BLM-CARLSBAD FIELD OFFICE

Form 3160-5 (April 1969) DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT SUNDFY NOTICES AND REPORTS ON WELLS DO not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.				FORM APPROVED OM B No 1004-0137 Expires: March 31, 2007 OCD-ARTESIA 5. Lease Senal No LC-068677 6 If Indian, Allottee or Tribe Name 7. If Unit or CA/Agreement, Name and/or No.		
1. Type of Well ☐ Gas Well ☐ Other						
2 Name of Operator COG Operating LLC						
3a Address 3b. Phone No. 550 W. Texas Ave., Suite 1300 Midland, TX 79701 432-685-4			o. (include area code) 1332		30-015-05906 10 Field and Pool, or Exploratory Area	
4 Location of Well (Footage, Sec.,				High Lonesome Queen 11 County or Parish, State		
1310 FNL & 1310 FWL Sec 15, T16S, R29E Unit D			Eddy, NM			
12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA						-
TYPE OF SUBMISSION						
✓ Notice of Intent		racture Treat Reclamation Well Integrity				
Subsequent Report	Change Plans Plug and Abandon Temporarily Abandon				Ouler	-
Final Abandonment Notice	inal Abandonment Notice Convert to Injection Plug Back Water Disposal					
Attach the Bond under which the following completion of the invitesting has been completed. Find determined that the site is ready	. ,	No on file a	with BLM/BIA. Requir pletion or recompletion :	ed subsequent in a new interv	reports shall be filed within 30 days ral, a Form 3160-4 shall be filed once	· \
1. MIRU. POOH w/ rods 2. RIH w/ 4-1/2" CIBP @ *3. Perf 184' and set plug fi 4. Spot 10 sx plug @ surfa	w GL. Install marker and clean location	тПĠ			PPROVED JAN 1 0 2008 LES BABYAK TROLEUM ENGINEER	
14 Thorshi cout fit that the force	and an and an and an and					= ~
14 I hereby certify that the fore Name (Printed/Typed) Kanicia Carrillo	going is true and correct	Title T	Dogwlatow, A = -1	•		
Kanisia Carrino		Title F	Title Regulatory Analyst			-
Signature		Date		11/30/2007 ACCE	PTED FOR RECORD	=
	THIS SPACE FOR FEDERA	AL OR S	TATE OFFICE	USE		Ξ
Approved by			Title		Part 2.5.2008	-
Conditions of approval, if any, are attached. Approval of this notice does not warran certify that the applicant holds legal or equitable title to those rights in the subject lea which would entitle the applicant to conduct operations thereon.			Office	Gerry Gu	=	
Title 18 USC Section 1001 and Title States any false, fictitious or fraudul	e 43 U.S.C. Section 1212, make it a crime for a ent statements or representations as to any ma	ny person k tter within i	nowingly and willfully is jurisdiction	to make to an	ny department or agency of the whited	

(Instructions on page 2)

SEE ATTACHED FOR CONDITIONS OF APPROVAL

CONDITIONS OF APPROVAL NMLC068677; Davis Federal #12 1310' FNL & 1310' FWL, Sec. 15, T16S-R29E Eddy County, New Mexico

Plugging procedure:

Attached: NMOCD Guidelines

BLM Permanent Abandonment Conditions of Approval

Proposed procedure:

- 2. Cap CIBP with 35' of cement if utilizing a bailer, or 100' cement plug (minimum, 25 sacks) if not using a bailer.
- 3. Base of salt (790') plug, 740-840' (25 sack), WOC and tag.
- 4. Top of salt (385') plug, 100' plug inside and outside of casing. Would take care of additional plugs and perforations by circulating to surface. WOC and tag.
- 5. Shoe (127') plug, 100' plug inside and outside of casing 77-177' (minimum, 25 sacks). If casing perforated will need to WOC and tag.
- 6. Surface plug, 50' to surface inside and outside of casing.
- 7. Best case, perforate at 435' and circulate cement to surface.

If you have any questions, contact Jim Amos at 505-234-5909.

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BUREAU OF LAND MANAGEMENT Roswell Field Office 2909 West Second Street Roswell, New Mexico 88201 505-627-0272

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Permanent Abandonment of Federal Wells Conditions of Approval

Failure to comply with the following Conditions of Approval may result in a Notice of Incidents of Noncompliance (INC) in accordance with 43 CFR 3163.1.

- 1. Plugging operations shall commence within <u>ninety (90)</u> days from the approval date of this Notice of Intent to Abandon. If you are unable to plug the well by the 90th day provide this office, prior to the 90th day, with the reason for not meeting the deadline and a date when we can expect the well to be plugged. Failure to do so will result in enforcement action.
- 2. <u>Notification:</u> Contact the appropriate BLM office at least 24 hours prior to the commencing of any plugging operations. For wells in Chaves and Roosevelt County, call 505-627-0272, Eddy County call 505- 234-5972; for wells in Lea County call 505-393-3612.
- 3. <u>Blowout Preventers</u>: A blowout preventer (BOP), as appropriate, shall be installed before commencing any plugging operation. The minimum BOP requirement is a 2M system for a well not deeper than 9,090 feet; a 3M system for a well not deeper than 13,636 feet; and a 5M system for a well not deeper than 22,727 feet.
- 4. <u>Mud Requirement:</u> Mud shall be placed between all plugs. Minimum consistency of plugging mud shall be obtained by mixing at the rate of 25 sacks (50 pounds each) of gel per 100 barrels of water. Minimum nine (9) pounds per gallon.
- 5. <u>Cement Requirement</u>: Sufficient cement shall be used to bring any required plug to the specified depth and length. Any given cement volumes on the proposed plugging procedure are merely estimates and are not final.

Unless otherwise specified in the approved procedure, the cement plug shall consist of either class "C", for up to 7,500 feet of depth, mixed at 14.8 lbs./gal. with 6.3 gallons of fresh water per sack or class "H", for deeper than 7,500 feet plugs, mixed at 16.4 lbs./gal. with 4.3 gallons of fresh water per sack.

- 6. <u>Dry Hole Marker</u>: All casing shall be cut-off at the base of the cellar or 3 feet below final restored ground level (whichever is deeper). The well bore shall then be capped with a 4-inch pipe, 10-feet in length, 4-feet above ground and embedded in cement. The following information shall be permanently inscribed on the dry hole marker: Well name and number, the name of the operator, the lease serial number, the surveyed location (the quarter-quarter section, section, township and range or other authorized survey designation acceptable to the authorized officer; such as metes and bounds).
- 7. <u>Subsequent Plugging Reporting:</u> Within 30 days after plugging work is completed, file one original and five copies of the Subsequent Report of Abandonment, Form 3160-5 to BLM. The report should give in detail the manner in which the plugging work was carried out, the extent (by depths) of cement plugs placed, and the size and location (by depths) of casing left in the well. **Show date well was plugged.**
- 8. <u>Trash:</u> All trash, junk and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

Following the submission and approval of the Subsequent Report of Abandonment, surface restoration conditions of approval will be developed and furnished to you.

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43 CFR PART 3160

Onshore Oil and Gas Operations; Federal and Indian Oil and Gas Leases; Drilling Operations

The following standards apply to the abandonment of newly drilled dry or non-productive wells in accordance with 43 CFR 3162.3-4 and section V of Onshore Oil and Gas Order No. 1. Approval shall be obtained prior to the commencement of abandonment. All formations bearing usable-quality water, oil, gas, or geothermal resources, and/or a prospectively valuable deposit of minerals shall be protected. Approval may be given orally by the authorized officer before abandonment operations are initiated. This oral request and approval shall be followed by a written notice of intent to abandon filed not later than the fifth business day following oral approval. Failure to obtain approval prior to commencement of abandonment operations shall result in immediate assessment of under 43 CFR 3163.1(b)(3). The hole shall be in static condition at the time any plugs are placed (this does not pertain to plugging lost circulation zones). Within 30 days of completion of abandonment, a subsequent report of a abandonment shall be filed. Plugging design for an abandonment hole shall include the following:

1. Open Hole.

- i. A cement plug shall be placed to extend at least 50 feet below the bottom (except as limited by total depth (TD) or plugged back total depth (PBTD)), to 50 feet above the top of:
 - a. Any zone encountered during which contains fluid or gas with a potential to migrate;
 - b. Any prospectively valuable deposit of minerals.
- ii. All cement plugs, except the surface plug, shall have sufficient slurry volume to fill 100 feet of the hole, plus an additional 10 percent of slurry for each 1,000 feet of depth.
- iii. No plug, except the surface plug, shall be less than 25 sacks without receiving specific approval from the authorized officer.
- iv. Extremely thick sections of single formation may be secured by placing 100-foot plugs across the top and bottom of the formation, and in accordance with item ii hereof. v. In the absence of productive zones or prospectively valuable deposits of minerals which otherwise require placement of cement plugs, long sections of open hole shall be plugged at least every 3,000 feet. Such plugs shall be placed across in-gauge sections of the hole, unless otherwise approved by the authoriuzed officer.
- 2. Cased Hole. A cement plug shall be placed opposite all open perforation and extend to a minimum of 50 feet below (except as limited by TD or PBTD) to 50 feet above the perforated interval. All cement plugs, except the surface plug, shall have sufficient slurry volume to fill 100 feet of hole, plus an additional 10 percent of slurry for each 1,000 feet of depth. In lieu of the cement plug, a bridge plug is acceptable, provided:

- i. The bridge plug is set within 50 feet to 100 feet above the open perforations;
- ii. The perforations are isolated from any open hole below; and
- iii. The bridge plug is capped with 50 feet of coment. If a bailer is used to cap this plug,
- 35 feet of cement shall be sufficient.
- 3. Casing Removed from Hole. If any casing is cut and recovered, a cement plug shall be placed to extend at least 50 feet above and below the stub. The exposed hole resulting from the casing removal shall be secured as required in items 1i and 1ii hereof.
- 4. An additional cement plug placed to extend a minimum of 50 feet above and below the shoe of the surface casing for intermediate string, as appropriate).
- 5. Annular Space. No annular space that extends to the surface shall be left open to the drilled hole below. If this condition exists, a minimum of the top 50 feet of annulus shall be plugged with cement.
- 6. Isolating Medium. Any cement plug which is the only isolating medium for a usable water interval or a zone containg a prspectively valuable deposit of minerals shall be tested tagging with the drill string. Any plugs placed where the fluid level will not remain static also shall be tested by either tagging the plug with the working pipe string, or pressuring to a minimum pump (surface) pressure of 1,000 psi, with no more than a 10 percent drop during a 15-minute period (cased hole only). If the integrity of any other plug is questionable, or if the authorized officer has specific concerns for which he/she orders a plug to be tested, it shall be tested in the same manner.
- 7. Silica Sand or Silica Flour. Silica sand or silica flour shall be added to cement exposed to bottom hole static temperatures above 230 øF to prevent heat degradation of the cement.
- 8. Surface Plug. A cement plug of at least 50 feet shall be placed across all annuluses. The top of this plug shall be placed as near the eventual casing cutoff point as possible.
- 9. Mud. Each of the intervals between plugs shall be filled with mud of suffcient density to exert hydrostatic pressure exceeding the greatest formation pressure encountered while drilling such interval. In the absense of other information at the time plugging is approved, a minimum mud weight of 9 pounds per gallon shall be specified.
- 10. Surface Cap. All casing shall be cut-off at the base of the cellar or 3 feet below final restored ground level (whichever is deeper). The well bore shall then be covered with a metal plate at least 1/4 inch thick and welded in place, or a 4-inch pipe, 10-feet in length, 4 feet above ground and embedded in cement as specified by the authorized officer. The well location and identity shall be permanently inscribed. A weep hole shall be left if a metal plate is welded in place.
- 11. The cellar shall be filled with suitable material as specified by the authorized officer and the surface restored in accordance with the instructions of the authorized officer.

Minimum Standard

All plugging orders shall be strictly adhered to.

Violation: Major.

Corrective Action: Contingent upon circumstances. Normal Abatement Period: Prompt correction required.



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NEW MEXICO OIL CONSERVATION DIVISION GUIDELINES ON PLUGGING PROCEDURES

- 1. All cement plugs will be a minimum of 100' in length.
- 2. Minimum 25 sack cement plug allowed.
- 3. Mud laden fluids between all cement plugs.
- 4. Mud laden fluids mixed at 25 sack of gel per 100 barrels of water.
- 5. A cement plug is required to be set 50'below and 50' above all casing shoes and casing stub plugs. Tag plugs.
- 6. A CIBP with 35' of cement on top may be set in lieu of 100' cement plug.
- 7. A CIBP with 35' of cement on top or 100' cement plug (minimum 25 sacks) must be set with-in 100' of top perforation.
- 8. All cement plugs set at casing shoes, casing stubs, above perforations and at top and base of salt section will be tagged.
- 9. No more than 2000' is to be allowed between cement plugs in open hole and no more than 3000' allowed between cement plugs in cased holes.
- 10. D.V. tools are required to have 100' cement plug set 50' below and 50' above D.V. tool.
- 11. R-111-P requires a solid cement plug set across the salt section (50'below and 50' above salt section). Fluid used to mix the cement shall be saturated with the salts common to the salt section penetrated and with suitable proportions, but not more than three percent of calcium chloride by weight of cement being considered the desired mixture whenever possible. The plug will be tagged.
- 12. Formations to be isolated with 100' cement plug or CIBP with 35' cement on top are as follows. Top of Fusselman, top of Devonian, top of Morrow, Top of Wolfcamp, in Delaware Basin, top of bone Springs, Top of Delaware, top and base of salt section, in Plateform Shelf top of ABO, top of Glorieta, top of Yates, Top of salt section and base of salt section. Cement plug set at top of Yates will be base of salt plug.
- 13. If cement does not exist behind casing at recommended geological formations to be isolated, the casing must be cut and pulled and cement plugs placed at recommended formations to be isolated or casing must be perforated and cement squeezed behind casing at recommended formations to be isolated.

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