

OCCIDENTAL PETROLEUM CORPORATION

Please contact your area engineer with any questions concerning this procedure.

5/5/2021

**PLUG and ABANDONMENT PROCEDURE**

HSR-MILLER 3-33A

API: 05-123-20023

WINS: 73899



**Step Description**

|    |  |
|----|--|
| 1  | Review Previous Open Wells Reports/Well History. If you have questions or concerns, contact Foreman/Engineer.  |
| 2  | <b>COA: Provide 48 hour notice to COGCC prior to rig up per request on approved Form 6 (e.g. call field coordinator, submit Form 42, etc.).</b>  |
| 3  | Notify Automation Removal Group at least 24 hours prior to rig move. Request they catch and remove plunger, isolate production equipment, and remove any automation prior to rig MIRU.   |
| 4  | MIRU Slickline. Pull production equipment and tag bottom. Record tag depth, casing/tubing pressures and fluid level in Open Wells. Gyro was run on 08/09/11. RDMO Slickline.   |
| 5  | Prepare location for base beam equipped rig. Install perimeter fence as needed.  |
| 6  | <b>COA: Verify Form 17 (State Bradenhead Test) has been run within 60 days of RU.</b>  |
| 7  | <b>Refer to the Rockies Well Services Guidelines document whenever rigging up BOP and WL, or whenever tripping in or out of the well. Consult with Foreman/Engineer before deviating from these guidelines.</b>  |
| 8  | Upon RU, check and record bradenhead pressure. If bradenhead valve is not accessible, re-plumb so that valve is above GL. Blow down bradenhead and leave open during working hours. Re-check pressure each day and input value in the "Casing press." box in Open Wells.   |
| 9  | MIRU WO rig. Verify BOP and wellhead rating, inspect for appropriate API standards, pressure test BOP. Kill well as necessary using biocide treated fresh water. ND WH. NU BOP. Unland tbg. <b>**Barrier Management**</b> Fluid will be the only barrier while NU BOP. Stop and review JSA.  |
| 10 | TOOH and SB 1560' of 2-3/8" tbg. LD remaining 2-3/8" tbg.  |
| 11 | MIRU WL. PU and RIH with (4-1/2", 11.6#) gauge ring to 7710'. POOH.  |
| 12 | PU and RIH with (4-1/2", 11.6#) CIBP and set at +/- 7700' (collars at 7689' & 7730'). POOH. RIH and dump 2 sx cement on CIBP. POOH.  |
| 13 | PU and RIH with (4-1/2", 11.6#) CIBP and set at +/- 7000' (collars at 6990' & 7020'). POOH. Slowly top fill well to clear out all gas. Pressure test CIBP to 500 psi. RIH and dump 2 sx cement on CIBP. POOH.  |
| 14 | <b>COA: Confirm and document static conditions in the well before placing the next plug. If there is evidence of pressure or fluid migration at any time after placing the Niobrara plug, contact Engineering.</b>   |
| 15 | MIRU WL. PU and RIH with one 3-1/8" perf gun. Shoot 16 squeeze holes at 2000'. POOH.   |
| 16 | Establish circulation to surface. Reverse circulate as needed. Use slugs of mud thinner and surfactant if required. Circulate the hole until returns are clean. Contact engineering if circulation cannot be achieved  |
| 17 | MIRU WL. PU and RIH with one 3-1/8" perf gun. Shoot 16 squeeze holes at 1500'. POOH. RDMO WL.  |
| 18 | PU and TIH with (4-1/2", 11.6#) CICR on 2-3/8" tbg. Set CICR at 1560'.   |
| 19 | MIRU cementers. Pump 10 bbls (min) of pre-flush, followed by 5 bbls fresh water spacer. Pump Squeeze: 225 sx (49.3 bbl or 277 cf) of the Upper AGM blend (2% CaCl & 4% Gyp, 15.8 ppg & 1.23 cf/sx). Underdisplace by 2 bbls. Volume is based on 440' in the casing below the CICR, 500' in the casing-hole annulus with 100% excess, and 125' on top of the CICR. Collect wet and dry samples of cement to be left on rig. RDMO Cementers. |
| 20 | Pull out of cement. TOOH to 1335'. Reverse circulate to ensure no cement is left in the tbg.   |
| 21 | TOOH and SB 770' of 2-3/8" tbg. LD stinger, and remaining tbg.   |
| 22 | <b>COA: WOC 8 hours. If there is evidence of pressure or fluid migration, contact Engineering as there will need to be additional remediation attempts before the SC shoe plug.</b>  |
| 23 | PU and TIH with mechanical cutter on 2-3/8" tbg. Cut 4-1/2", 11.6# casing at 770'. TOOH and LD cutter.   |
| 24 | Attempt to establish circulation and circulate (55 bbl) with biocide treated fresh water.  |
| 25 | ND BOP. ND TH. Un-land casing. Rig max pull shall be 100,000#. Max pull over string weight shall be 50,000#. If unable to unland, contact Foreman/Engineer. <b>**Barrier Management**</b> Fluid will be the only barrier while unlanding casing. Stop and review JSA.  |

|    |  |
|----|--|
| 26 | Install BOP on casing head with 4-1/2", 11.6# pipe rams. <b>**Barrier Management**</b> Fluid will be the only barrier while NU BOP. Stop and review JSA.   |
| 27 | TOOH and LD all 4-1/2", 11.6# casing. Remove 4-1/2", 11.6# pipe rams and install 2-3/8" pipe rams.   |
| 28 | TIH with mule shoe on 2-3/8" tubing to 770'. Establish circulation to surface with biocide treated fresh water and pump at least three hole-volumes (165 bbl) to clean up wellbore.  |
| 29 | <b>COA: Verify and document that all pressure and fluid migration has been eliminated prior to placing the SC shoe plug at 770'. If there is evidence of pressure or fluid migration, contact Engineering.</b>   |
| 30 | MIRU cementers. Pump 10 bbls (min) of pre-flush, followed by 5 bbls fresh water spacer. Pump Stub Plug: Pump 120 sx (26.3 bbl or 148 cf) of the Upper AGM blend (2% CaCl & 4% Gyp, 15.8 ppg & 1.23 cf/sx). Volume is based on 103' in 7.875" bit size open hole with 100% excess factor. 202' in the 8-5/8", 24# surface casing with no excess. The plug is designed to cover 770'-465'. Collect wet and dry samples of cement to be left on rig. RDMO Cementers. Notify engineering if circulation is ever lost during job. |
| 31 | <b>COA: If cement was not circulated to surface, then WOC 4 hours. Tag TOC. TOC must be 617' or shallower. If tag is too deep or there is evidence of pressure or fluid migration, contact Engineering.</b>  |
| 32 | Pull out of cement. TOOH to 60'. Reverse circulate tbq clean. WOC.   |
| 33 | TIH and tag cement to verify appropriate coverage above the surface casing shoe. Consult with Foreman/Engineer on when to PT casing. Pressure test casing to 500 psi and hold for 15 minutes. Notify engineering if tag is low or pressure test fails.   |
| 34 | TOOH. Lay down all tbq. ND BOP. Install night cap. RDMO WO rig.  |
| 35 | Instruct cementing and wireline contractors to e-mail copies of all job logs/job summaries to rscDJVendors@anadarko.com within 24 hours of completion of the job.  |
| 36 | Supervisor submit paper copies of all invoices, logs, and reports to VWP Engineering Specialist.   |
| 37 | Excavation crew to notify One Call to clear excavation area around wellhead and for flow lines.  |
| 38 | Excavate hole around surface casing enough to allow welder to cut casing a minimum 5' below ground level.  |
| 39 | Welder cut casing minimum 5' below ground level.   |
| 40 | Fill 8-5/8", 24# surface casing from 50' to surface with 16 sx (3.3 bbl or 19 cf) of cement (15.8 ppg & 1.15 cf/sx).   |
| 41 | Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number.   |
| 42 | Obtain GPS location data as per COGCC Rule 215 and send to rscDJVendors@anadarko.com.  |
| 43 | Properly abandon flow lines per Rule 1103. File electronic Form 42 once abandonment is complete.   |
| 44 | Back fill hole with fill. Clean location, and level.   |
| 45 | Submit Form 6 to COGCC ensuring to provide 'As performed' WBD identifying operations completed.  |

Deepest WW 1 mile: 635'; FHM: 1163'; Sussex Top: 4369'; Sussex Base: 4609'; Shannon Base: Absent; Niobrara Top: 7150'  
WELL HAS GYRO. Gyro was run on 08/09/11.

No known casing integrity issues.

SUSSEX/SHANNON NOT PRODUCTIVE WITHIN 1 MILE

Well was drilled by HS Resoruces.

Vertical Well.

State of Colorado  
Oil and Gas Conservation Commission



48 hour notice required

1120 Lincoln Street, Suite 801, Denver Colorado 80203 (303) 894-2100 Fax (303) 894-2109

**WELL ABANDONMENT REPORT**

Submit original plus one copy. This form is to be submitted as an intent whenever a plugging is planned on a borehole. The approved intent shall be valid for six months after the approval date after that period a new intent will be required. After the plugging is complete, this form and one copy shall again be submitted as a subsequent report of the work as actually completed.

Attachments:  
Proposed Procedure  
Proposed WBD  
Additional Information Pertinent to Abandonment

|  |                           |
|--|---------------------------|
| COGCC Operator Number: <u>47120</u>                          | Contact Name & Telephone  |
| Name of Operator: <u>Kerr-McGee Oil &amp; Gas Onshore LP</u> |                           |
| Address: <u>P. O. Box 173779</u>                             |                           |
| City: <u>Denver</u> State: <u>CO</u> Zip: <u>80217</u>       |                           |
| API Number <u>05-123-20023</u>                               |                           |
| Well Name: <u>HSR-MILLER</u>                                 | Well Number: <u>3-33A</u> |

Notice of Intent to Abandon

Reason for Abandonment:  Dry  Production Sub-economic  Mechanical Problems  Other Describe if Other

Casing to be Pulled:  Yes  No Estimated Depth: 770

Fish in Hole:  Yes  No If yes, explain details below

Wellbore has Uncemented Casing Leaks:  Yes  No If yes, explain details below

Details: \_\_\_\_\_

**Current and Previously Abandoned Zones**

| Formation     | Perforations - Top | Perforations - Bottom | Date Abandoned | Method of Isolation<br>(None, Retainer/Squeezed, BP/Cement Top, Bridge Plug, Cement Squeezed, BP/Squeezed) | Plug Depth |
|---------------|--------------------|-----------------------|----------------|--|------------|
| <u>J SAND</u> | <u>7782</u>        | <u>7852</u>           |                |  |            |
|               |                    |                       |                |  |            |
|               |                    |                       |                |  |            |
|               |                    |                       |                |  |            |
|               |                    |                       |                |  |            |

**Casing History**

All lines must be completed for the Casing History. The only choices available are listed to the right.

| Casing Type           | Size of Hole Fractions | Size of Casing Fractions | Grade       | Wt/Ft       | Csg/Lin Top | Setting Depth | Sacks Cement | Cement Bottom | Cement Top  | Status CAL - CBL - VISU |
|-----------------------|------------------------|--------------------------|-------------|-------------|-------------|---------------|--------------|---------------|-------------|-------------------------|
| <u>Surface String</u> | <u>12-1/4</u>          | <u>8-5/8</u>             | <u>J-55</u> | <u>24</u>   | <u>0</u>    | <u>667</u>    | <u>470</u>   | <u>667</u>    | <u>0</u>    | <u>VISU</u>             |
| <u>First String</u>   | <u>7-7/8</u>           | <u>4-1/2</u>             | <u>I-80</u> | <u>11.6</u> | <u>0</u>    | <u>7967</u>   | <u>250</u>   | <u>7967</u>   | <u>6660</u> | <u>CBL</u>              |
|                       |                        |                          |             |             |             |               |              |               |             |                         |
|                       |                        |                          |             |             |             |               |              |               |             |                         |

**Plugging Procedure for Intent and Subsequent Report**

NOTE: Two (2) sacks cement required on all CIBPs.

CIBP #1: Depth 7700 with 2 sacks cmt on top. CIBP #2 Depth 7000 with 2 sacks cmt on top.  
 CIBP #3: Depth \_\_\_\_\_ with \_\_\_\_\_ sacks cmt on top. CIBP #4 Depth \_\_\_\_\_ with \_\_\_\_\_ sacks cmt on top.  
 CIBP #5: Depth \_\_\_\_\_ with \_\_\_\_\_ sacks cmt on top. CIBP #6 Depth \_\_\_\_\_ with \_\_\_\_\_ sacks cmt on top.

|  |                            |             |           | Casing, Open Hole, Annulus, Stub Plug |  | Yes/No |
|--|----------------------------|-------------|-----------|---------------------------------------|--|--------|
| Set <u>10</u> sks cmt from <u>1560</u> ft. to <u>1435</u> ft. in | Casing Type: <u>Casing</u> | Plug Tagged | <u>No</u> |                                       |  |        |
| Set <u>16</u> sks cmt from <u>50</u> ft. to <u>0</u> ft. in      | Casing Type: <u>Casing</u> | Plug Tagged | <u>No</u> |                                       |  |        |
| Set _____ sks cmt from _____ ft. to _____ ft. in                 | Casing Type: _____         | Plug Tagged | _____     |                                       |  |        |
| Set _____ sks cmt from _____ ft. to _____ ft. in                 | Casing Type: _____         | Plug Tagged | _____     |                                       |  |        |
| Set _____ sks cmt from _____ ft. to _____ ft. in                 | Casing Type: _____         | Plug Tagged | _____     |                                       |  |        |

Perforate and squeeze at 2000 ft. with 215 sacks Leave at least 100 ft. in casing 1560 CICR Depth  
 Perforate and squeeze at \_\_\_\_\_ ft. with \_\_\_\_\_ sacks Leave at least 100 ft. in casing \_\_\_\_\_ CICR Depth  
 Perforate and squeeze at \_\_\_\_\_ ft. with \_\_\_\_\_ sacks Leave at least 100 ft. in casing \_\_\_\_\_ CICR Depth  
 Perforate and squeeze at \_\_\_\_\_ ft. with \_\_\_\_\_ sacks Leave at least 100 ft. in casing \_\_\_\_\_ CICR Depth  
 Set 120 sks half in, half out surface casing from 770 ft. to 617 ft.  
 Set 16 sks at surface  
 Cut four feet below ground level, weld on plate Above Ground Dry Hole Marker:  Yes  No  
 Set \_\_\_\_\_ sacks in rat hole Set \_\_\_\_\_ sacks in mouse hole

**Additional Plugging Information**

TECHNICAL DETAILS OR COMMENTS: ADD SEPERATE PAGE IF NECESSARY (STAGE CEMENT - STAGE TOOLS ETC.)