1001 17th Street
Suite 1600
Denver, CO 80202

Plug and Abandonment Procedure - Proposed

Well Name: ORCHARD UNIT 20-4 (M17OU) **Version:** FINAL
API: 05-077-09309 **Date:** 5/14/24

1) Notify the BLM office and the ECMC at least 48 hours before plugging operations commence with a Form 42 and by calling BLM. Ensure proper ground disturbance forms have been completed, one call for utility identification has been done and proper paperwork is on location.

2) Hold a pre-job safety meeting. Discuss all aspects of the procedure with any involved personnel. Identify and address any safety concerns before the job begins.

3) Record all casing pressures as found, note in WellView.

4) Ensure a Bradenhead Test has already been completed and a Form 17 has been submitted. (test consists of using gauges to monitor production casing and tubing pressures, as surface casing (bradenhead) is opened and pressures are recorded at five-minute internals for 30 minutes.). If not completed, notify production engineer.

5) MIRU workover unit. Kill well if necessary. ND wellhead, NU BOP.

6) Test and chart BOPs as per regulations.

7) Perform 500 psi pressure test for 15 minutes. Record pressure test results in WellView. If not successful, notify production engineer.

8) TIH w/ tubing, Pump 9 ppg mud spacer.

Tbg Set Depth (ft):	3,325	Mud Volume (bbl):	24

9) POOH w/ tbg to next cement plug depth. Mix and pump class G neat cement plug. Pick up above plug and circulate clean.

Est TOC (ft):	1,810	Plug Description:	Ohio Creek, Williams Fork	
Tbg Set Depth (ft):	2,278	Coverage:	Ohio Creek	2,051
Plug Height (ft):	468		Williams Fork	2,278
Plug Vol (sks):	53			

10) After cement sets, tag plug and press test casing to 350 psi. Confirm tag and press test in Wellview. Notify Engineer if tag or press test is unsuccesful. Pump 9 ppg mud spacer. TOOH

Tag Depth (ft):	1,810	Mud Volume (bbl):	17

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11a) RU Wireline, RIH and perforate csg. POOH w/ WL.

Perf Depth (ft):	1,097	Gun Charge:	4 spf - 90 deg phasing

11b) TIH w/ tbg. Attempt to establish injection into squeeze perforations. Mix and pump class G neat cement plug. Pick up above plug and circulate clean.

Est TOC (ft):	897	Plug Description:	Surface Shoe Plug	
Tbg Set Depth (ft):	1,147	Coverage:	Surface Casing Shoe	1,047
Plug Height (ft):	200			
Plug Vol (sks):	65			
Squeeze Vol (sks):	42			
Internal Vol (sks):	23			

12) After cement sets, tag plug and press test casing to 350 psi. Confirm tag and press test in Wellview. Notify Engineer if tag or press test is unsuccesful. Pump 9 ppg mud spacer.

Tag Depth (ft):	897	Mud Volume (bbl):	19

13) Confirm any bradenhead pressure has been eliminated. If bradenhead pressure is present, notify production engineer.

14) POOH w/ tbg to next cement plug depth. Mix and pump class G neat cement plug. Pick up above plug and circulate clean.

Est TOC (ft):	Surface	Plug Description:	Surface Plug	
Tbg Set Depth (ft):	91	Coverage:	Surface down to	91
Plug Height (ft):	75			
Plug Vol (sks):	9			

15) RDMO workover unit and support equipment.

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16) Wait at least 5 days (and no more then 90), before procedure to next step.

17) Dig around wellhead, cut off 4' below ground level. Top off w/ cement if surface plug is not at surface.

18) Weld information plate to casing stub with 1/4" weep hole. Take GPS reading of well information plate for regulatory agencies. Inscribe plate with following:

Caerus Oil and Gas LLC
COC64191
ORCHARD UNIT 20-4 (M17OU)
05-077-09309
17-08S-96W

19) Back fill hole and release equipment

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Well Name: ORCHARD UNIT 20-4 (M17OU)
API: 05-077-09309
Surface Owner: FED
Mineral Owner: FED
Well Status: TA

Field: GRAND VALLEY
Lat: 39.3407375
Long: -108.1392440
Sec-Twn-Rng: 17-08S-96W

KB (ft): 16 all depth ref KB unless otherwise noted

	OD (in)	ID (in)	Wt. (lb/ft)	Grade	Hole (in)	Top (ft)	Btm (ft)	TOC (ft)
Conductor	16.000		42.0	H-40	24.00	16	56	16
Surface	8.625	8.097	24.0	J-55	12.25	16	1,047	16
Intermediate								
Production	5.500	4.892	17.00	I-80	7.88	16	5,445	16

	OD (in)	ID (in)	Wt. (lb/ft)	Grade	EOT (ft)
Tubing					

Gross Perf Inverval

Top Perf (ft) 3,424
Btm Perf (ft) 5,236

PBTD (ft) 3,325

Surf Csg. Press (psi) 240
Int Csg. Press (psi) NA
Prod Csg. Press (psi) 25
Tubing Press (psi) 25
Test Date: 9/21/2023

Formation Tops	RGL (ft)	RKB (ft)
Wasatch	0	16
L. Wasatch	1,744	1,760
Wasatch G	no top	
Fort Union	N/A	
Ohio Creek	2,035	2,051
Williams Fork	2,262	2,278
Top Gas	3,355	3,371

Well Notes 0

General Notes All Displacement fluid shall contain corrosion inhibitor and biocide. Premix 5 gallons per 100 bbls fluid to be placed between all plugs.
Federal well requires 9ppg weighted spacer fluid (mud/brine) between plugs, procedure describes as mud, discuss fluid specifications w/ Eng.

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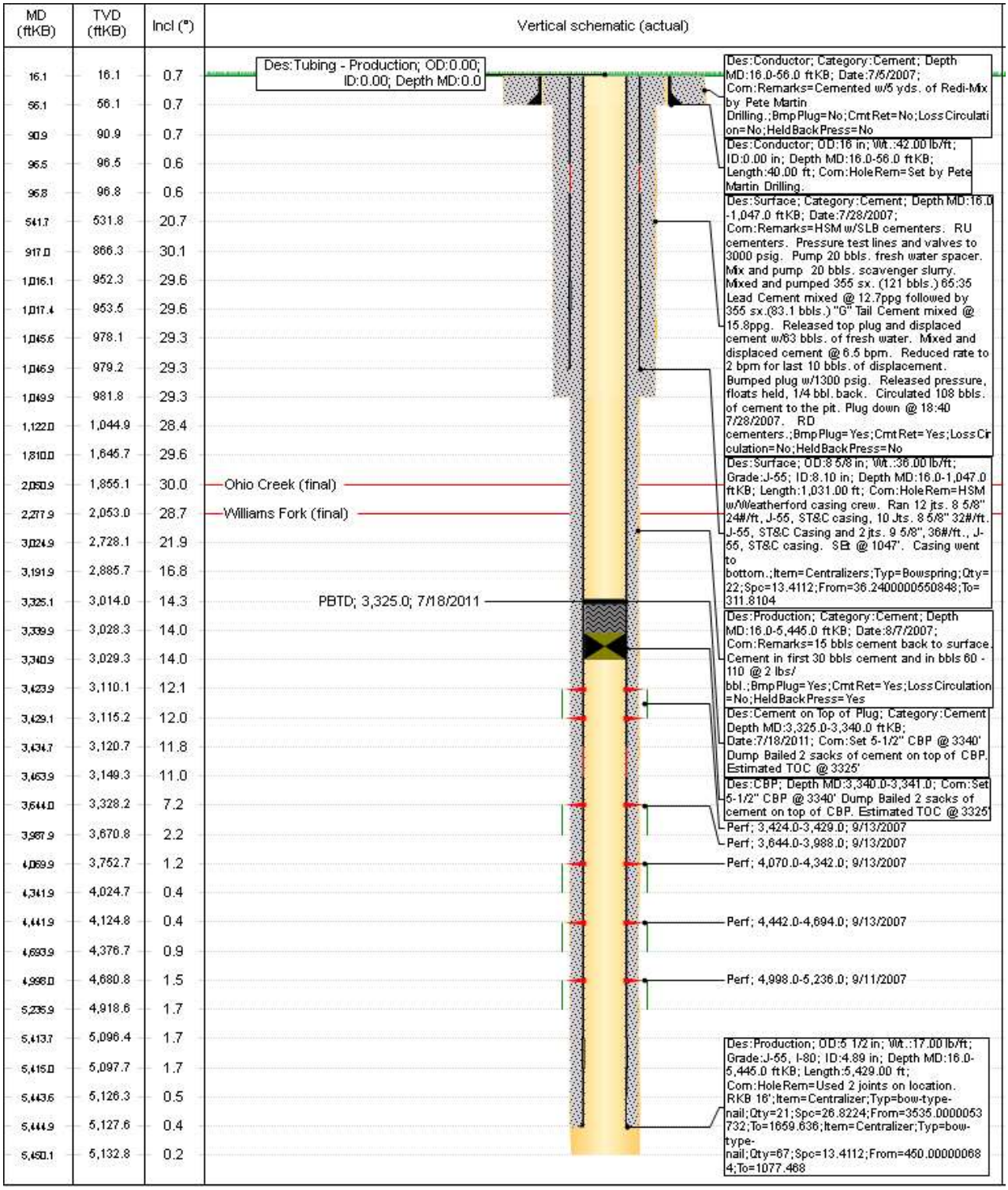
Current WBD



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Plugged WBD

MD (ftKB)	TVD (ftKB)	Incl (°)
16.1	16.1	0.7
56.1	56.1	0.7
90.9	90.9	0.7
96.5	96.5	0.6
96.8	96.8	0.6
541.7	531.8	20.7
897.0	848.9	29.9
1,016.1	952.3	29.6
1,017.4	953.5	29.6
1,045.6	978.1	29.3
1,046.9	979.2	29.3
1,049.9	981.8	29.3
1,097.1	1,023.0	28.8
1,810.0	1,645.7	29.6
2,050.9	1,855.1	30.0
2,277.9	2,053.0	28.7
3,024.9	2,728.1	21.9
3,191.9	2,885.7	16.8
3,325.1	3,014.0	14.3
3,339.9	3,028.3	14.0
3,340.9	3,029.3	14.0
3,423.9	3,110.1	12.1
3,429.1	3,115.2	12.0
3,434.7	3,120.7	11.8
3,463.9	3,149.3	11.0
3,644.0	3,328.2	7.2
3,987.9	3,670.8	2.2
4,069.9	3,752.7	1.2
4,341.9	4,024.7	0.4
4,441.9	4,124.8	0.4
4,693.9	4,376.7	0.9
4,998.0	4,680.8	1.5
5,235.9	4,918.6	1.7
5,413.7	5,096.4	1.7
5,415.0	5,097.7	1.7
5,443.6	5,126.3	0.5
5,444.9	5,127.6	0.4
5,450.1	5,132.8	0.2