

**KERR-MCGEE OIL AND GAS ONSHORE LP**  
**WITTEMYER 40-2**  
**SE NE 2 2N 67W 1,476' FNL 1,229' FEL**  
**LAT: 40.17020      LONG: -104.85270**  
**WELD,COLORADO**

09/19/2013

AREA: S1      ROUTE: S12      Spud: 06/20/2010      WINS No.: C5488      AFE/WO#: 88415111      API#: 0512330871

GL: 4841      KB: 4855      MTD: 8245      TVD: 7964      LOG MD:      PBMD: 8188      PBTVD: 7907

Directions:      WCR 24 1/2 & WCR 23 W 1/10, N 2/10 INTO

<u>TUBULARS</u>	<u>Tool Type</u>	<u>Joints</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Thread</u>	<u>Condition</u>	<u>Top D</u>	<u>Bottom D</u>
<b>SURFACE CASING</b>									
	Casing	20	8.63	24.00	J-55	STC	NEW	14	863
	Saw Tooth Shoe	1	8.63		J-55			863	864
<b>PRODUCTION CASING</b>									
	Casing	188	4.50	11.60	I-80	8RD LTC	NEW	14	8188
	Latch Down Baffle	1	4.50		I-80			8188	8188
	Casing	1	4.50	11.60	I-80	8RD LTC	NEW	8188	8225
	Casing Float Shoe	1	4.50		I-80			8225	8226
<b>PRODUCTION TUBING</b>									
	Tubing	241	2.38	4.70	J-55	External-Ups		14	7590
	Seating Nipple	1						7590	7591
	Wellbore Equipment	1						7591	7592

<u>CEMENT TYPE</u>	<u>Stage</u>	<u>Sacks</u>	<u>Cement Type</u>	<u>Top D</u>	<u>Btn D</u>	<u>cbf</u>	<u>est</u>	<u>Comments</u>
<b>SURFACE CASING CEMENT</b>								
	PRIM CMT 1ST STAGE	540	LEAD TYPE 3	14	864	No		FULL 6.00
<b>PRODUCTION CASING CEMENT</b>								
	PRIM CMT 1ST STAGE	828	LEAD 35/65 POZ-MIX	1730	7000	Yes	No	
	PRIM CMT 1ST STAGE	217	TAIL 35/65 POZ-MIX	7000	8245	Yes	No	

<u>PERFORATIONS</u>									
<u>Formation</u>	<u>Zone</u>	<u>Top</u>	<u>Btn</u>	<u>spf</u>	<u>Shots</u>	<u>Date</u>	<u>Reason</u>	<u>Comments</u>	<u>Producing</u>
NIOBRARA	B	7420	7432	3	36	07/12/2010	PRODUCTION		Yes
NIOBRARA	C	7480	7486	3	18	07/12/2010	PRODUCTION		Yes
NIOBRARA	C	7506	7512	3	18	07/12/2010	PRODUCTION		Yes
CODELL		7631	7649	3	54	07/08/2010	PRODUCTION		Yes

Comments:      Well needs Bradenhead work completed.  
Well is to be worked in due to Eagle Window.  
Nio top: 7410'; TOC: 1750'  
NPV: 351M; No known casing issues.

**Proposed Completion Procedure**

1. NOTE: DEVIATION SUMMARY REPORT IN OPENWELLS SO GYRO NOT NEEDED.
2. Level location for base beam rig.
3. Call Foreman or Field Coordinator before rig up to catch plunger, isolate production equipment, and ask if replacement parts/equipment are requested. Operations need to hook up the Bradenhead pressure and bleed off the pressure before the rig gets on location.
4. Check and report surface casing pressure. If surface casing is not accessible at ground level, re-plumb so valve is at ground level.
5. Spot a minimum of 25 jts 2-3/8", 6.5#, J-55 EUE TBG for replacement and 135 jts 1-1/4", 2.33#/ft, J-55 10rd IJ for annular cement job.
6. MIRU slickline. Fish production equipment as necessary and tag fill. Note tagged depth in OpenWells. Last tagged depth was 8188' on 9/21/2010 (Bottom Codell perf: 7649'). RDMO slickline.
7. MIRU WO rig, flat tank, and pump. Blow surface casing down to tank and load surface casing with biocide treated fresh water. Kill well, as necessary, with biocide treated fresh water. ND WH. NU BOPE.
8. Unseat landing joint and lay down.
9. MIRU EMI services (last EMI date: never EMI'd). TOOH with 2-3/8" TBG. EMI on TOOH. LD joints with wall loss or penetrations > 35%. Replace joints as necessary. \*\*Keep yellow & blue band tubing. Note joint number and depth of tubing leak(s) on PRODUCTION EQUIPMENT FAILURE REPORT IN OPEN WELLS.
10. TIH with 2-3/8" TBG & RBP suitable for 4.5", 11.6#, I-80 casing. Set RBP at 4100'. (Collars at 4078' & 4122').

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11. Circulate gas out of well and pressure test RBP & CSG to 2000 psi for 15 min. Dump 2 sx sand on top of RBP & TOO H while standing back TBG.
12. MIRU WL services. TIH w/chemical cutter to +/- 750' (inside of surface casing). Cut 4-1/2" CSG at +/-750' and TOO H with wireline tools. Standby wireline.
13. TOO H & SB 4-1/2" CSG.
14. PU & TIH w/overshot and 4-1/2" CSG & latch on to 4-1/2" CSG at +/- 750'.
15. PU & TIH on wireline with freepoint tool and determine if CSG is free at +/- 1654'. TOO H with freepoint tools.
16. PU & TIH with string shot and shoot at coupling at +/- 1654'. TOO H with wireline tools and RDMO WL.
17. TOO H & SB 4-1/2" CSG.
18. PU & RIH with sklrtd sub, ported collar, and 4-1/2" CSG and thread back into backed off casing coupling at +/- 1654'.
19. PU & TIH with shifting tool and 2-3/8" TBG to ported collar above casing coupling at +/-1654'. Open ported collar.
20. MIRU cement services. Establish injection rate with biocide treated water through ported collar at +/- 1654'. Mix and pump cement job as follows: Freshwater spacer, 20 bbls Sodium Metasilicate, 385 sx 15.8 ppg neat Class G cement with 1/4#/sx cello-flake. (Attempt to cement from 1654' to 100').
21. Displace to end of tubing. Close ported collar and TIH with 4 joints 2-3/8" TBG. Reverse circulate 2 times the tubing volume or until returns clean up.
22. Trip out of the hole with tubing and shut in overnight.
23. Rig down cementing services.
24. MIRU wireline services.
25. PU and RIH with CCL-GR-CBL-VDL. Run from 1800' to surface, or the top of cement. RDMO wireline. If the cement is not above 100' then contact engineer.
26. PU and TIH with 2-3/8" TBG & retrieving head. Circulate sand off RBP, latch RBP and TOO H standing back TBG & laying down retrieving head and RBP.
27. If clean out is not necessary, skip to the next step. PU and TIH with bailer (hydrostatic or bulldog) and clean out to at least 7886'. (Bottom Codell perf 7649') TOO H and SB 2-3/8" TBG & LD bailer.
28. PU and TIH with NC, XN profile nipple, and 2-3/8" TBG and land well at 7600', which is approximately 1 joint above the top Codell perf.
29. RU rig lubricator. Broach tubing to XN nipple. RD rig lubricator.
30. ND BOPE. NU WH. RDMO WO Rig.
31. Clean location and swab if necessary. Notify Foreman or Field Coordinator of completed workover operations and turn well over to production team.

**Proposed Perforation Intervals**

Top	Btm	Zone	Comments

Engineer: RAMSEY KING: 720-201-7252

Foreman: KEITH LEBSACK: 970-590-6255

Lead Pumper: MARK YOUNG: 970-301-1555

Authorized By: JACK HARBISON/CORY EIKENBERG