000	ND	112	63.3-131	1.28	20	
Surrogate: 4-Bromochlorobenzene-PID	8130		"	8000		102	50-150			

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

BP America Production Co.  
PO Box 22024  
Tulsa OK, 74121-2024

Project Name: Pump Mesa SWD  
Project Number: 03143-0424  
Project Manager: Steve Moskal

**Reported:**  
11/26/18 15:38

### Nonhalogenated Organics by 8015 - Quality Control

#### Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

#### Batch 1847016 - DRO Extraction EPA 3570

##### Blank (1847016-BLK1)

Prepared: 11/20/18 0 Analyzed: 11/20/18 1

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate: n-Nonane	45.6		"	50.0		91.2	50-200			

##### LCS (1847016-BS1)

Prepared: 11/20/18 0 Analyzed: 11/20/18 1

Diesel Range Organics (C10-C28)	456	25.0	mg/kg	500		91.2	38-132			
Surrogate: n-Nonane	43.1		"	50.0		86.3	50-200			

##### Matrix Spike (1847016-MS1)

Source: P811052-01

Prepared: 11/20/18 0 Analyzed: 11/21/18 1

Diesel Range Organics (C10-C28)	461	25.0	mg/kg	500	ND	92.1	38-132			
Surrogate: n-Nonane	41.3		"	50.0		82.5	50-200			

##### Matrix Spike Dup (1847016-MSD1)

Source: P811052-01

Prepared: 11/20/18 0 Analyzed: 11/20/18 1

Diesel Range Organics (C10-C28)	462	25.0	mg/kg	500	ND	92.5	38-132	0.361	20	
Surrogate: n-Nonane	40.3		"	50.0		80.6	50-200			

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.



BP America Production Co.  
 PO Box 22024  
 Tulsa OK, 74121-2024

 Project Name: Pump Mesa SWD  
 Project Number: 03143-0424  
 Project Manager: Steve Moskal

**Reported:**  
 11/26/18 15:38

**Nonhalogenated Organics by 8015 - Quality Control**
**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 1847017 - Purge and Trap EPA 5030A**
**Blank (1847017-BLK1)**

Prepared: 11/20/18 0 Analyzed: 11/20/18 1

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.45		"	8.00		106	50-150			

**LCS (1847017-BS2)**

Prepared: 11/20/18 0 Analyzed: 11/20/18 2

Gasoline Range Organics (C6-C10)	53.2	20.0	mg/kg	50.0		106	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.46		"	8.00		106	50-150			

**Matrix Spike (1847017-MS2)**

Source: P811050-01

Prepared: 11/20/18 0 Analyzed: 11/20/18 2

Gasoline Range Organics (C6-C10)	53.1	20.0	mg/kg	50.0	ND	106	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.37		"	8.00		105	50-150			

**Matrix Spike Dup (1847017-MSD2)**

Source: P811050-01

Prepared: 11/20/18 0 Analyzed: 11/20/18 2

Gasoline Range Organics (C6-C10)	45.0	20.0	mg/kg	50.0	ND	90.1	70-130	16.4	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.54		"	8.00		107	50-150			

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

BP America Production Co.  
 PO Box 22024  
 Tulsa OK, 74121-2024

 Project Name: Pump Mesa SWD  
 Project Number: 03143-0424  
 Project Manager: Steve Moskal

**Reported:**  
 11/26/18 15:38

**Anions by 300.0/9056A - Quality Control**
**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 1847012 - Anion Extraction EPA 300.0/9056A**
**Blank (1847012-BLK1)**

Prepared &amp; Analyzed: 11/19/18 1

Chloride ND 20.0 mg/kg

**LCS (1847012-BS1)**

Prepared &amp; Analyzed: 11/19/18 1

Chloride 255 20.0 mg/kg 250 102 90-110

**Matrix Spike (1847012-MS1)**
**Source: P811050-01**

Prepared &amp; Analyzed: 11/19/18 1

Chloride 333 20.0 mg/kg 250 73.8 104 80-120

**Matrix Spike Dup (1847012-MSD1)**
**Source: P811050-01**

Prepared &amp; Analyzed: 11/19/18 1

Chloride 332 20.0 mg/kg 250 73.8 103 80-120 0.457 20

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.



BP America Production Co.  
PO Box 22024  
Tulsa OK, 74121-2024

Project Name: Pump Mesa SWD  
Project Number: 03143-0424  
Project Manager: Steve Moskal

**Reported:**  
11/26/18 15:38

#### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
RPD Relative Percent Difference  
\*\* Methods marked with \*\* are non-accredited methods.

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

Client: BP AMERICA		Report Attention		Lab Use Only		TAT		EPA Program				
Project: PUMP MESA SWD		Report due by: STANDARD TAT		Lab WO# P811057		Job Number 03143-0424		1D 3D		RCRA	CWA	SDWA
Project Manager: STEVEN MOSKAL		Attention: STEVE MOSKAL / JEFF BLAGG										
Address:		Address:								State		
City, State, Zip		City, State, Zip								NM CO UT AZ		
Phone: (505) 330-9179		Phone: (505) 330-1183								X		
Email: STEVEN.MOSKAL@BPX.COM		Email: jefcblagg@aol.com										

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1	Remarks
1317	11/19/2018	SOIL	1	SOURCE AREA 5-pt	1	X	X	X			X		
1320	"	"	1	MID AREA 5-pt	2	X	X	X			X		
1323	"	"	1	SW EXTENT 5-pt	3	X	X	X			X		

Additional Instructions: Bu BP - P.O. to be generated

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Jeff Blagg						Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.					
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Lab Use Only			
Jeff Blagg		11/19/2018	1507	[Signature]		11/19/18	15:07	Received on ice: Y / N			
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	T1 T2 T3			
								AVG Temp °C 4			

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other  
 Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.