



Souder, Miller & Associates ♦ 201 S. Halagueno St. ♦ Carlsbad, NM 88220  
(575) 689-7040

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July 24, 2020

SMA #5E29133, BG28

NMOCD District 1  
1625 N. French Drive  
Hobbs, New Mexico 88240

**RE: LINER INSPECTION REPORT  
SALADO DRAW 6 FEDERAL #1H (NRM2018253989)**

To Whom it May Concern:

Souder, Miller & Associates (SMA) is pleased to submit this letter report on behalf of Devon Energy Production Company (Devon Energy) summarizing the liner inspection that occurred due to the Salado Draw 6 Federal #1H Tank Battery release. The site is located in Unit Letter M Section 6, Township 26S, Range 34E (N32.065401/W-103.514801) Lea County, New Mexico, on Federal land.

**Site Characterization**

On June 28, 2020, an overnight storm caused the power to fail which caused the water transfer pump not to operate. It was also found that a check valve in the water transfer pump was bad, which caused fluid to flow back into the tanks and the tanks to overflow. All released fluid stayed inside the lined secondary containment, resulting in the release of 650 bbls of produced water inside the lined secondary containment of the tank battery. Initial response activities were conducted by the operator and included source elimination and site stabilization, which recovered approximately 650 bbls of produced water. The tanks and containment were then pressure washed and the residual fluids recovered.

Based upon New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) well data, depth to groundwater in the area is estimated to be between 148 and 170 feet below grade surface (bgs). There are no water sources within ½-mile of the location, according to the NMOSE and USGS water well databases ([https://gis.ose.state.nm.us/gisapps/ose\\_pod\\_locations/](https://gis.ose.state.nm.us/gisapps/ose_pod_locations/); accessed July 16, 2020; Appendix C). The nearest significant watercourse is an unnamed playa located approximately 2,824 feet to the southwest.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of >100 feet bgs.

**Liner Integrity**

At the request of Devon Energy, SMA conducted a liner integrity inspection per the requirements of 19.15.29.11.A(5)(a) NMAC. NMOCD was notified on July 14, 2020 that the liner inspection was to occur. After a thorough visual inspection of the liner within the tank battery containment, the liner appeared to be intact and had the ability to contain the leak in question. The tank from which the release occurred was identified, and SMA verified that the release did not occur outside of the lined containment. A photo log and field notes of the inspection is included in Appendix A.

Devon Energy Production Company  
Salado Draw 6 Federal #1H (NRM2018253989)

5E29133 BG28

SMA recommends no further action for this release.

Souder, Miller and Associates appreciates the opportunity to provide environmental services to you. If you have any questions or comments concerning this report, please feel free to call Lynn A. Acosta at 505-516-7469.

Sincerely,  
Souder, Miller & Associates



Lynn A. Acosta  
Staff Geoscientist

Shawna Chubbuck  
Senior Scientist

## Figures

Figure 1: Site Map  
Figure 1A: NMOSE Depth to Groundwater  
Figure 1B: Potentiometric Surface Map  
Figure 2: Surface Water Protection Map

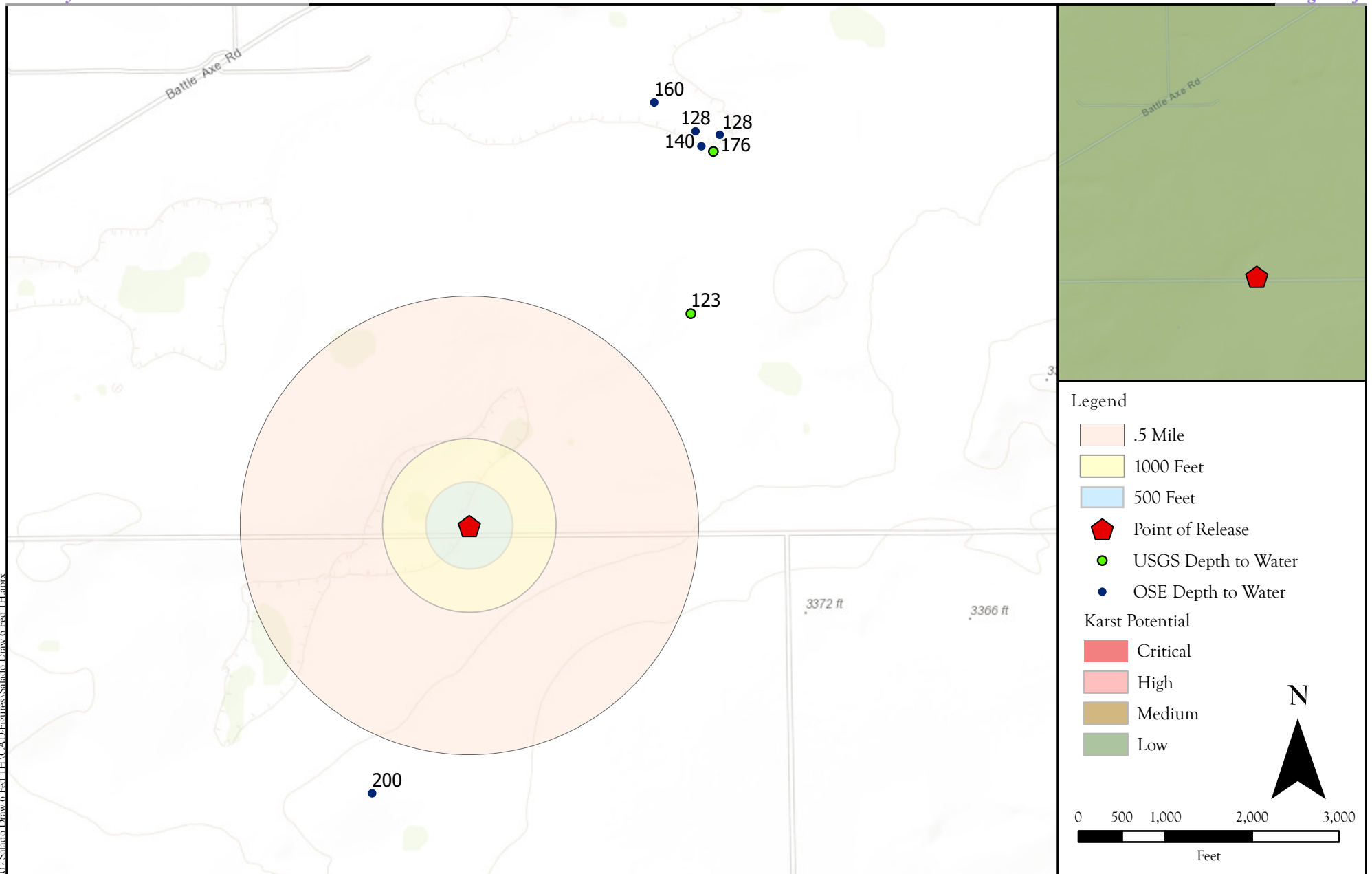
## Appendices

Appendix A: Photo Log & Field Notes  
Appendix B: C141  
Appendix C: Water Well Data

Devon Energy Production Company  
Salado Draw 6 Federal #1H (NRM2018253989)

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## FIGURES



Site Map  
 Salado Draw 6 Fed #001H- Devon Energy Production Company  
 UL: M S: 06 T: 26S R: 34E, Lea County, New Mexico

Figure 1

P:\5 Devon MSA 2020\5E29133\1\FIG20 - Salado Draw 6 Fed 1\H\CAD\Figures\Salado Draw 6 Fed 1\H.mxd  
 Date Saved:  
 6/16/2020

Revisions  
 By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
 By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_

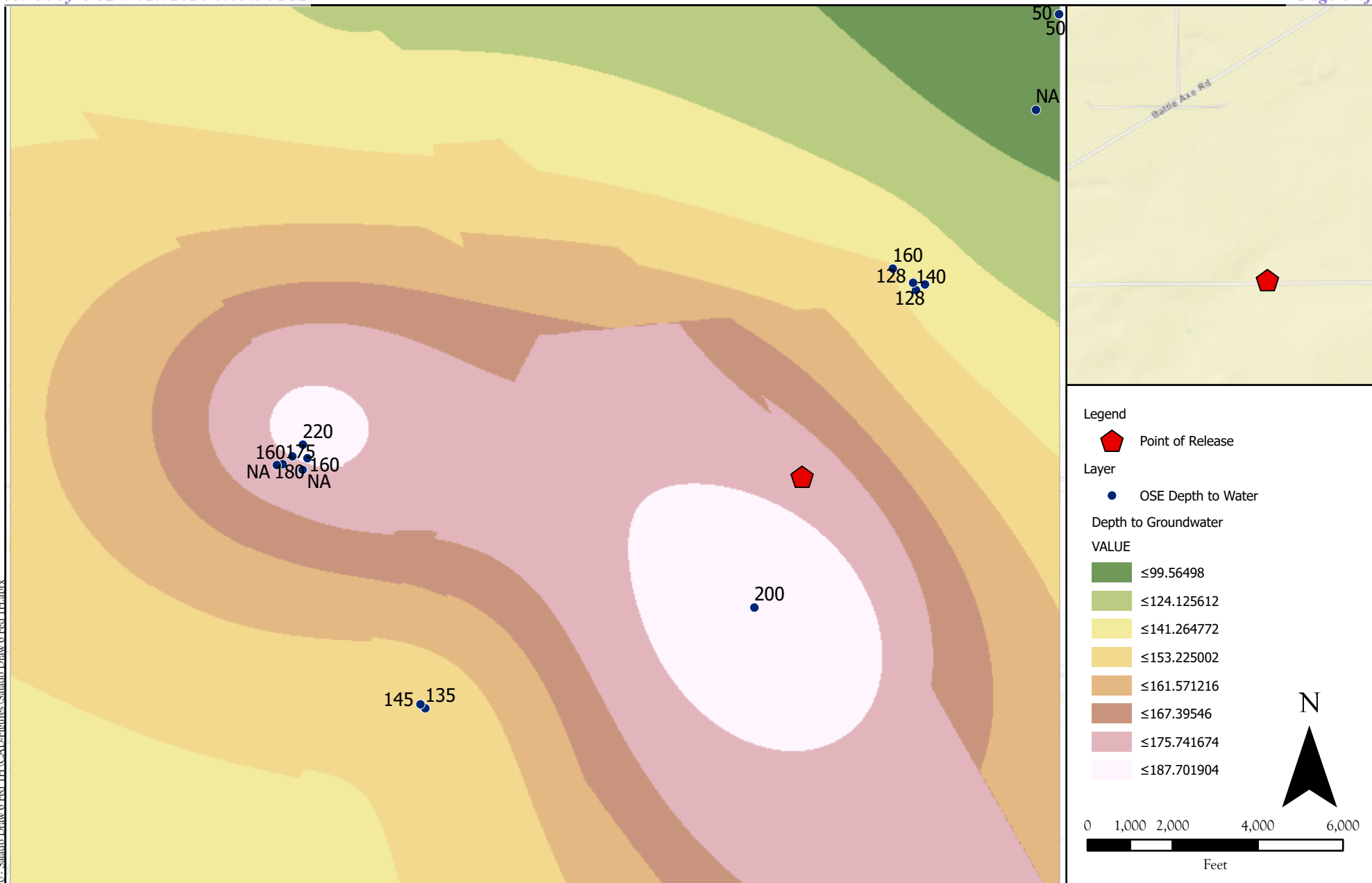
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Drawn  
 Date  
 Checked  
 Approved

Lynn A. Acosta  
 6/16/2020  
 \_\_\_\_\_  
 \_\_\_\_\_



201 South Halaguena Street  
 Carlsbad, New Mexico 88221  
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## Site Map

Salado Draw 6 Fed #001H- Devon Energy Production Company  
 UL: M S: 06 T: 26S R: 34E, Lea County, New Mexico

Figure 1A

## Revisions

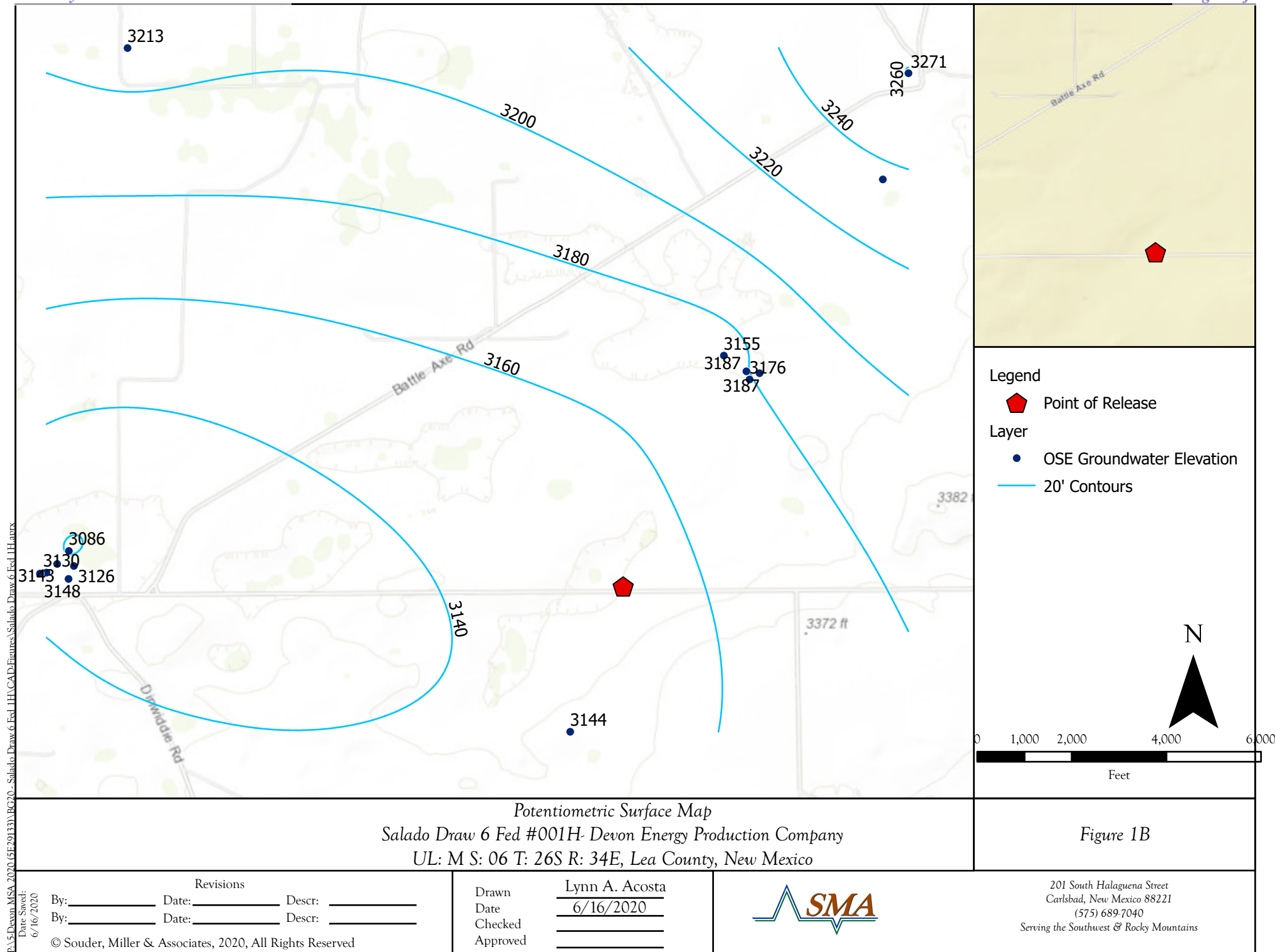
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 By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_

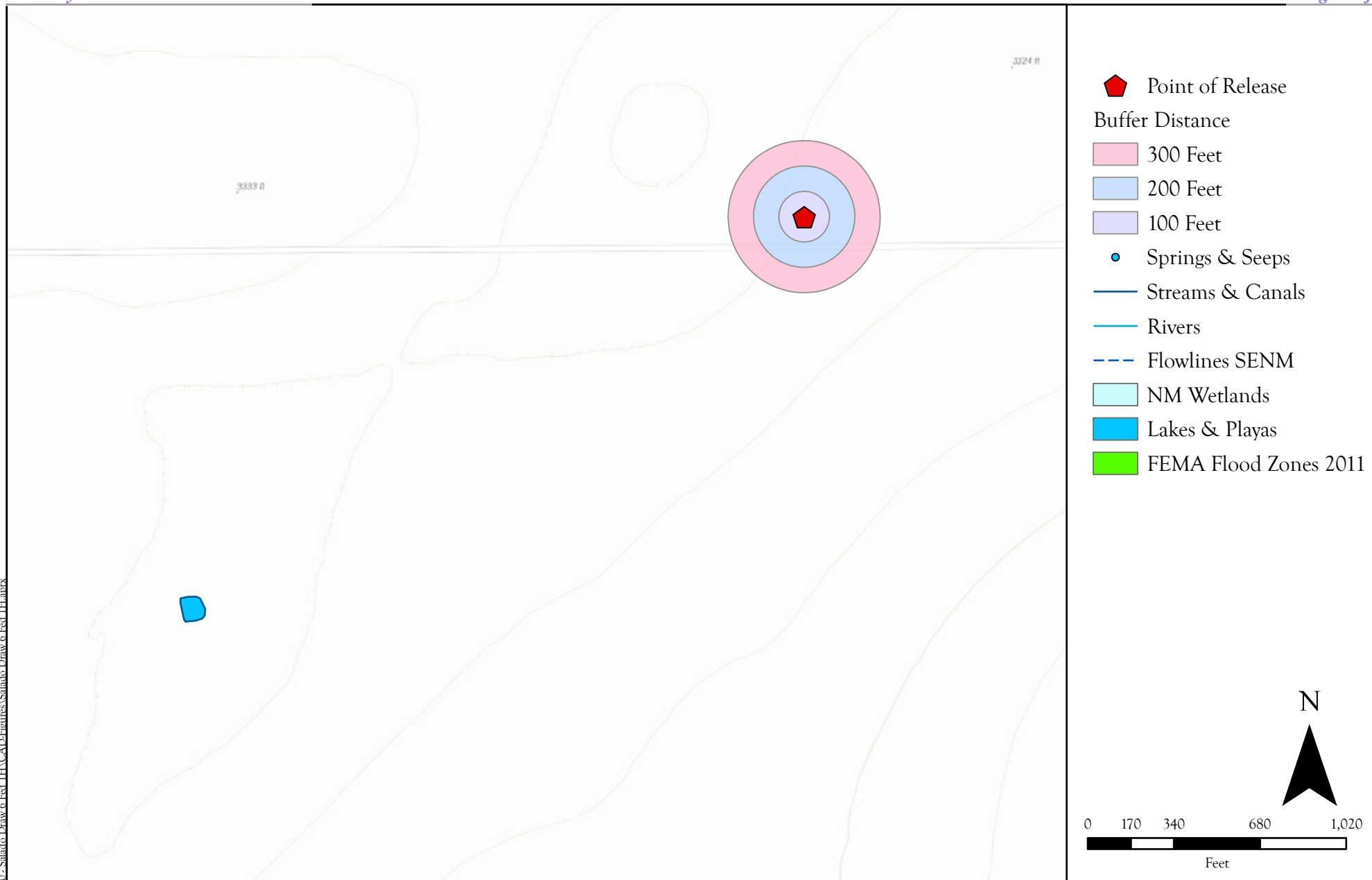
Drawn  
 Date  
 Checked  
 Approved

Lynn A. Acosta  
 6/16/2020



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Surface Water Protection Map  
 Salado Draw 6 Fed #001H- Devon Energy Production Company  
 UL: M S: 06 T: 26S R: 34E Lea County, New Mexico

Figure 2

## Revisions

By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
 By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_

Drawn \_\_\_\_\_  
 Date 7/8/2020  
 Checked \_\_\_\_\_  
 Approved \_\_\_\_\_



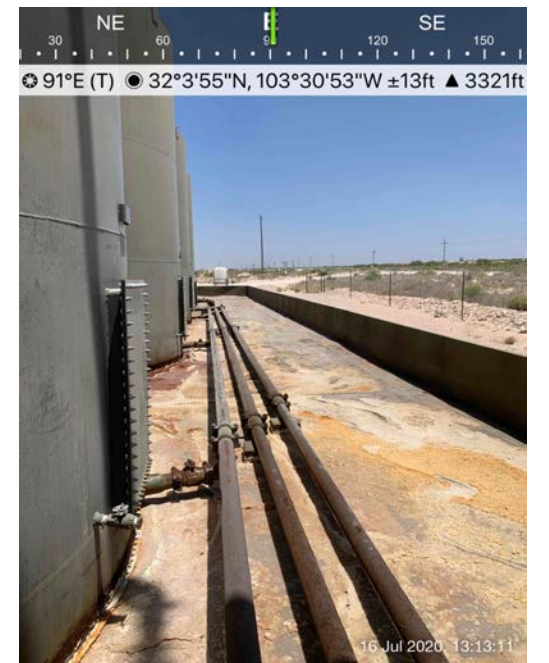
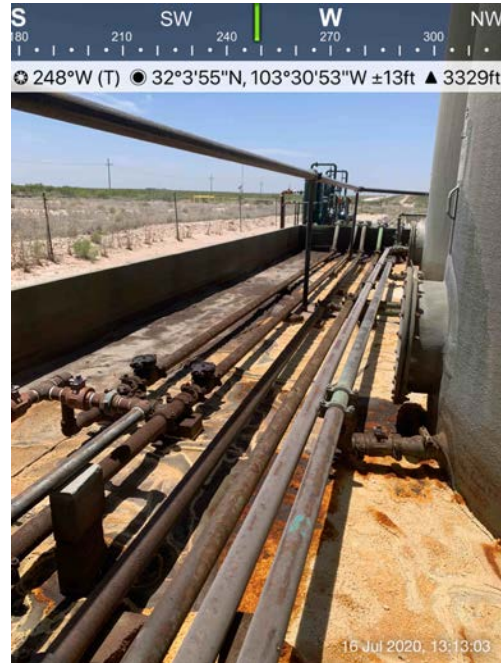
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**Appendix A**  
**PHOTO LOG & FIELD NOTES**





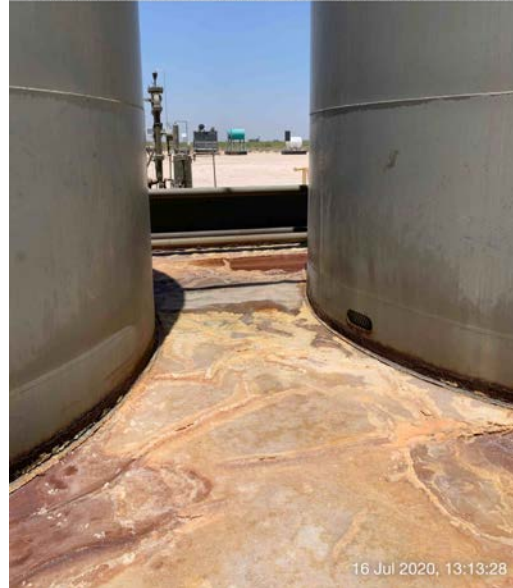


27°NE (T) 32°3'55"N, 103°30'53"W ±13ft 3322ft



16 Jul 2020, 13:13:21

6°N (T) 32°3'55"N, 103°30'52"W ±13ft 3323ft



16 Jul 2020, 13:13:28

91°E (T) 32°3'55"N, 103°30'52"W ±13ft 3323ft



16 Jul 2020, 13:13:35

24°NE (T) 32°3'55"N, 103°30'52"W ±13ft 3323ft



16 Jul 2020, 13:13:37

55°NE (T) 32°3'55"N, 103°30'52"W ±13ft 3320ft



16 Jul 2020, 13:13:44

216°SW (T) 32°3'55"N, 103°30'52"W ±13ft 3323ft



16 Jul 2020, 13:14:10

**Souder, Miller & Associates  
Liner Inspection Form**Project Name: SaladoInspection Date: 7/16/2020Client Name: Devon

Client Representative(s): \_\_\_\_\_

SMA Inspector(s): Alicia A. Lopez / Sebastian O.

Project Location: \_\_\_\_\_

Latitude: 32.065401 Longitude: -103.514801NRM2018253989**Inspection Parameters as Outlined in 19.15.29.11.A(5) NMAC****PRIOR TO INSPECTION:**

Two (2) Business Day Notification of Inspection to Appropriate Division Office

(Y/N): YDate of Notice: 7/14/20

Material Covering Liner Removed by Client

(Y/N): N

Affected Areas Exposed by Client

(Y/N): Y**INSPECTION:**

Liner Thoroughly Inspected for Damage

(Y/N): YAll Damaged Areas Observed Marked in **White Paint** on Liner

Photos and Field Notes Detailing Failures Attached to This Form

**To Be Completed by Client Representative:**

Can Responsible Party Demonstrate:

Liner Integrity Was Maintained (per SMA Inspection)

(Y/N): Y

Release Was Contained to Lined Containment Area

(Y/N): Y

Liner Was Able to Contain the Leak

(Y/N): Y

If YES:

Certify on Form C-141 That Liner Remains Intact

If NO to Any of Above:

Responsible Party Must Delineate Horizontal &amp; Vertical Extent

Depending on Release:

See Table 1 19.15.29.12 NMAC

See Subparagraph (e) Paragraph (5) of Subsection A 19.15.29.11 NMAC

**Additional Comments:****SMA INSPECTOR SIGNATURE**  
Date: 7/16/2020**CLIENT REPRESENTATIVE**  
Date: 7/16/20

Devon Energy Production Company  
Salado Draw 6 Federal #1H (NRM2018253989)

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**APPENDIX B  
C141**

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	NRM2018253989
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party Devon Energy Production Company	OGRID 6137
Contact Name Amanda T. Davis	Contact Telephone 575-748-0176
Contact email amanda.davis@divn.com	Incident # (assigned by OCD)
Contact mailing address 6488 Seven Rivers HWY	

### Location of Release Source

Latitude 32.065401 Longitude -103.514801  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Salado Draw 6 Federal #1H	Site Type Oil
Date Release Discovered 6/28/2020	API# (if applicable) 30-025-41293

Unit Letter	Section	Township	Range	County
M	6	26S	34E	Lea

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

### 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) 650	Volume Recovered (bbls) 650
	Is the concentration of total dissolved solids (TDS) 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 Overnight a storm caused the power to fail which caused the water transfer pump not to operate. It was also found that a check valve in the water transfer pump was bad, which caused fluid to flow back into the tanks and the tanks to overflow. All released fluid stayed inside the lined secondary containment, and all fluid was recovered. GPS coordinates above are of the release source, GPS coordinates of the specific well are 32.06570, -103.51470.



Incident ID	NRM2018253989
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? <b>This release was more than 25 bbls.</b>
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? <b>An email was sent by Tom Bynum on 6/28/20 @ 8:22 p.m. to Lea County Spills, BLM Spills, R. Mann, and B. Boone.</b>	

### 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:          	
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: <b>Kendra DeHoyos</b>	Title: <b>EHS Associate</b>
Signature: <u>Kendra DeHoyos</u>	Date: _____
email: <b>kendra.dehoyos@dvn.com</b>	Telephone: <b>575-748-3371</b>
<b><u>OCD Only</u></b>	
Received by: <u>Ramona Marcus</u>	Date: <u>6/30/2020</u>

Incident ID	NRM2018253989
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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>148-170</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
- ☒ 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.

Incident ID	NRM2018253989
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: \_\_\_\_\_ Lupe Carrasco \_\_\_\_\_ Title: \_\_\_\_\_ EHS Professional \_\_\_\_\_

Signature: \_\_\_\_\_ *Lupe Carrasco* \_\_\_\_\_ Date: \_\_\_\_\_ 7/29/20 \_\_\_\_\_

email: \_\_\_\_\_ Lupe.Carrasco@dm.com \_\_\_\_\_ Telephone: \_\_\_\_\_ 575-7480165 \_\_\_\_\_

**OCD Only**

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



Incident ID	NRM2018253989
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: Lupe Carrasco Title: EHS Professional

Signature: Lupe Carrasco Date: 7/29/20

email: Lupe.Carrasco@dvn.com Telephone: 575-748-0165

### 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: \_\_\_\_\_

NRM2018253989

Spills In Lined Containment	
Measurements Of Standing Fluid	
Length(Ft)	135
Width(Ft)	30
Depth(in.)	15
Total Capacity without tank displacements (bbls)	901.67
No. of 500 bbl Tanks In Standing Fluid	6
No. of Other Tanks In Standing Fluid	
OD Of Other Tanks In Standing Fluid(feet)	
Total Volume of standing fluid accounting for tank displacement.	649.74

Devon Energy Production Company  
Salado Draw 6 Federal #1H (NRM2018253989)

5E29133 BG28

## **APPENDIX C WATER WELL DATA**



## 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	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
<a href="#">C 02295</a>		CUB	LE	2	2	4	12	26S	33E	639865	3547624	1074	250	200	50
<a href="#">C 02292 POD1</a>		CUB	LE	4	1	2	06	26S	34E	640992	3549987	1561	200	140	60
<a href="#">C 03441 POD1</a>		C	LE	4	1	2	06	26S	34E	640971	3550039	1596	250		

Average Depth to Water: **170 feet**

Minimum Depth: **140 feet**

Maximum Depth: **200 feet**

**Record Count: 3**

### UTMNAD83 Radius Search (in meters):

**Easting (X):** 640183

**Northing (Y):** 3548651

**Radius:** 1600

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.

7/8/20 8:58 AM

WATER COLUMN/ AVERAGE DEPTH TO  
WATER