



# Ikenouye 01

## P&A Procedure

Engineer: Sarah McDonnell (832-247-2575)

Revised: 4/3/2017 (original by Garrett)

### LOCATION:

Qtr/Qtr: SESE Section: 29 Township: 5N Range: 65W  
Footages: 660 FSL & 660 FEL  
COUNTY: WELD STATE: CO API #: 05-123-11621

### WELL DATA:

Surface Csg: 8-5/8" 24# @ 517' KB Elevation: 4656'  
Surface Cmt: 365 sx GL Elevation: 4645'  
Long St Csg: 4-1/2" 10.5# J-55 @ 7,173 TD: 7184'  
Long St Cmt: 250 sx PBTD: 7128'  
Long St Date: 2/10/1984

Plug Back (Sand or CIBP): Sand  
Perforation Interval (1): Niobrara Perforations: 6,750 -6,898'  
Perforation Interval (2): Codell Perforations: 7,048-7,064'  
Perforation Interval (3):  
Tubing: 2-3/8" 4.7# J-55 @ 7,031' Rods:  
Pump:  
Misc.:

### PRODUCTION STATUS:

BRADENHEAD: SI  
FOX HILLS COVERAGE: Latest brhd pressure: 100 psi- oil at surface  
COMMENTS: Covered  
Producing Sussex within mile

### PROCEDURE:

- 1) Perform Form 17 if not done already. If the beginning pressure is greater than 25 psi, any pressure remains at the conclusion of the test, or if liquids were present; call COGCC engineer for sampling requirements. Submit form 17 within 10 days.
- 2) MIRU Workover rig, pump & tank.
- 3) Blow down well and roll hole with fresh water, if possible.
- 4) ND WH, NU BOP.
- 5) POOH and LD tbq.
- 6) RIH w/ CIBP on wireline and set @ 6,700'.
- 7) Dump bail 2 sx of Class G Neat cement on top of CIBP.
- 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 @ 4,480' (TOC ~ 6000').
- 10) RIH w/ CICR on workstring and set @ 4,380' (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 170 sx of 15.8 PlugCEM from HES w/ Gaschek.

Length (ft)	OD (in)	ID (in)	Volume Factor (bbl/ft)	Volume (bbls)	Volume (ft^3)	Yield (ft^3/sk)	Cement (sx)
450	10.000	4.500	0.0775	35	196	1.209	162
100	4.052	0.000	0.0159	1.6	9	1.209	7

\*Calculations assume 10" open hole.

- 14) Displace cement with 15 bbls fresh water (2 bbls short of workstring volume).

Tubing ID	Length (ft)	Disp. Factor (BBL/ft)	Disp (BBL)	Disp -2BBL
1.995	4380	0.00387	17	15

- 15) Unsting from CICR.

- 16) Place 2 bbls (10 sx) of cement on top of CICR. Allow to fall on CICR as pulling out.

- 17) POOH w/ workstring.

- 18) RIH w/ 1' perforating gun and shoot 4-6 spf @ 2,319' (TOC ~ 4030').

- 19) RIH w/ CICR on workstring and set @ 2,219' (100' above perforations).

- 20) 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.

- 21) Establish injection rate.

- 22) Pump 10 bbls Mud Flush (or similar spacer) followed by 190 sx of 15.8 PlugCEM from HES w/ Gaschek.

Length (ft)	OD (in)	ID (in)	Volume Factor (bbl/ft)	Volume (bbls)	Volume (ft^3)	Yield (ft^3/sk)	Cement (sx)
500	10.000	4.500	0.0775	39	217	1.209	180
100	4.052	0.000	0.0159	2	9	1.209	7
<b>TOTAL</b>							<b>187</b>

\*Calculations assume 10" open hole.

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

Tubing ID	Length (ft)	Disp. Factor (BBL/ft)	Disp (BBL)	Disp -2BBL
1.995	2219	0.00387	9	7

- 24) Unsting from CICR.

- 25) Place 2 bbls (10 sx) of cement on top of CICR. Allow to fall on CICR as pulling out.

- 26) POOH w/ workstring.

- 27) RIH w/ WL and cut production casing at 717' (200' below surface shoe or deepest water well).

- 28) Circulate a MINIMUM of 2 bottoms up volumes (76 bbls) or until well is free of oil, gas, or any large cuttings.

Length (ft)	OD (in)	ID (in)	bbl/ft	Volume (bbls)	2x Disp (bbl)
517	8.097	4.500	0.0440	23	46
0	12.250	4.500	0.1261	0	0
200	10.000	4.500	0.0775	15	31
<b>TOTAL:</b>					<b>76</b>

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

- 30) Unland production casing.

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

- 32) RIH w/ workstring to 767' (50' inside of casing).

- 33) Establish circulation.

- 34) Pump 10 bbls Mud Flush (or similar spacer) followed by 110 sx of 15.8 ppg PlugCem from HES cement w/ Gaschek as a balanced plug. SDFN and ensure that well has no pressure prior to pumping second plug to surface. If pressure is present, contact engineer.

Length (ft)	OD (in)	ID (in)	Volume Factor (bbl/ft)	Volume (bbls)	Volume (ft^3)	Yield (ft^3/sk)	Cement (sx)
50	8.097	0	0.0637	3	18	1.209	15

0	12.25	0	0.1458	0	0	1.209	0
200	10	0	0.0971	19	109	1.209	90
50	4.052	0	0.0159	1	4	1.209	4
<b>TOTAL</b>							<b>109</b>

35) Pump 150 sx of Class G Neat cement, TOC should be at surface.

Length (ft)	OD (in)	ID (in)	Volume Factor (bbl/ft)	Volume (bbls)	Volume (ft^3)	Yield (ft^3/sk)	Cement (sx)
467	8.097	0	0.0637	30	167	1.15	145

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

37) ND BOP.

38) RDMO.

# NOBLE ENERGY INC.

Ikenouye 01  
SESE 29-5N-65W  
660 FSL & 660 FEL  
WELD COUNTY, CO

Wattenberg

## CURRENT WELLBORE SCHEMATIC with PROPOSED P&A 4/3/2017

LEGEND	
Existing Cement	
New Cement	
CICR	
CIBP	
Existing BP	
Sand Plug	

API: 05-123-11621  
COGCC #

GL Elev: 4645'  
KB Elev: 4656'

Spud Date: 2/3/1984

### Surface Casing :

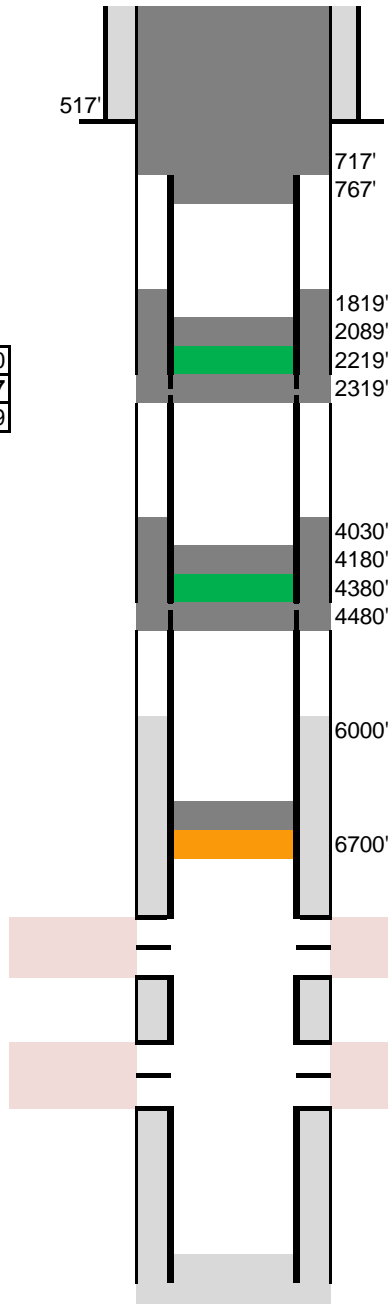
8-5/8" 24# @ 517'  
Cement: 365 sx  
TOC: Surface

WW	220	420
SC	517	717
FH	319	519

TOC @ 6000'  
Nio Log Top: 6744'

### Production Casing :

4-1/2" 10.5# J-55 @ 7,173  
Cement: 250 sx



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

### TOC @ surface

Pump 150 sx cement shoe plug to surface  
Pump 110 sx cement (w/ Gaschek) @ 767'  
Cut surfacing casing at 717'

### TOC: 1819' in annulus, 2089' in pipe

Pump 190 sx cement (w/ Gaschek) through @ 2 bbls on top  
CICR @ 2,219'  
Perforate @ 2,319'

### TOC: 4,030' in annulus, 4,180' in pipe

Pump 170 sx cement (w/ Gaschek) through @ 2 bbls on top  
CICR @ 4,380'  
Perforate @ 4,480'

Set CIBP @ 6,700' w/ 2 sx cement on top

Niobrara Perforations: 6,750 -6,898'

Codell Perforations: 7,048-7,064'

TD: 7184'