

LUPPENS 5-19

P&A Procedure

Engineer: Brian Ulmer (Cell #303-905-4467)

Date: 4/24/17

**LOCATION:**

Qtr/Qtr: SWNW Section: 19 Township: 6N Range: 64W
 Footages: 2185 FNL & 465 FWL
 COUNTY: WELD STATE: CO API #: 05-123-23283

WELL DATA:

Surface Csg: 8.625" 24# J-55 @ 671' KB KB Elevation: 4687'
 Surface Cmt: 470 sx GL Elevation: 4675'
 Long St Csg: 4.5" 11.6# I-80 @ 7120' KB TD: 7120' KB
 Long St Cmt: 455 sx PBTD: 7078' KB
 Long St Date: 10/17/2005

Plug Back (Sand or CIBP): Pushed CIBP to bottom
 Perforation Interval (1): Niobrara Perforations: 6660-6886' KB
 Perforation Interval (2): Codell Perforations: 6952-6966' KB
 Perforation Interval (3): _____
 Tubing: 2.375" 4.7# J-55 @ 6938' KB Rods: _____
 Pump: _____
 Misc.: _____

PRODUCTION STATUS:

Long term Shut in

BRADENHEAD:

No issues

FOX HILLS COVERAGE:

Yes

COMMENTS:

Parkman wells within one mile

PROCEDURE:

- 1) MIRU workover rig, pump, and tank.
- 2) Blow down well and roll hole with fresh water, if possible.
- 3) ND WH, NU BOP.
- 4) POOH and stand back tbq.
- 5) RU WL and RIH w/ CIBP and set @ 6610'
- 6) Dump bail 2 sx of Class G Neat cement on top of CIBP. TOC @ 6584'
- 7) 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.
- 8) RIH w/ workstring to 4080'. Pump 60 sx balanced plug of Class G Neat cement. New TOC: 3340'

Length (ft)	OD (in)	ID (in)	ft ³ /ft	Volume (ft ³)	Yield (ft ³ /sk)	Cement (sk)	Nearest 5sk
740	4.000	0.000	0.087	65	1.150	56	60
						TOTAL:	60

- 9) RIH w/ 1' perforating gun and shoot 4-6 spf @ 2500'
- 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 210 sx of Class G Neat cement.

Length (ft)	OD (in)	ID (in)	ft ³ /ft	Volume (ft ³)	Yield (ft ³ /sk)	Cement (sk)	Nearest 5sk
500	10.000	4.500	0.435	217	1.150	189	190
100	4.000	0.000	0.087	9	1.150	8	10
2 bbl on top of CICR				11	1.150	10	10
						TOTAL:	210

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. (BBL/ft)	Disp (BBL)	Disp -2BBL
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 871'.

19) Circulate a MINIMUM of 2 bottoms up volumes (90 bbls) or until well is free of oil, gas, or any large cuttings.

Length (ft)	OD (in)	ID (in)	BBL/ft	Disp (BBL)	2x Disp (BBL)
671	8.097	4.500	0.0440	30	59
1	12.250	4.500	0.1261	0	0
199	10.000	4.500	0.0775	15	31
TOTAL:				90	

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 921' (50ft inside top of casing cut).

24) Establish circulation.

25) Pump 10 bbls Mud Flush (or similar spacer) followed by 315 sx of Class G Neat cement as a balanced plug. TOC @ Surface.

Length (ft)	OD (in)	ID (in)	ft ³ /ft	Volume (ft ³)	Yield (ft ³ /sk)	Cement (sk)	Nearest 5sk
671	8.097	0.000	0.358	240	1.150	209	210
1	12.250	0.000	0.818	1	1.150	1	5
199	10.000	0.000	0.545	109	1.150	94	95
50	4.000	0.000	0.087	4	1.150	4	5
TOTAL:						315	

25) POOH workstring. Top off cement as needed. Cement needs to be ~10' from surface.

26) ND BOP.

27) RDMO.

NOBLE ENERGY INC.
LUPPENS 5-19
SWNW 19-6N-64W
2185 FNL & 465 FWL
WELD COUNTY, CO
Wattenberg
PROPOSED WELLBORE SCHEMATIC
for P&A
Date: 4/24/17
Drawing not to scale

API: 05-123-23283

GL Elev: 4675'
 KB Elev: 4687'

Spud Date: 10/12/2005

Surface Casing:
 8.625" 24# J-55 @ 671' KB
 Cement: 470 sx
 TOC: Surface

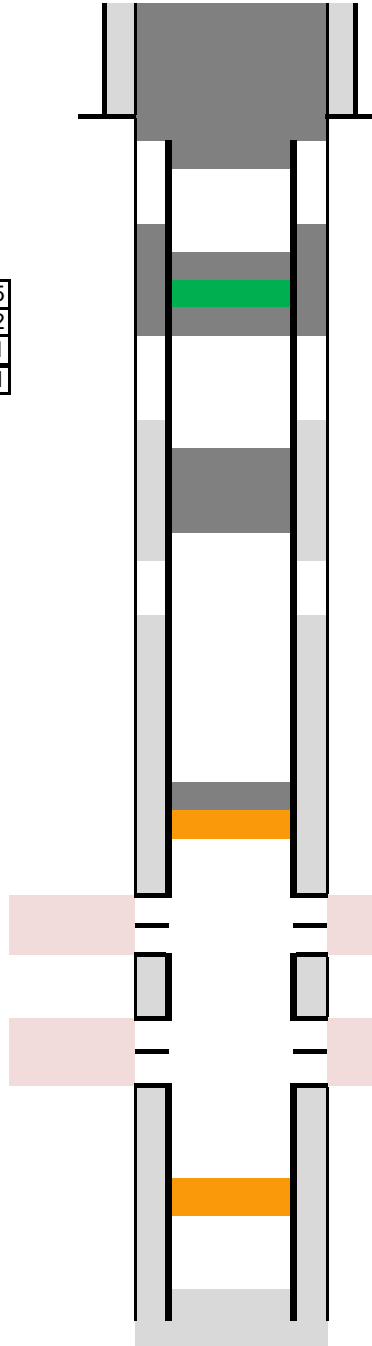
Water Well	575	775
FH:	332	532
Sfc Casing	671	871
Min. shoe plug depth:		871

TOC @ 3088'
Parkman top: 3547'
Parkman base: 3976'

Cement bottom: 4528'

TOC @ 6076'

Production Casing:
 4.5" 11.6# I-80 @ 7120' KB
 Cement: 455 sx
 TD: 10/17/2005



Cut surface casing off 6'-8' below surface.

TOC @ Surface

Cut production casing @ 871'
Pump 315 sx cement @ 921' (50' into casing top)

Perforate 2500'
CICR @ 2400'
Pump 210 sx Cement
TOC: 2000' annulus, 2271' in pipe

TOC: 6584'
Set CIBP @ 6610' w/ 2sx cement on top

Niobrara Perforations: 6660-6886' KB

Codell Perforations: 6952-6966' KB

TD: 7120' KB

LEGEND	
Existing Cement	
New Cement	
CICR	
CIBP	
Existing BP	
Sand Plug	