



August 4, 2021

Nathan Bennett
Extraction Oil & Gas
370 17th Street, Suite 5300
Denver, CO 80202

Subject: Third Party Flowline Abandonment-in-place Verification Letter

Anderson MB #33-5
(Facility ID: 206919
(Location ID: 321421)
40.096750, -105.129170
SWNW 33 2N69W
Boulder County, Colorado

Dear Mr. Bennett,

This letter shall serve as verification that an Apex Companies LLC (Apex) Field Geologist, working under the supervision of a Professional Engineer registered with the State of Colorado, was present during the abandonment-in-place of the Extraction Oil & Gas off-location flowline, Anderson MB #33-5 (COGCC Location ID: 321421), located in Boulder County, Colorado. A pre-abandonment notice under Form 44 (Off-Location Flowline Report) Document Number 402545399 was submitted on December 3, 2020. The Apex Field Geologist observed that the abandonment requirements of Rule 1105.e.(1)-(4) were met including:

1. Evacuate the flowline or crude oil transfer line of any hydrocarbons or produced water to ensure the line is safe and inert;
2. Deplete the flowline or crude oil transfer line to atmospheric pressure;
3. Cut the flowline's or crude oil transfer line's risers to three (3) feet below grade or to the depth of the flowline or crude oil transfer line, whichever is shallower; and
4. Seal the ends of the flowline or crude oil transfer line below grade;

Observations

On June 7, 2021, an Apex Field Geologist was dispatched to the Anderson MB #33-5 location to observe the depletion of the flowline to atmospheric pressure (Rule 1105.e.2), evacuation of any remaining hydrocarbons or produced water from the flowline (Rule 1105.e.1) and flushing with freshwater of 280 feet of 2-inch flowline. Both riser ends of the flowline were uncapped and the flowline was allowed to deplete to atmospheric pressure. The pipe was then made safe and inert by flushing 45 barrels of fresh water through the full length of flowline until clear water was observed at the receiving end, evacuating any remaining hydrocarbons or produced water from the flowline.

On June 11 and June 16, 2021, the Apex Field Geologist returned to the Anderson MB #33-5 location to observe the flowline being cut (Rule 1105.e.3) and sealed (Rule 1105.e.4) at all ends of abandonment (either side of access road [Ends A and B] and either side of the canal {Ends C and D}). The flowline was cut at the utility depth, approximately 3-feet at the south side of Access Road (End A), approximately 3.5 feet at the north side of Access Road (End B), approximately 3.66-feet at the south side of canal (End C) and approximately 4.9-feet at the separator end (End D). All ends of the off-location portion of flowline then had threads cut into the outside surface, and a threaded cap was installed and sealed with black tape. The on-location portions of the flowline, including the risers at both ends, will be fully removed.

In addition to observation of abandonment activities, the Apex Field Geologist completed a visual assessment of the site for soil staining, salt accumulation, stressed vegetation, or other signs of soil impacts at the surface. The visual assessment of the site yielded no areas of concern. The flowline was also inspected for indications of suspected asbestos containing wrapping or coating and was found to be steel casing with no wrapping or coating.

Sincerely,
Apex Companies, LLC



Dan Delahunty, P.E., CPESC
Program Manager



Attachments:

1. Line Abandonment-in-Place Form
2. Flowline Abandon-in-Place Checklist
3. Flowline AIP Diagram
4. Photolog



LINE ABANDONMENT IN PLACE FORM

Location Description: Anderson MB 33-5 Date: 6/16/21

Reason for Abandonment in Place per 1105d (mark applicable reason)

A: Surface Owner Agreement Allowance	B: Federal Location	C: Co-Located with Other Lines or Right of Way	D: Significant damage to Natural Resources	E: Restricted Occupance Area or Sensitive Wildlife	F: Within 30ft of Public road, Path ROW, Utility or Pipeline Crossing	G: Within 30ft of or under River, Stream, or Wetlands	H: Will cause significant Emmissions	Pre Locate Complete?: <input checked="" type="checkbox"/> YES
		X						Ticket Attached?: <input checked="" type="checkbox"/> YES
								Ticket #: <u>A112500272-00A</u>

Company performing the work: LASEP OILFIELD

Crew Member Name:	Crew Member Title:	Crew Member Name:	Crew Member Title:
<u>AJ MARTINEZ</u>	<u>- FOREMAN</u>		
<u>MARCO CASTILLO</u>	<u>- HAND</u>		

Welder: (if applicable) _____ Welder Certification #: _____

Description of work to be performed: FLUSH FLOWLINE WITH FRESH WATER. LEFT 40' OF 2" STEEL FLOWLINE & 1" POLY SUPPLY LINE IN GROUND ACROSS DRIVEWAY PER SURFACE OWNER REQUEST LEFT 240' OF 2" STEEL FLOWLINE & 1" POLY SUPPLY

→ ON BACK

Remaining Line #1

Remaining Line #1 Desc: Flow Line

Line Size: <u>2"</u>	Line Type: <u>STEEL</u>	Coating?: <u>X-TRU COAT</u>	Estimated Flowline Depth: <u>4'</u>
Reason for Leaving Lines in Place: <u>CO-LOCATED WITH OTHER FLOWLINE</u>			Estimated Flowline Length: <u>280'</u>

<input checked="" type="checkbox"/> YES Line Flush with Fresh Water	<input type="checkbox"/> Inert Gas Added into Line
<input checked="" type="checkbox"/> YES Removed Riser	<input type="checkbox"/> Welded Cap
<input checked="" type="checkbox"/> YES Installed Threaded Collar and Bulbplug	

Remaining Line #2

Remaining Line #2 Desc: SUPPLY LINE

Line Size: <u>1"</u>	Line Type: <u>POLY</u>	Coating?: <u>N/A</u>	Estimated Flowline Depth: <u>4'</u>
Reason for Leaving Lines in Place: <u>CO-LOCATED WITH OTHER LINES</u>			Estimated Flowline Length: <u>280'</u>

<input type="checkbox"/> Line Flush with Fresh Water	<input type="checkbox"/> Inert Gas Added into Line
<input type="checkbox"/> Removed Riser	<input type="checkbox"/> Welded Cap
<input type="checkbox"/> Installed Threaded Collar and Bulbplug	

Sales Line/ Riser Still on Location?: Yes No Sales Line Owner?: WESTERN MIDSTREAM

Name of Qualified 3rd Party Observer: Ryan Finley License #: CO 39305

Signature of Qualified 3rd Party Observer: Ryan Finley Employed By: Apex Companies LLC

Operations Approval: _____ Date: / /

Maintenance Approval: _____ Date: / /



Flowline Abandon-in-place Checklist

Project Manager: Dan Delahunty, Ryan Finley

Site Name(s): Anderson MB #33-5

Location ID: 321421

Client: Extraction Oil and Gas

Lat/Long: 40.096750, -105.129170

Abandonment Dates: 06/07/2021 (Flushing)	Time Onsite: 09:00	Time Offsite: 10:45
06/11/2021 (Capping)	12:00	14:15
06/16/2021 (Capping)	10:15	11:00

Flowline Information:

Type: Steel

Length: 280 feet

Diameter: 2 inch

Condition: Intact - No noted damage

Coating: X-Tru Coating

Other: No asbestos containing material.

Requirements to be verified (COGCC 1105 e. #1-4)

- Evacuate the flowline or crude oil transfer line of any hydrocarbons or produced water to ensure the line is safe and inert.
 - Start time/date: 06/07/2021 at 09:00
 - End time/date: 06/07/2021 at 10:30
 - Volume of fresh water used: 45 barrels
 - Notes/details: Flowline temporarily capped until final cut and cap occurred on 06/07/2021
- Deplete the flowline or crude oil transfer line to atmospheric pressure
 - Date/Time uncapped:
 - End A (wellhead): 06/11/2021
 - End D (separator): 06/11/2021
- Cut the flowline's or crude oil transfer line's risers to three (3) feet below grade or to the depth of the flowline or crude transfer line, whichever is shallower.
 - Depth of cut flowline:



- End A: 3 feet
 - End B: 3.5 feet
 - End C: 3.66 feet
 - End D: 4.9 feet
- Location (cut and capped location)
 - End A: 40.097513°, -105.128888°
 - End B: 40.097618°, -105.128859°
 - End C: 40.097930°, -105.126159°
 - End D: 40.098463°, -105.126204°
- Seal the ends of the flowline or crude transfer line below grade
 - End A
 - Method: Capping
 - Type: Threaded
 - Date: 06/16/2021
 - End B
 - Method: Capping
 - Type: Threaded
 - Date: 06/16/2021
 - End C
 - Method: Capping
 - Type: Threaded
 - Date: 06/11/2021
 - End D
 - Method: Capping
 - Type: Threaded
 - Date: 06/16/2021



**Anderson MB #33-5
(Location ID: 321421)
Flowline AIP Diagram**



Cut and Capped -
End D 4.9ft BGS

Separator End

Cut and Capped -
End C 3.66ft BGS

Cut and Capped -
End B 3.5ft BGS

Cut and Capped -
End A 4ft BGS

Wellhead
(Abandoned)

Legend

- Cut and Cap for AIP Location
- Removed Flowline - Field-screen Sample



Description:

Flushing Operations - Wellhead End



Description:

Flushing Operations - Separator End

**Description:**

Flushing Operations - Separator End Open to Venting



Description:

Flushing Operations - Wellhead End Open to Venting



Description:

End A - South Side of Access Road - Cut and Capped End



Description:

End B - North Side of Access Road - Cut and Capped End



Description:

End C - South Side of Canal - Cut and Capped End



Description:

End D - Separator End - Cut and Capped End