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

August 6, 2020 SMA #5E29133, BG59

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

RE: LINER INSPECTION REPORT
FLAGLER 8 CENTRAL TANK BATTERY 1

To Whom it May Concern:

Souder, Miller & Associates (SMA) is pleased to submit this letter report on behalf of Devon Energy Production Company (Devon) summarizing the liner inspection that occurred due to the Flagler 8 CTB 1 release. The site is located in Unit Letter M Section 8, T25S, R33E (N32.140865/W-103.601115) Lea County, New Mexico, on BLM land.

Site Characterization

On July 18, 2020, a ½-inch valve on a water transfer line was discovered with a crack in it at Flagler 8 Central Tank Battery 1 Facility, causing fluid to be released onto the lined secondary containment. This resulted in the release of 63 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 63 bbls of produced water.

Based upon New Mexico Office of the State Engineer (NMOSE) depth to groundwater in the area is estimated to be 90 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/; accessed July 29, 2020; Appendix C). The nearest significant watercourse is an unnamed intermittent stream, located approximately 10,603 feet to the east/northeast. Figures 1 and 2 show the release location and surrounding hydrologic features. Figure 3 shows the location of the facility and the release.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of 51-100 feet bgs.

Liner Integrity

At the request of Devon, SMA conducted a liner integrity inspection per the requirements of 19.15.29.11.A(5)(a) NMAC. NMOCD was notified on July 27, 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 and will continue to do so. The valve 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.

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

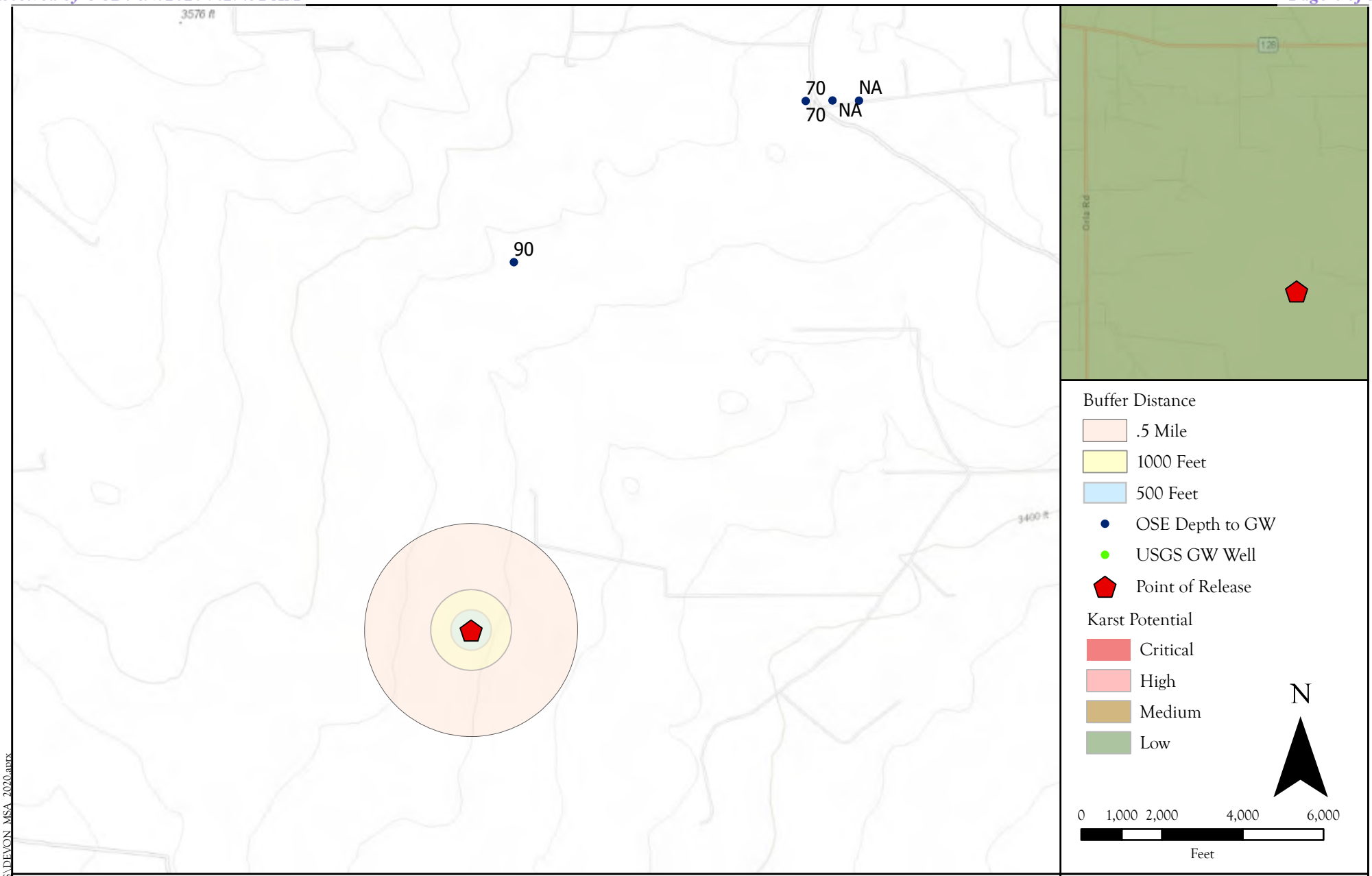
Shawna Chubbuck
Senior Scientist

Attachments

Figures
Figure 1: Site Map
Figure 2: Surface Water Protection Map
Figure 3: Site and Sample Location Map

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

FIGURES



Site Map

Flagler 8 CTB 1 - Devon Energy Production Company

UL: M S: 8 T: 25S R: 33E, Lea County, New Mexico

Figure 1

P:\5-Devon MSA 2020 (5E29133)\GIS\DEVON_MSA_2020.aprx
Date Saved: 7/29/2020

Revisions

By: _____ Date: _____ Descr: _____

By: _____ Date: _____ Descr: _____

Drawn Lynn A. Acosta

Date 7/30/2020

Checked _____

Approved _____

201 South Halaguena Street
Carlsbad, New Mexico 88221
(575) 689-7040
Serving the Southwest & Rocky Mountains

Surface Water Protection Map
Flagler 8 CTB 1- Devon Energy Production Company
UL: M S: 8 T: 25S R: 33E Lea County, New Mexico

Figure 2

P:\5-Devon MSA 2020 (5E29133)\GIS\DEVON_MSA_2020.aprx
Date Saved: 7/29/2020

Revisions
By: _____ Date: _____ Descr: _____
By: _____ Date: _____ Descr: _____

Drawn Lynn A. Acosta
Date 7/30/2020
Checked
Approved

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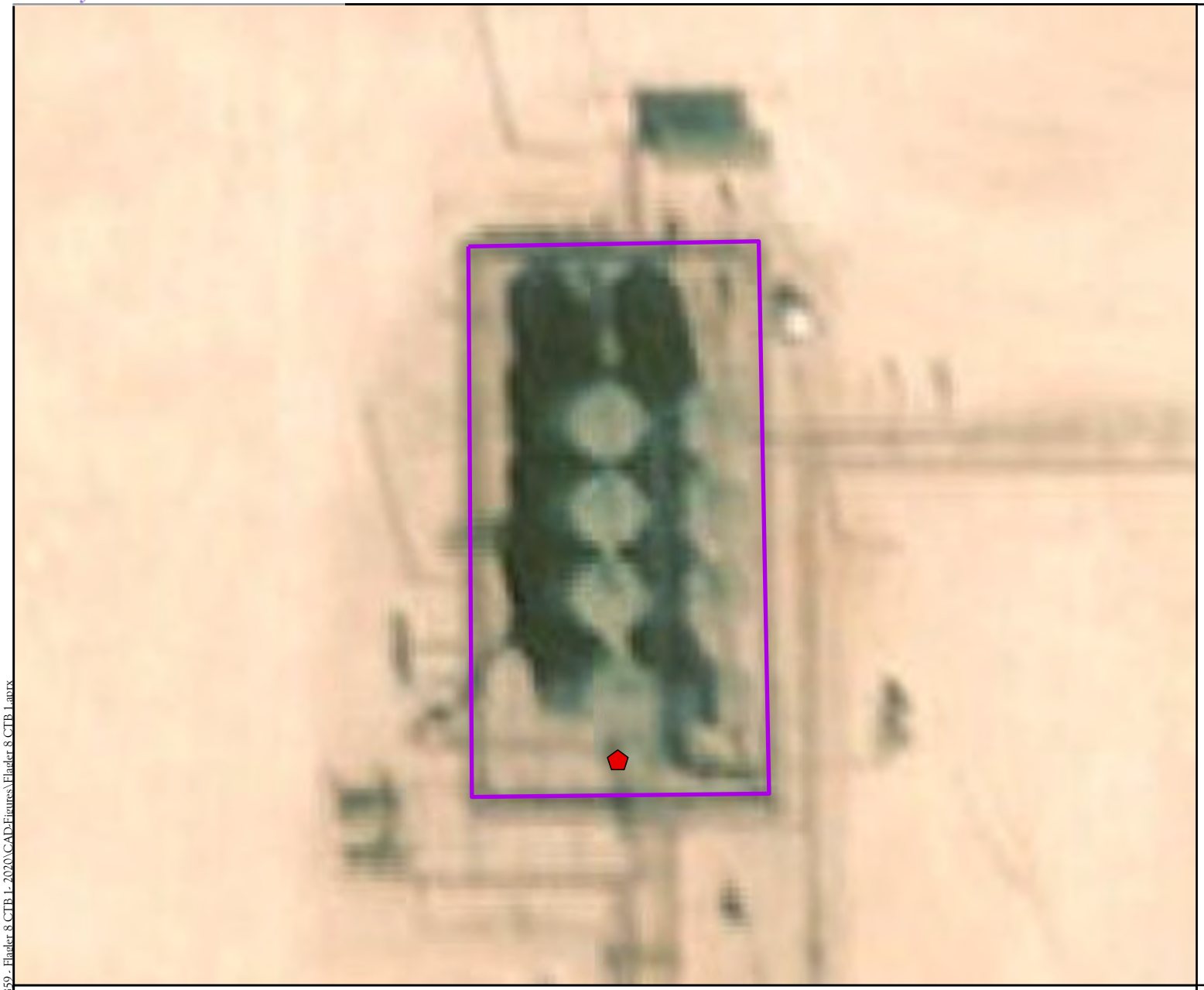

Legend

Containment Barrier

Point of Release

N

0 10 20 40 60

Feet

Site and Sample Location Map
Flagler 8 CTB 1 - Devon Energy Production Company
UL: M S: 8 T: 25S R: 33E Lea County, New Mexico

Figure 3

P:\5-Devon MSA 2020 (5E29133)\RG59 - Flagler 8 CTB 1- 2020\CAD-Figures\Flagler 8 CTB 1.mxrx

Date Saved: 7/30/2020

Revisions

By: _____ Date: _____ Descr: _____

By: _____ Date: _____ Descr: _____

Drawn Lynn A. Acosta

Date 8/6/2020

Checked _____

Approved _____

201 South Halaguena Street
Carlsbad, New Mexico 88221
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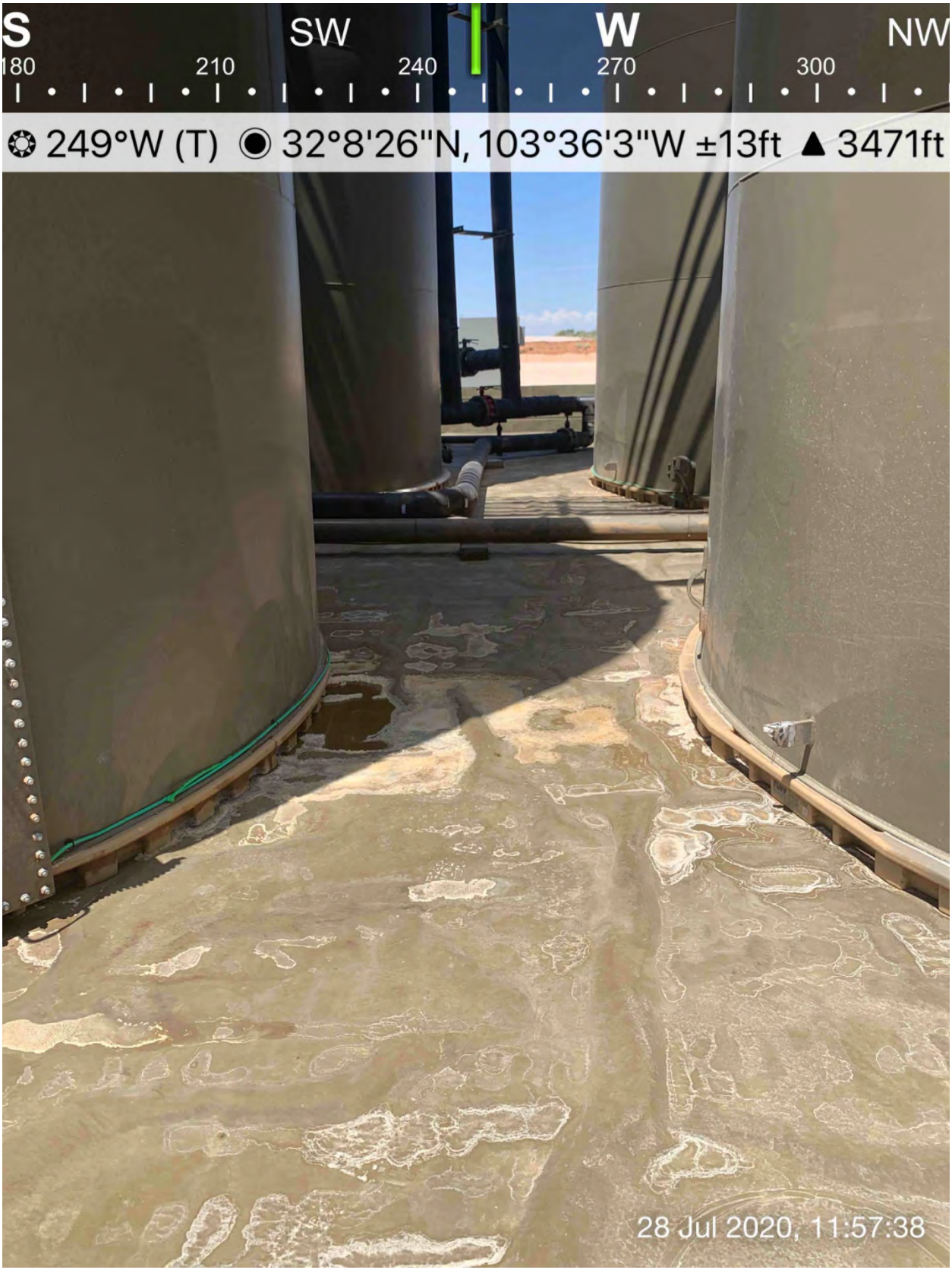
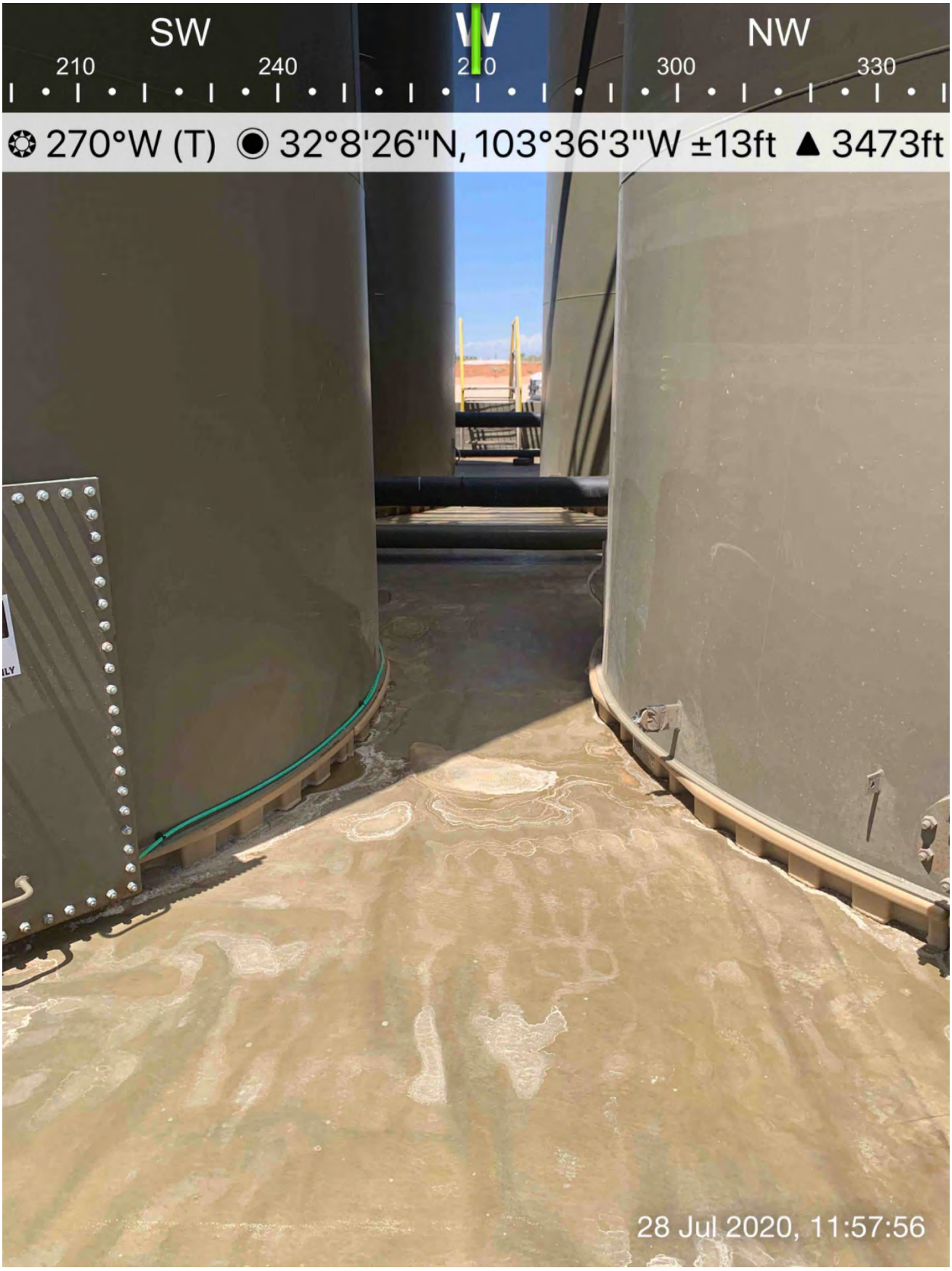
Appendix A
PHOTO LOG & FIELD NOTES


NW
N
NE
300
330
0
30
60
7°N (T) 32°8'26"N, 103°36'3"W ±13ft 3473ft
28 Jul 2020, 11:57:22


NW
N
NE
300
330
0
30
350°N (T) 32°8'26"N, 103°36'3"W ±13ft 3472ft
28 Jul 2020, 11:57:30


S
SW
W
NW
180
210
240
270
300
249°W (T)
32°8'26"N, 103°36'3"W ±13ft
3471ft
28 Jul 2020, 11:57:38

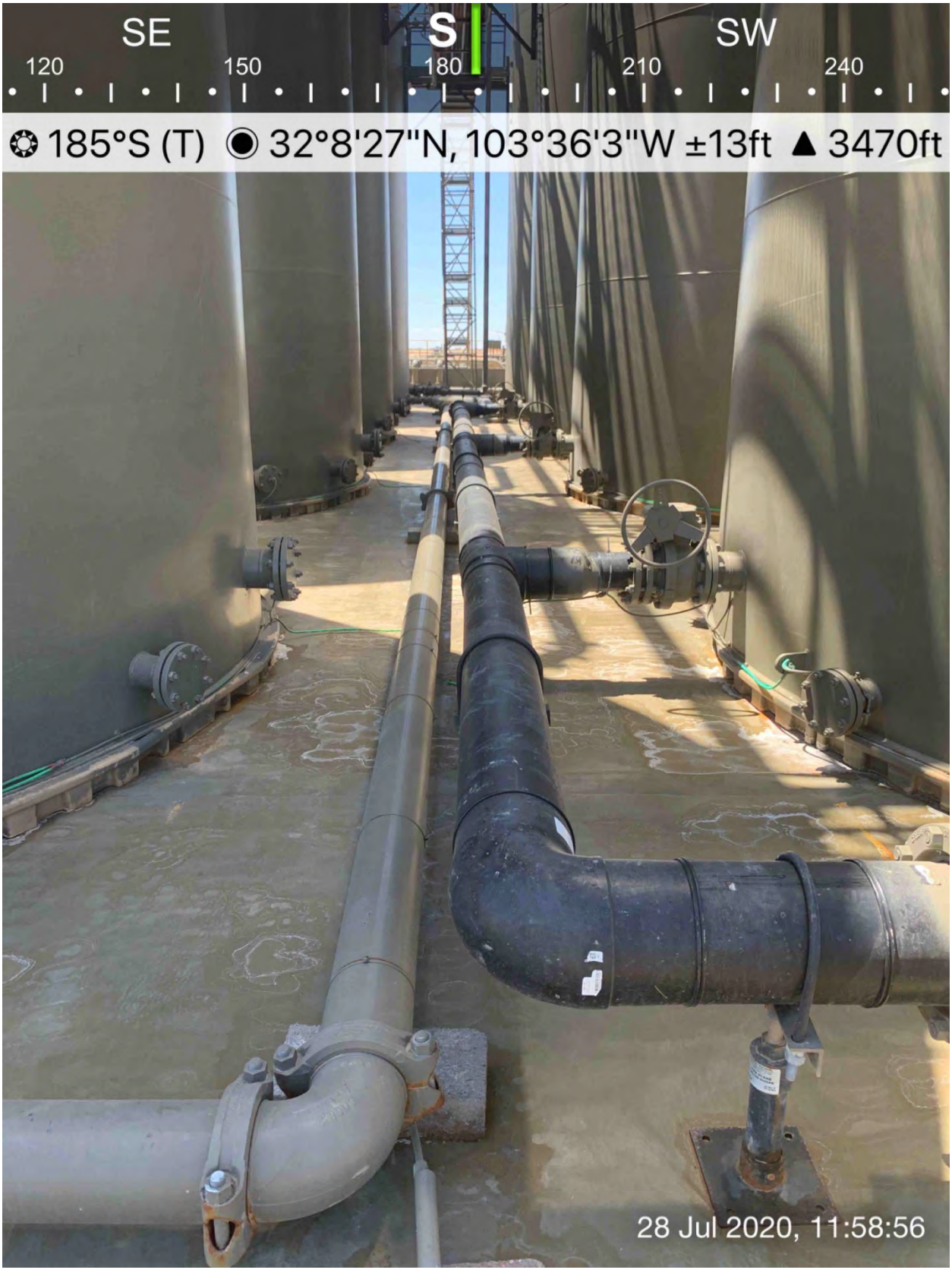

SW
W
NW
210
240
270
300
330
270°W (T)
32°8'26"N, 103°36'3"W ±13ft
3473ft
28 Jul 2020, 11:57:56


SW
240
W
270
300
NW
330
285°W (T)
32°8'26"N, 103°36'3"W ±13ft
3474ft
28 Jul 2020, 11:58:08


W
NW
N
240
270
300
330
0
306°NW (T)
32°8'26"N, 103°36'3"W ±13ft
3471ft
28 Jul 2020, 11:58:18


NW
N
NE
300
330
0
30
349°N (T)
32°8'26"N, 103°36'3"W ±13ft
3468ft
28 Jul 2020, 11:58:26


N
NE
E
330
0
3
60
90
31°NE (T) 32°8'27"N, 103°36'3"W ±13ft ▲3470ft
CAUTION
THIS UNIT MAY
START
AUTOMATICALLY
28 Jul 2020, 11:58:42


SE
S
SW
120
150
180
210
240
185°S (T)
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3470ft
28 Jul 2020, 11:58:56

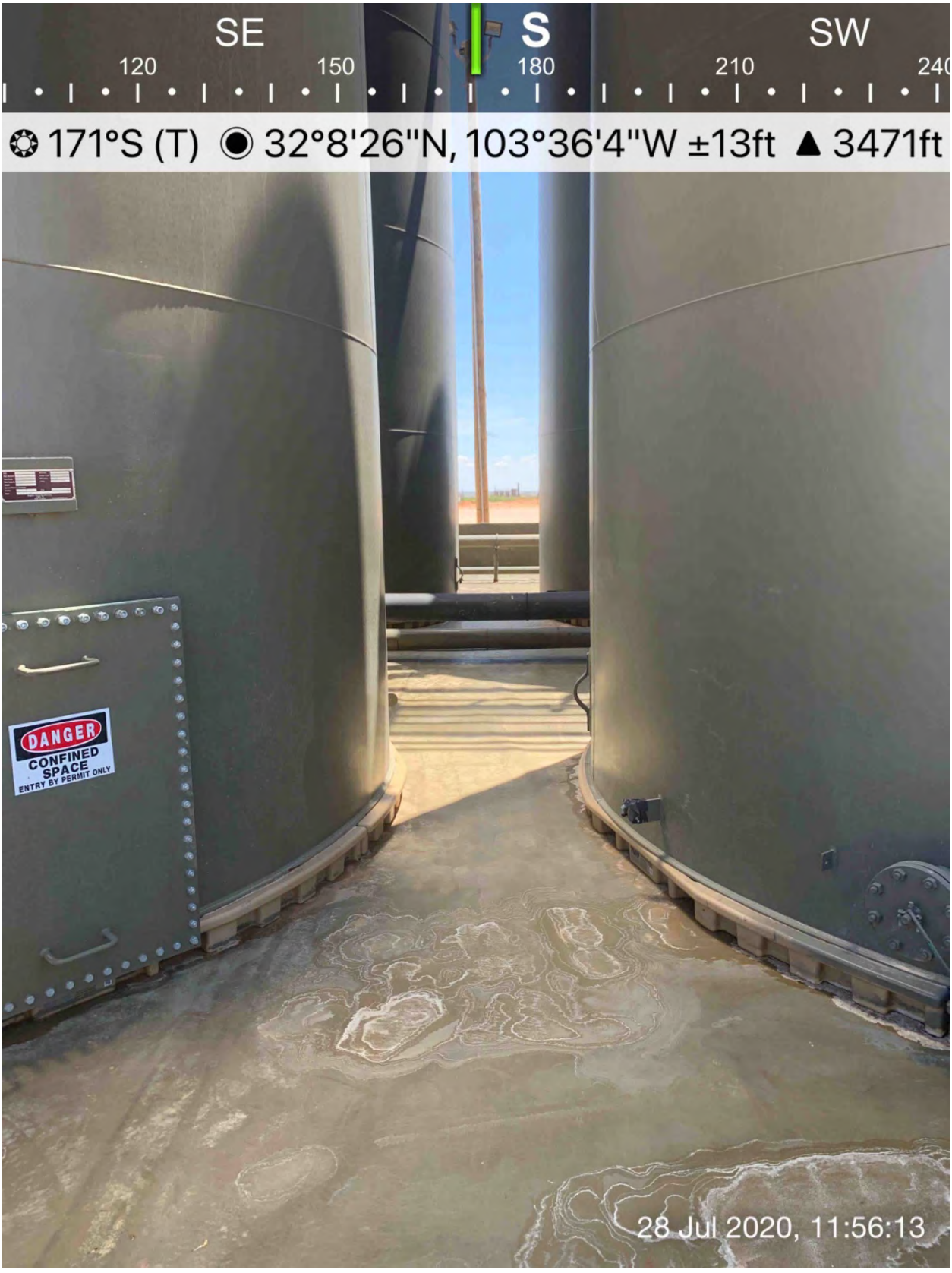

NW
N
NE
300
330
0
30
60
8°N (T) 32°8'27"N, 103°36'3"W ±13ft 3469ft
28 Jul 2020, 11:59:17

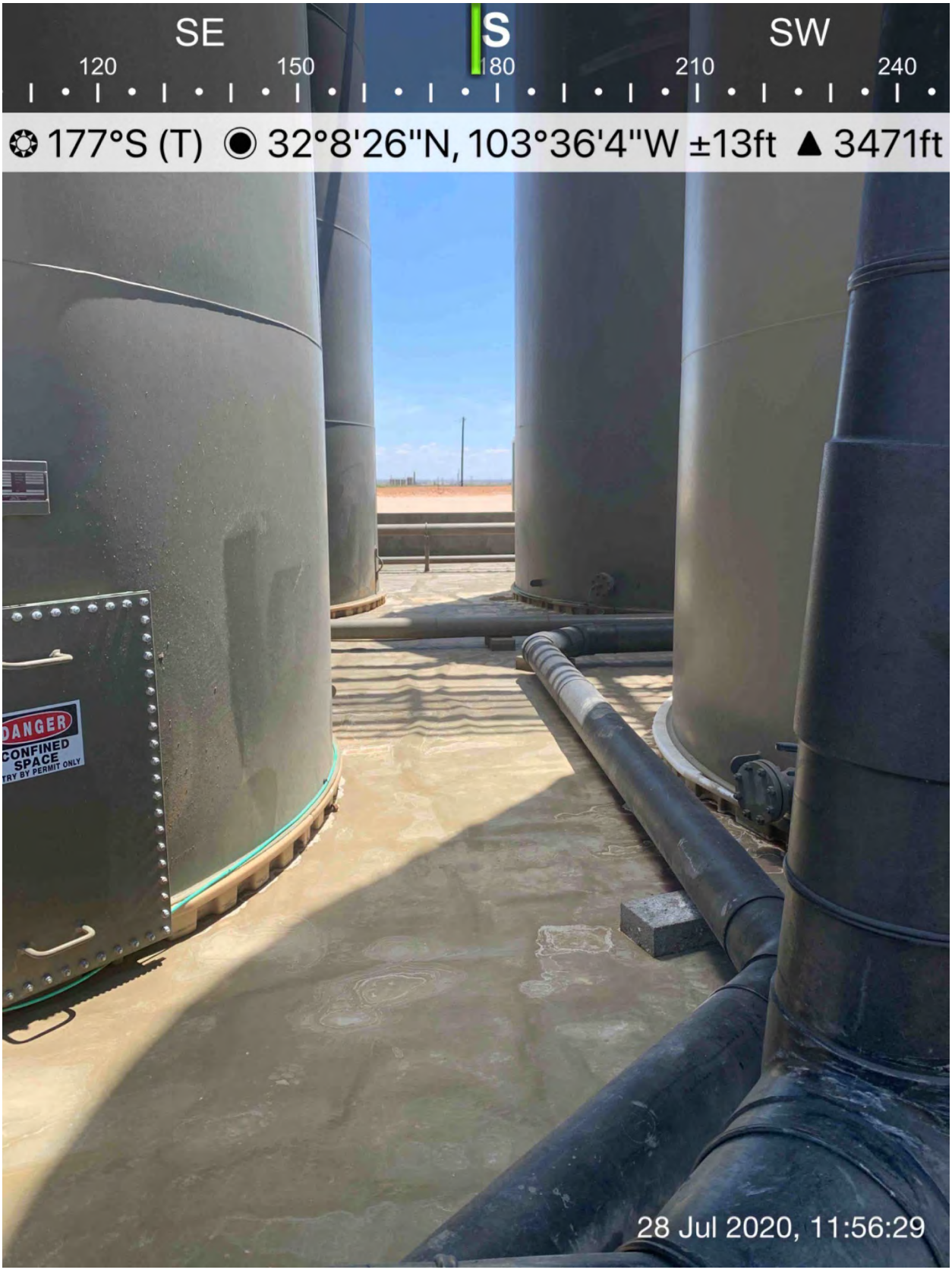

W NW N NE
270 300 330 0 30
339°N (T) 32°8'27"N, 103°36'4"W ±13ft 3469ft
28 Jul 2020, 11:59:26


SE
S
SW
120
150
180
210
240
182°S (T)
32°8'27"N, 103°36'4"W ±13ft
3470ft
28 Jul 2020, 11:59:35

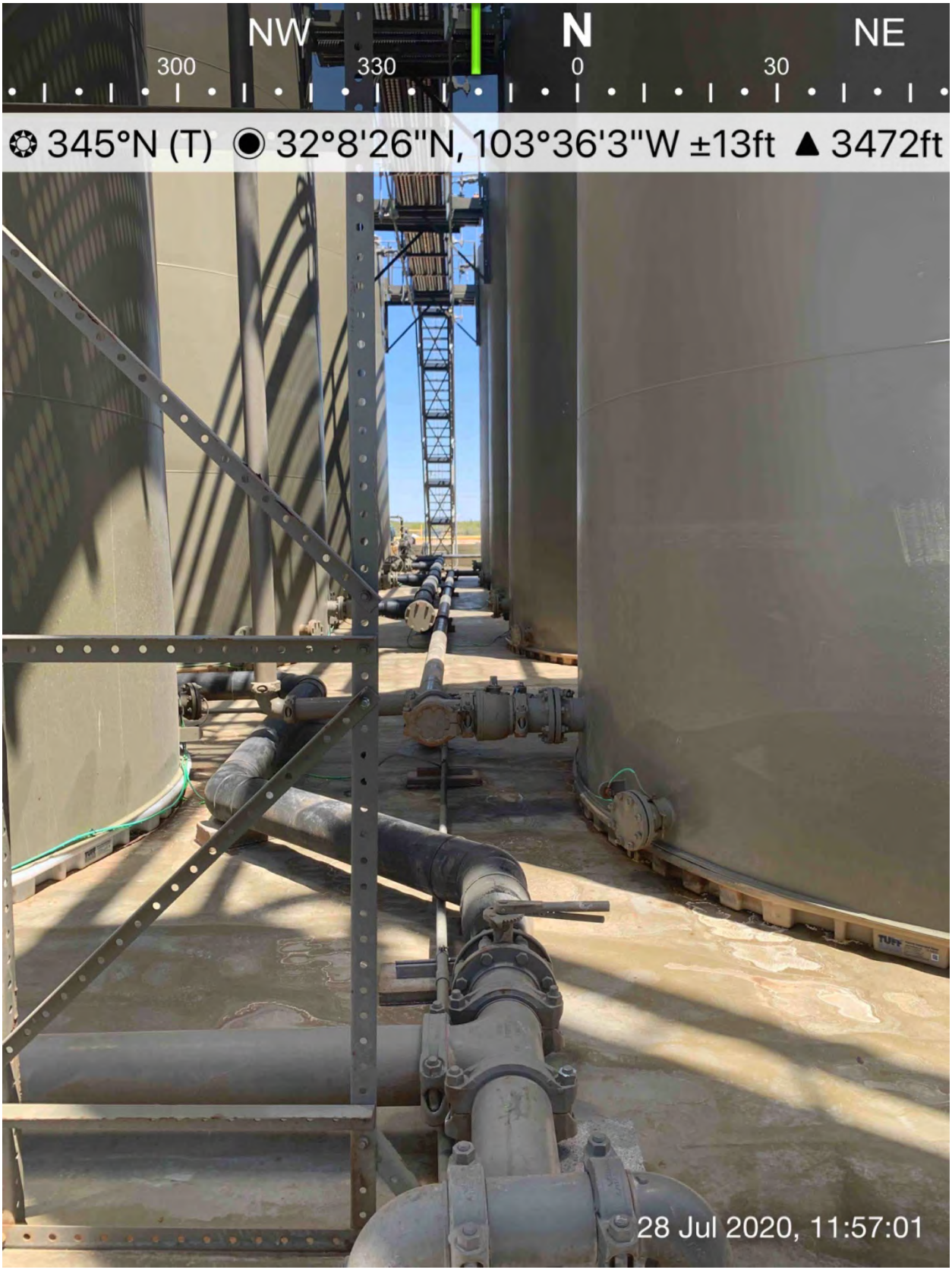

NE
E
SE
30
60
90
120
150
84°E (T) 32°8'26"N, 103°36'4"W ±13ft 3469ft
28 Jul 2020, 11:55:51


SW
W
NW
210
240
270
300
330
263°W (T)
32°8'26"N, 103°36'4"W ±13ft
3469ft
28 Jul 2020, 11:56:04


SE
S
SW
120
150
180
210
171°S (T)
32°8'26"N, 103°36'4"W ±13ft
3471ft
DANGER
CONFINED SPACE
ENTRY BY PERMIT ONLY
28 Jul 2020, 11:56:13


SE
S
SW
120
150
180
210
240
177°S (T)
32°8'26"N, 103°36'4"W ±13ft
3471ft
DANGER
CONFINED SPACE
28 Jul 2020, 11:56:29


NE
E
SE
30
60
90
120
150
99°E (T) 32°8'26"N, 103°36'4"W ±13ft 3474ft
28 Jul 2020, 11:56:45


NW
N
NE
300
330
0
30
345°N (T)
32°8'26"N, 103°36'3"W ±13ft
3472ft
28 Jul 2020, 11:57:01


E
SE
S
60
90
120
150
180
128°SE (T)
32°8'26"N, 103°36'3"W ±13ft
3473ft
28 Jul 2020, 11:57:17

Souder, Miller & Associates
Liner Inspection Form

Project Name: Flagler 8 CTB 1 Inspection Date: 7/28/2020

Client Name: Devon Energy

Client Representative(s): _____

SMA Inspector(s): Alicia A. López

Project Location: Lea County NM Latitude: 32.140865 Longitude: -103.601115

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): Y
Date of Notice: _____

Material Covering Liner Removed by Client (Y/N): Y

Affected Areas Exposed by Client (Y/N): Y

INSPECTION:

Liner Thoroughly Inspected for Damage (Y/N): Y

All 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): ___
Release Was Contained to Lined Containment Area (Y/N): ___
Liner Was Able to Contain the Leak (Y/N): ___

If **YES**:
Certify on Form C-141 That Liner Remains Intact

If **NO** to Any of Above:
Responsible Party Must Delineate Horizontal & 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: 7/28/2020

CLIENT REPRESENTATIVE

Tom Bynum

Date: 7/28/2020

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	NRM2020438914
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@dvn.com	Incident # *(assigned by OCD)*
Contact mailing address 6488 Seven Rivers HWY	

Location of Release Source

Latitude 32.140865 Longitude -103.601115

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Flagler 8 CTB 1	Site Type Central Tank Battery
Date Release Discovered 7/18/2020	API# *(if applicable)* N/A

Unit Letter	Section	Township	Range	County
M	8	25S	33E	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)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
■ Produced Water	Volume Released (bbls) 63	Volume Recovered (bbls) 63
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: A 1/2-inch valve on a water transfer line was found with a crack in it, causing fluid to be released into the lined secondary containment. The line was shut down and isolated so the valve could be replaced. All fluid was recovered from containment. The GPS coordinates above pinpoint the source of the release, while these coordinates are from the lease sign: 32.14055056, -103.6011111.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM2020438914
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? This release was more than 25 bbls.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

An email was sent by Tom Bynum on 7/19/20 @ 6:30 a.m. to Lea County Spills, BLM Spills, R. Mann, and B. Boone.

Initial Response

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

- ■ The source of the release has been stopped.
- ■ The impacted area has been secured to protect human health and the environment.
- ■ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ■ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not 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: Kendra DeHoyos Title: EHS Associate

Signature: Kendra DeHoyos Date: 7/19/2020

email: kendra.dehoyos@dvn.com Telephone: 575-748-3371

OCD Only

Received by: Ramona Marcus Date: 7/22/2020

State of New Mexico
Oil Conservation Division

Incident ID	NRM2020438914
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?	90 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

8/6/2020

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NRM2020438914
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: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 8/6/2020

email: tom.bynum@dvn.com Telephone: 575-748-0176

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NRM2020438914
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: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 8/6/2020

email: tom.bynum@dvn.com Telephone: 575-748-0176

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NRM2020438914
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: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 8/6/2020

email: tom.bynum@dvn.com Telephone: 575-748-0176

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: _____

NRM2020438914

Spills In Lined Containment	
Measurements Of Standing Fluid	
Length(Ft)	60
Width(Ft)	120
Depth(in.)	0.75
Total Capacity without tank displacements (bbls)	80.15
No. of 500 bbl Tanks In Standing Fluid	8
No. of Other Tanks In Standing Fluid	
OD Of Other Tanks In Standing Fluid(feet)	
Total Volume of standing fluid accounting for tank displacement.	63.35

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	Depth Well	Depth Water	Water Column
C 02312		CUB	LE	1	2	1	05	25S	33E	632292	3559772	2887	150	90	60

Average Depth to Water: **90 feet**
Minimum Depth: **90 feet**
Maximum Depth: **90 feet**

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 631935 **Northing (Y):** 3556907 **Radius:** 3000

7/29/20 3:11 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER