

Critical Well Notes

- Artificial lift method - CO-ROD, insert pump
- *Required 10% excess cement for every 1000' depth (included in proposed calculations)*
- *Rule 434.a.(5) Plug and Abandon - The Operator will not cap or seal the well until 5 days after placing the last plug to allow monitoring for successful plugging and will cap or seal the Well within 90 days after placing last plug.*

Offline Activity

- Hot oil will be required to free up co-rod
- Use pulling unit to fish co-rod offline

Procedure - Rig Only

- 1 MIRU pulling service rig
- 2 Check pressure on all casing and tubing strings. Verify no pressure and observe well for 15 minutes to verify no flow. Kill well with available kill fluids, brine if necessary.
 - 1 Trickle kill fluid down production casing as needed to keep well dead
- 3 N/U stump-tested BOPE.
 - 1 Install BPV in tubing hanger. N/D production tree.
 - 2 Install 5k Class III BOP and pressure test 250 psi low and 1000 psi, MASP, or max anticipated pressure (whichever is larger) high for 5 min each.
- 4 Assuming all co-rod has been removed, plan to TOH with 2-7/8" work string
- 5 R/U wireline. Run in hole with gauge ring to planned set depth of CICR. POOH with same.
- 6 Perforate 5-1/2" liner 50' below shoe at a perforation depth of 4055'. POOH with wireline.
- 7 M/U CICR to wireline and RIH to set at proposed set depth 3970' above 5-1/2" liner lap
- 8 Conduct pressure test of casing, CICR to 500 psi for 15 minutes. Document results in WellView.
 - 1 Discuss picking up squeeze packer if casing failed previous pressure test
- 9 Bubble test all annuli for 30 minutes each and document results in WellView under daily pressures
- 10 TIH with tubing string (and squeeze packer if necessary) to tag CICR if work string was picked up
- 11 Plug #1: mech. barrier + cement to isolate open hole producing interval
 - 1 Sting into retainer and establish injection through slotted liner, perforations
 - 2 Squeeze total of 46 sacks Class G cement below cement retainer
 - 2 Spot 55 sacks Class G cement from 3970' to 3800'
- 12 Plug #2: establish tested barrier between producing zone and surface shoe
 - 1 Perforate at 1500'
 - 2 Establish circulation / injection
 - 3 Squeeze / circulate cement from 1500' to 1000' with 197 sacks Class G cement
 - 4 WOC, tag pressure test. Minimum tag depth is 1400' (100' above abandonment perforation)
- 13 Plug #3: Isolate 10-3/4" shoe, surface
 - 1 Perforate at 670'
 - 2 Establish circulation to surface
 - 3 Conduct bubble test to ensure no gas migration
 - 4 Bubble test passes, plan to circulate job total 264 sacks Class G cement to bring cement to surface in and out
- 14 Discuss with engineer any changes to proposed plan forward during execution

Plug

Summary Table	Base	Top	Volume	Perf & Squeeze	Notes
Squeeze below CICR	4055	3970	46	YES	

6/16/2022

Wilson Creek #69
API: 05-103-09693

Revision #: 1

Niobrara Producing Zone	3970	3800	55	NO	
Courtesy barrier plug	1500	1000	197	YES	
Surface isolation	670	0	264	YES	
Total Sacks	562				
Total Perf & Squeeze			3		
Total Spot			1		