



Wells Ranch 31-33

P&A Procedure

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LOCATION:

Qtr/Qtr: NW/NE Section: 33 Township: 6N Range: 63W
Footages: 840 FNL & 2145 FEL

COUNTY: WELD STATE: CO API #: 05-123-23487

WELL DATA:

Surface Csg: 8-5/8" 24# J-55 @ 456' KB Elevation: 4791'
Surface Cmt: 360 sx GL Elevation: 4779'
Long St Csg: 4-1/2" 11.60# M-80 @ 6997' TD: 6999'
Long St Cmt: 820 sx PBDT: 6956'
Long St Date: 4/18/2006

Plug Back (Sand or CIBP): Sand
Perforation Interval (1): Niobrara Perforations 6618'-6632' & 6724'-6740'
Perforation Interval (2): _____
Perforation Interval (3): _____
Tubing: 2-3/8" 4.70# J-55 @ 6609' Rods: N/A
Pump: _____
Misc.: _____
Misc.: _____

PRODUCTION STATUS:

Producing

COMMENTS:

Abandoning to accommodate upcoming horizontal wells

PROCEDURE:

- 1) Bradenhead Form 17 needs to be done by the rig since this is a PG1 LTSI well that hasn't had a recent Form 17. Recover any necessary samples per Form 6 COA; direct sample(s) to DIG/Precision contact for analysis.
- 2) MIRU workover rig, pump, and tank.
- 3) Blow down well and roll hole with fresh water, if possible.
- 4) ND WH, NU BOP.
- 5) POOH and stand back tbg.
- 6) RU WL and RIH w/ CIBP and set @ 6568' (50' above Nio top perf)
- 7) Dump bail 2 sx of Class G Neat cement on top of CIBP.
TOC: 6542'
- 8) Load hole with fluid and pressure test CIBP to 1000 psi with rig pumps. Hold for 15 minutes.
Test will be considered successful if lose less than 100 psi. If test is unsuccessful, contact engineer.
- 9) RIH w/ 1' perforating gun and shoot 4-6 spf @ 2500' (TOC is 3,324').
- 10) RIH w/ CICR on workstring and set @ 2400' (100' above perforations).
- 11) Load annulus between production casing and workstring. Test to 500 psi for 15 minutes.
Test is considered successful if lose less than 50 psi. If pressure test fails, contact engineer.
- 12) Establish injection rate.
- 13) Pump 10 bbls Mud Flush (or similar spacer) followed by 200 sx of 15.8 ppg Enhanced PlugCEM Halliburton cement.

Length (ft)	Vol Factor (bbls/ft)	Volume (bbls)	Volume (ft ³)	Yield (ft ³ /sk)	Cement (sk)	Next Nearest 5sk
500	0.0775	38.75	217.58	1.21	179.82	--
100	0.0155	1.55	8.70	1.21	7.19	--
129	0.0155	2.00	11.23	1.21	9.28	--
TOTAL:					196.29	200

Calculations assume 10" open hole and last 2 bbls cmt left on top of CICR.

- 14) Displace cement with 7 bbls fresh water (2 bbls short of workstring volume).

Tubing ID	Length (ft)	Disp. Factor (bbl/ft)	Displacement (bbl)	Displacement Minus 2 bbls
1.995	2400	0.00387	9	7

- 15) Unsting from CICR.

- 16) Place remaining 2 bbls of cement on top of CICR. Allow to fall on CICR as pulling out.
TOC: 2271'

- 17) POOH w/ workstring.

- 18) RIH w/ WL and cut production casing at 674' (200' below surface shoe, deepest water well, or **Fox Hills**).

- 19) Circulate a MINIMUM of 2 bottoms up volumes (74 bbls) or until well is free of oil, gas, or any large cuttings.

Length (ft)	Vol Factor (bbls/ft)	Volume (bbls)
456	0.0440	20.06
218	0.0775	16.90
TOTAL x 2:		74

- 20) Perform flow check for 5 minutes to ensure well is static and record current fluid weight in WellView.

- 21) Unland production casing.

- 22) POOH and LD production casing filling pipe every 6 joints.

- 23) RIH w/ workstring to 674' (top of casing).

- 24) Establish circulation before first of 2 cement jobs.

- 25) Pump 10 bbls Mud Flush (or similar spacer) followed by 125 sx of 15.8 ppg Enhanced PlugCEM Halliburton cement as a balanced plug. Goal is to pump at least a 300' plug that comes at least 50' into the surface casing.

Length (ft)	Vol Factor (bbls/ft)	Volume (bbls)	Volume (ft ³)	Yield (ft ³ /sk)	Cement (sk)	Next Nearest 5sk
82	0.0636	5.22	29.28	1.21	24.20	--
218	0.0971	21.17	118.86	1.21	98.23	--
TOTAL:					122.43	125

Calculations assume 10" open hole.

- 26) POOH w/ workstring. SDFN and release Halliburton crew. The next day, ensure that well has no pressure prior to pumping a second plug. If pressure is present, contact the engineer. Plan on Class G Neat cement for second plug.

- 27) When it is confirmed there is no wellhead pressure, RIH to tag Enhanced PlugCEM plug. Adjust volumes to pump a cement plug to surface. Under the assumptions of the previous plug, actual depth would be tagged at 368'. Pump approximately 115 sx of Class G Neat cement.

Length (ft)	Vol Factor (bbls/ft)	Volume (bbls)	Volume (ft ³)	Yield (ft ³ /sk)	Cement (sk)	Next Nearest 5sk
368	0.0636	23.40	131.42	1.15	114.28	115

- 28) POOH w/ workstring. Top off cement if needed. Cement needs to be ~10' from surface.

- 29) ND BOP. Top off cement as needed.

- 30) RDMO.