

## Short Procedure: NAP Government 2-A - P&A

**Background:** Well is a flowing gas producer operated by Mont Rouge, LLC. Little is known about the well other than casing sizes, cement volumes, and perforation / formation depths. Likely 2-7/8" tubing. Plan to P&A wellbore.

**10/28/19:** Per Mont Rouge pumper, flowing well with no AL. Historical SI pressure ~400 psi. Unlikely to have a downhole packer, but could not confirm.

It is up to the WSR, Workover Engineer and Production Engineer to make the decisions necessary to safely do what is best for the well.

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	Travis Garza	Workover Superintendent	970-210-6780
	Rose Mizell	Production Engineer	970-257-6092

**WellSafe Procedure Required:** Yes, P&A operation\*  
*\*Pending Exception*

**MASP:** 500 psi

**Short Procedure:** For procedure specifics, WSRs will need to refer to the Well Intervention Standard Procedure or Rangely WPT.

**NOTE: Refer to Anita Sanford's Regulatory/Permitting Document for Rangely prior to executing any work on the well. Need to ensure proper notifications have been made to all regulatory bodies before initiating job. If unsure of requirements consult with workover engineer.**

**NOTE: Also refer to COA's found in the Regulatory folder on the O Drive. Ensure operations are compliant with BLM/COGCC requirements. Notify CRVFO inspectors 48hrs prior to operations (contact info in COA).**

0. Ahead of the rig, MOB A&W & PLS to perform diagnostic work. Check pressure on all casing strings & bleed off same. Attempt to pump down tubing x casing annulus to determine if there is a packer, test to 1,000 psi for 5 min or pump until the well is full & confirm injection, chart not necessary. Attempt to pump down tubing to determine if there is a tubing plug. Report findings to WOE.

MIRU PLS. Test lubricator to 500 psi for 5 min. RIH with blind box / CCL to deepest depth possible to determine tubular details & ensure no plug / restrictions.

**NOTE: Record casing pressures & diagnostic tests in WellView**

	<p>1. MIRU workover rig and equipment. Check pressure on all casing strings (including bradenhead). <b><u>Record tubing and casing pressures every day on the WellView report.</u></b></p>
	<p>2. Set BPV in hanger (<b>WSEA 10A</b>), if possible. N/D tree. <b>N/U 7-1/16" 5K BOP with Washington head, 5K annular and 2-7/8" pipe rams on top of blind rams (WSEA 8A).</b> Pull BPV. <b>Test BOPE to 5 minute 250 psi low/ 10 minute 500 psi high. (WSEA 9)</b></p>
	<p>3. Caliper elevators and document in WellView. If it is determined there is a packer, attempt to release and TOH L/D production tubing. If there is no packer, and tubing doesn't pull free, attempt to release TAC.</p> <p><b>NOTE: Tubing details unknown. Likely 2-7/8" tubing</b></p>
	<p>4. If unable to pull tubing, MIRU W/L. N/U lubricator and test to 500 psi for 5 minutes. RIH with gauge ring to EOT. POOH. RIH with mechanical cutter / CCL and cut tubing above packer.</p> <p><b>NOTE: Discuss cut depth with fishing hand and WOE prior to making cut.</b></p>
	<p>5. TOH L/D tubing. Fish packer/TAC and remaining tailpipe per Prime fishing</p>
	<p>6. P/U 6-1/8" bit and scraper BHA on 2 7/8" workstring. TIH and scrape casing down to top perf at 4,230'. At a minimum, must cleanout to 4,130'. TOH.</p> <p><b>Note: Perf depths at 4,230' - 4,244'.</b></p>
	<p>7. RIH with Kline 7" CIBP and 7" TST packer. Set CIBP at +/- 4,180' (must set CIBP between 4,180' - 4,130'). If necessary, circulate freshwater. Test CIBP/casing to 500 psi for 15 minutes. If casing does not test, isolate leak with TST packer. TOH</p> <p><b>NOTE: Discuss leak interval with WOE and Superintendent. Planned cement plugs may isolate leak.</b></p>

8. MIRU Cutters wireline. N/U and test lubricator to 500 psi for 5 minutes. Run CBL/CCL/GR from top of CIBP at 4,180' to surface. **Immediately** send copies to WOE, Superintendent, and Anita Sanford. **Verify TOC with WOE, Supt, and PE & notify Craig Burger (COGCC) & BLM for approval.**

**BLM Contacts:**

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**NOTE: TOC will determine cement plug depths. *Do not continue to next step without COGCC concurrence of TOC.***

9. RIH with 2-7/8" workstring to top of CIBP at 4,180'. Spot ~150' (~29 sks / 5.9 bbls) 15.8ppg, 1.15 cu.ft/sk Class G cement plug on top of CIBP. Pull up 100' above TOC and reverse clean wellbore volume with freshwater. WOC.

**NOTE: Minimum 100' verified cement above CIBP is required. Per BLM COA, water will be used between plugs.**

10. **Test Cement Plug #1 with at least one of the following (WSEA 10B):**  
1) Pressure Test to 300 psi for 15 minutes with freshwater  
2) Tag TOC with 10klbs weight with pumps on  
3) Tag TOC with 10klbs weight with pumps off (if cement has set up overnight)

**NOTE: Preferred to test with option 1 AND option 2. 1st barrier to Dakota**

11. Spot end of stinger at TOC of cement plug #1 (+/- 4,030'). Spot ~344' (~66 sks / 13.5 bbls) 15.8ppg, 1.15 cu.ft/sk Class G balanced cement plug. Pull ~100' above TOC and reverse circulate clean with freshwater.

**Plug depth dependent on verified TOC per CBL. Verify with WOE prior to pumping.**

**Note: TOC to be at least 100' above the top of the Dakota.**

12.	<p><b>Test Cement Plug #2 with at least one of the following (WSEA 10C):</b></p> <ol style="list-style-type: none"> <li>1) Pressure Test to 300 psi for 15 minutes with freshwater</li> <li>2) Tag TOC with 10klbs weight with pumps on</li> <li>3) Tag TOC with 10klbs weight with pumps off (if cement has set up overnight)</li> </ol> <p><b>NOTE: Preferred to test with option 2. Cement plug must be at least 100'. 2nd barrier to Dakota.</b></p>
13.	<p>MIRU PLS. N/U lubricator and test to 500 psi for 5 minutes. RIH with perforating guns and perforate 7" casing at 800'. POOH with spent guns, ensure all shots fired. Note perforations in WellView under applicable tab.</p>
14.	<p>Establish circulation rate/pressures from surface, not to exceed 1,000 psi. MIRU cement provider. Test lines to 500 psi above circulation pressure. Circulate 15.8 ppg, 1.15 ft<sup>3</sup>/sk, Class "G" cement until cement returns to surface (~ 265 sks / 54 bbls). WOC to achieve 500 psi compressive strength. <b>Tag surface plug with string weight to verify placement (WSEA 10E).</b></p>
15.	<p>N/D BOPE. Cut all casing and anchors &amp; remove to 4' below grade. Verify cmt to surface. Weld on dry hole marker.</p>
16.	<p>Notify EMC that location is ready for final reclamation. Complete Ownership Transfer Document from D&amp;C to Operations. RDMO workover rig and equipment. <b>ENSURE LOCATION IS CLEAN.</b></p>