

Document Number:  
400730584

Date Received:  
11/13/2014

**WELL ABANDONMENT REPORT**

This form is to be submitted as an Intent to Abandon whenever an abandonment is planned on a borehole. After the abandonment is complete, this form shall again be submitted as a Subsequent Report of the actual work completed. The approved intent shall be valid for six months after the approval date, after that period, a new intent will be required. Attachments required with the Intent to Abandon are wellbore diagrams of the current configuration and the proposed configuration with plugs set.

A Subsequent Report of Abandonment shall indicate the actual work completed. Attachments required with a Subsequent Report are a wellbore diagram showing plugs that were set and casing remaining in the hole, the job summaries from all plugging contractors used, including wireline and cementing (third party verification) and any logs that may have been run during abandonment.

OGCC Operator Number: 47120 Contact Name: CHERYL LIGHT

Name of Operator: KERR MCGEE OIL & GAS ONSHORE LP Phone: (720) 929-6461

Address: P O BOX 173779 Fax: (720) 929-7461

City: DENVER State: CO Zip: 80217- Email: CHERYL.LIGHT@ANADARKO.COM

**For "Intent" 24 hour notice required,** Name: Precup, Jim Tel: (303) 726-3822

**COGCC contact:** Email: james.precup@state.co.us

API Number 05-123-08716-00

Well Name: GRANT BROS. 31-11 Well Number: 2

Location: QtrQtr: NWNE Section: 11 Township: 1N Range: 68W Meridian: 6

County: WELD Federal, Indian or State Lease Number: \_\_\_\_\_

Field Name: SPINDLE Field Number: 77900

Notice of Intent to Abandon       Subsequent Report of Abandonment

*Only Complete the Following Background Information for Intent to Abandon*

Latitude: 40.071261 Longitude: -104.968148

GPS Data:  
Date of Measurement: 04/01/2010 PDOP Reading: 4.5 GPS Instrument Operator's Name: Paul Tappy

Reason for Abandonment:  Dry  Production for Sub-economic  Mechanical Problems

Other \_\_\_\_\_

Casing to be pulled:  Yes  No Estimated Depth: 1250

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	Perf. Top	Perf. Btm	Abandoned Date	Method of Isolation	Plug Depth
SHANNON	5144	5160			
SUSSEX	4658	4701			

Total: 2 zone(s)

**Casing History**

Casing Type	Size of Hole	Size of Casing	Weight Per Foot	Setting Depth	Sacks Cement	Cement Bot	Cement Top	Status
SURF	12+1/4	8+5/8	23	616	400	616	0	VISU
1ST	7+7/8	5+1/2	15.5	5,267	350	5,267	4,470	CBL

## Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 80 with 25 sacks cmt on top. CIBP #2: Depth \_\_\_\_\_ with \_\_\_\_\_ 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.

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

Set 75 sks cmt from 4700 ft. to 4500 ft. Plug Type: CASING Plug Tagged:   
Set \_\_\_\_\_ sks cmt from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Plug Type: \_\_\_\_\_ Plug Tagged:   
Set \_\_\_\_\_ sks cmt from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Plug Type: \_\_\_\_\_ Plug Tagged:   
Set \_\_\_\_\_ sks cmt from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Plug Type: \_\_\_\_\_ Plug Tagged:   
Set \_\_\_\_\_ sks cmt from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Plug Type: \_\_\_\_\_ Plug Tagged:

Perforate and squeeze at 4701 ft. with 75 sacks. Leave at least 100 ft. in casing 4600 CICR Depth

Perforate and squeeze at 4380 ft. with 110 sacks. Leave at least 100 ft. in casing 4210 CICR Depth

Perforate and squeeze at \_\_\_\_\_ ft. with \_\_\_\_\_ sacks. Leave at least 100 ft. in casing \_\_\_\_\_ CICR Depth

(Cast Iron Cement Retainer Depth)

Set 360 sacks half in. half out surface casing from 1350 ft. to 416 ft. Plug Tagged:

Set 25 sacks 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 for Subsequent Report Only

Casing Recovered: \_\_\_\_\_ ft. of \_\_\_\_\_ inch casing Plugging Date: \_\_\_\_\_

\*Wireline Contractor: \_\_\_\_\_ \*Cementing Contractor: \_\_\_\_\_

Type of Cement and Additives Used: \_\_\_\_\_

Flowline/Pipeline has been abandoned per Rule 1103  Yes  No \*ATTACH JOB SUMMARY

Technical Detail/Comments:

Perforate and squeeze at 4701' - 4500' ft. with 75 sacks Leave at least 100 ft. in casing 4600' CICR Depth  
 Perforate and squeeze at 4380' & 4180' ft. with 110 sacks Leave at least 100 ft. in casing 4210' CICR Depth  
 9 PU & TIH with casing scraper for 5-1/2" 15.5# production casing to 4650' (last tagged at 5228' on 8/21/08). TOOH and stand back 4600' of 2-3/8" tubing. LD casing scraper and extra tubing.  
 10 MIRU slickline. Run gyro survey inside 5-1/2" 15.5# production casing from 4550' (~100' above top Sussex perms) to surface with stops every 100'. Forward gyro survey data and invoices to Sabrina Frantz. RDMO slickline.  
 11 MIRU hydrotester. PU CICR with 2-3/8" tubing and TIH while hydrotesting the 2-3/8" tubing to 3000psi. Set CICR at 4600' (collars at 4583' and 4614'). RDMO hydrotester.  
 12 Connect to the 2-3/8" tubing and establish an injection rate through CICR of at least 1 bbl/min into the open Sussex perms with an injection pressure less than 2000psi. If injection rate at least 1 bbl/min and injection pressure less than 2000psi proceed to next step, otherwise contact engineering.  
 13 MIRU cementing services. Establish injection with water through CICR and pump 20 bbls sodium metasilicate, 5 bbl water spacer, 75 sx Class "G" cement with 0.25 pps cello flake, 0.4% CD-32 and 0.4% ASA-301 mixed at 15.8ppg and 1.15 cuft/sx (cement volumes based on 50sx to squeeze Sussex perms and 5-1/2" casing capacity with no excess from 4700' to 4500'). Underdisplace cement in tubing using 15 bbls water (2.8 bbls short of CICR set at 4600') and spot remaining cement on top of CICR. TOOH and stand back 2-3/8" tubing so EOT at +/- 4300'. Reverse circulate using approx. 33 bbls water (2 times tubing volume) or until returns are clean. RDMO cementing services.  
 14 TOOH and stand back 4210' of 2-3/8" tubing and LD extra tubing.  
 15 MIRU wireline. PU and RIH with 3-1/8" perf guns and shoot squeeze holes at 4380' using 3 SPF, 0.5" EHD, 1' net, 3 total shots.  
 16 PUH with perf guns and shoot squeeze holes at 4180' using 3 SPF, 0.5" EHD, 1' net, 3 total shots. RDMO wireline.  
 17 PU & TIH with CICR on 2-3/8" tubing. Set CICR at 4210' (no collar locator ran at this depth to correlate to).  
 18 Establish circulation through squeeze holes to surface with water. If circulation is established, proceed to next step; otherwise contact engineering for revised procedure steps.  
 19 MIRU cementing services. Establish circulation with water through CICR and pump 20 bbls sodium metasilicate, 5 bbl water spacer, 110 sx Class "G" cement with 0.25 pps cello flake, 0.4% CD-32 and 0.4% ASA-301 mixed at 15.8ppg and 1.15 cuft/sx (cement volumes based on 9" caliper plus 20% excess from 4380' to 4180' and 5-1/2" casing capacity with no excess from 4380' to 4000'). Underdisplace cement in tubing using 11 bbls water (5.3 bbls short of CICR set at 4210') and spot remaining cement on top of CICR. TOOH and stand back 2-3/8" tubing so EOT at +/- 3800'. Reverse circulate using approx. 30 bbls water (2 times tubing volume) or until returns are clean. RDMO cementing services.  
 20 TOOH and stand back 1350' of 2-3/8" tubing and LD extra tubing.  
 21 MIRU wireline. RIH and jet cut 5-1/2" production casing at 1250'. RDMO wireline. Circulate bottoms up and continue circulating to remove any gas from wellbore.  
 22 ND BOP. Install BOP on surface casing head with 5-1/2" pipe rams. Install 3000 psi ball valves on both casing head outlets. Install a choke or choke manifold on one outlet.  
 23 TOOH and LD 1250' of 5-1/2" casing.  
 24 TIH w/ 2-3/8" tubing open ended to 1350' (100' inside the 5-1/2" stub).  
 25 MIRU cementing services. Establish circulation with water and pump 10 bbls SAPP mud flush, 20 bbls fresh water spacer, then balanced stub plug using 360 sx Type III cement with cello flake and CaCl<sub>2</sub> as necessary, mixed at 14.8 ppg and 1.33 cuft/sx (cement volumes based on 100' inside 5-1/2" casing, 634' in 9" hole with 40% excess, and 200' in 8-5/8" surface casing). RDMO cement

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: \_\_\_\_\_ Print Name: CHERYL LIGHT  
 Title: SR. REGULATORY ANALYST Date: 11/13/2014 Email: DJREGULATORY@ANADARKO.COM

Based on the information provided herein, this Well Abandonment Report (Form 6) complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: SCHLAGENHAUF, MARK Date: 5/14/2015

**CONDITIONS OF APPROVAL, IF ANY:** \_\_\_\_\_ Expiration Date: 11/13/2015

**COA Type**

**Description**

	<ol style="list-style-type: none"> <li>1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU.</li> <li>2) If unable to pull casing contact COGCC for plugging modifications.</li> <li>3) For 1350' plug: pump plug and displace, shut-in, WOC 4 hours and tag plug – must be 566' or shallower.</li> <li>4) Properly abandon flowlines as per Rule 1103. File electronic Form 42 once abandonment complete.</li> <li>5) Please submit gyro survey data with Form 6 (s) Subsequent Report of Abandonment.</li> <li>6) Please submit CBL and FDC log with Form 6 (s) Subsequent Report of Abandonment.</li> </ol>
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## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400730584	FORM 6 INTENT SUBMITTED
400730602	PROPOSED PLUGGING PROCEDURE
400730603	WELLBORE DIAGRAM

Total Attach: 3 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Well Completion Report dated 9/16/1976.	11/24/2014 9:37:00 AM

Total: 1 comment(s)