Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HOBBS OCD
JUL 03 2019
RECEIVED

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY 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.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM66927

6. If Indian, Allottee or Tribe Name

7. Unit or CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
Multiple--See Attached

2. Name of Operator
EOG RESOURCES INCORPORATED
Contact: EMILY FOLLIS
E-Mail: emily_follis@eogresources.com

9. API Well No.
Multiple--See Attached

3a. Address
PO BOX 2267
MIDLAND, TX 79702

3b. Phone No. (include area code)
Ph: 432-636-3600

10. Field and Pool or Exploratory Area
WOLFCAMP

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Multiple--See Attached

11. County or Parish, State
LEA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

EOG request to Amend the cementing program ,and add bradenhead squeeze stage. Amend the casing program and revise annulus clearance criteria to our approved APD. Please apply amendments to the below listed wells.

Lobo Blanco 9 Fed #701H API #30-025-46079 NMNM066927
Lobo Blanco 9 Fed #702H API #30-025-46080 NMNM066927
Lobo Blanco 9 Fed #703H API #30-025-46082 NMNM066927
Lobo Blanco 9 Fed #704H API #30-025-46081 NMNM066927

See attachments

Carlsbad Field Office
OCD Hobbs

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

All Previous COAs still Exist, Except For the Following:

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #468984 verified by the BLM Well Information System
For EOG RESOURCES INCORPORATED, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 06/13/2019 (19PP2200SE)

Name *(Printed/Typed)* BEN HOCHER — Title ENGINEERING ASSOCIATE

Signature (Electronic Submission) — Date 06/13/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By JEROMY PORTER — Title PETROLEUM ENGINEER — Date 06/17/2019

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Hobbs

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #468984 that would not fit on the form

Wells/Facilities, continued

Agreement	Lease	Well/Fac Name, Number	API Number	Location
NMNM66927	NMNM66927	LOBO BLANCO 9 FED 701H	30-025-46079-00-X1	Sec 9 T26S R34E SWSW 293FSL 347FWL 32.051502 N Lat, 103.482254 W Lon
NMNM66927	NMNM66927	LOBO BLANCO 9 FED 702H	30-025-46080-00-X1	Sec 9 T26S R34E SWSW 326FSL 347FWL 32.051594 N Lat, 103.482254 W Lon
NMNM66927	NMNM66927	LOBO BLANCO 9 FED 703H	30-025-46082-00-X1	Sec 9 T26S R34E SWSW 293FSL 1341FWL 32.051506 N Lat, 103.479050 W Lon
NMNM66927	NMNM66927	LOBO BLANCO 9 FED 704H	30-025-46081-00-X1	Sec 9 T26S R34E SWSW 326FSL 1341FWL 32.051594 N Lat, 103.479050 W Lon

Revisions to Operator-Submitted EC Data for Sundry Notice #468984

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM66927	NMNM66927
Agreement:		
Operator:	EOG RESOURCES INC PO BOX 2267 MIDLAND, TX 79702 Ph: 432-636-3600	EOG RESOURCES INCORPORATED PO BOX 2267 MIDLAND, TX 79702 Ph: 432.686.3689
Admin Contact:	EMILY FOLLIS SR REGULATORY ADMINISTRATOR E-Mail: emily_follis@eogresources.com Ph: 432-636-3600	EMILY FOLLIS SR REGULATORY ADMINISTRATOR E-Mail: emily_follis@eogresources.com Ph: 432-636-3600
Tech Contact:	BEN HOCHER ENGINEERING ASSOCIATE E-Mail: Ben_Hocher@eogresources.com Ph: 432-686-3623	BEN HOCHER ENGINEERING ASSOCIATE E-Mail: ben_hocher@eogresources.com Ph: 432-686-3623
Location: State: County:	 NM LEA COUNTY	 NM LEA
Field/Pool:	98105 WC025 G09 S263416B	WOLFCAMP
Well/Facility:	LOBO BLANCO 9 FEDERAL 701H,702H,703H, Sec 9 T26S R34E 293FSL 347FWL	LOBO BLANCO 9 FED 701H Sec 9 T26S R34E SWSW 293FSL 347FWL 32.051502 N Lat, 103.482254 W Lon LOBO BLANCO 9 FED 702H Sec 9 T26S R34E SWSW 326FSL 347FWL 32.051594 N Lat, 103.482254 W Lon LOBO BLANCO 9 FED 703H Sec 9 T26S R34E SWSW 293FSL 1341FWL 32.051506 N Lat, 103.479050 W Lon LOBO BLANCO 9 FED 704H Sec 9 T26S R34E SWSW 326FSL 1341FWL 32.051594 N Lat, 103.479050 W Lon

TECHNICAL SPECIFICATIONS

These specifications are furnished for general information only and are not intended for design purposes. This information is preliminary and may change subject to a final design by VAM-USA Engineering. This is not a controlled document.

DWC/C-IS MS **Casing** **5.500" O.D.** **20.00 lb./ft.** **VST P-110EC**

standard

		Material
VST P-110EC		Grade
125,000		Minimum Yield Strength (psi.)
135,000		Minimum Ultimate Strength (psi.)
		Pipe Dimensions
5.500		Nominal Pipe Body OD (in.)
4.778		Nominal Pipe Body ID (in.)
0.361		Nominal Wall Thickness (in.)
20.00		Nominal Weight (lbs./ft.)
19.83		Plain End Weight (lbs./ft.)
5.828		Nominal Pipe Body Area (sq. in.)
		Pipe Body Performance Properties
729,000		Minimum Pipe Body Yield Strength (lbs.)
12,090		Minimum Collapse Pressure (psi.)
14,360		Minimum Internal Yield Pressure (psi.)
13,100		Hydrostatic Test Pressure (psi.)
		Connection Dimensions
6.115		Connection OD (in.)
4.778		Connection ID (in.)
4.653		Connection Drift Diameter (in.)
4.13		Make-up Loss (in.)
5.828		Critical Area (sq. in.)
100.0		Joint Efficiency (%)
		Connection Performance Properties
729,000	(1)	Joint Strength (lbs.)
26,040	(2)	Reference String Length (ft.) 1.4 Design Factor
728,000	(3)	API Joint Strength (lbs.)
729,000		Compression Rating (lbs.)
12,090		API Collapse Pressure Rating (psi.)
14,360	(4)	API Internal Pressure Resistance (psi.)
104.2		Maximum Uniaxial Bend Rating (degrees/100 ft.)
		Approximated Field End Torque Values
16,600	(5)	Minimum Final Torque (ft.-lbs.)
19,100	(5)	Maximum Final Torque (ft.-lbs.)
21,600	(6)	Connection Yield Torque (ft.-lbs.)

VAM-USA
4424 W. Sam Houston Pkwy, Suite 150
Houston, TX 77041
Phone: (713) 479-3200
Fax: (713) 479-3234
E-mail: VAMUSAsales@na.vallourec.com

(1) Joint Strength is the minimum pipe body yield strength multiplied by the connection critical area.

(2) Reference String Length is the joint strength divided by both the weight in air and the design factor.

(3) API Joint Strength is for reference only. It is calculated from Formulas 42 and 43 in the API Bulletin 5C3.

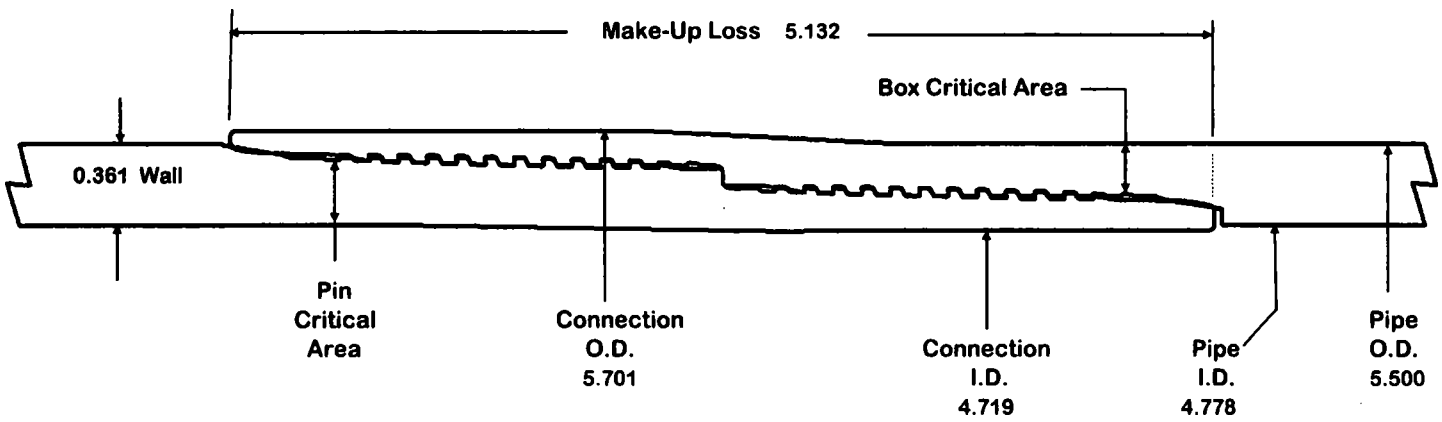
(4) API Internal Pressure Resistance is calculated from Formulas 31, 32, and 35 in the API Bulletin 5C3.

(5) Torque values are approximated and may be affected by field conditions.

(6) Connection yield torque is not to be exceeded.

Connection specifications within the control of VAM-USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades i obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advi to obtain current connection specifications and verify pipe mechanical properties for each application.

VAM® SFC



O.D.	WEIGHT	WALL	GRADE	DRIFT
5.500	20.00	0.361	VST P110EC	4.653

PIPE BODY PROPERTIES

Material Grade	VST P110EC
Min. Yield Strength	125 ksi
Min. Tensile Strength	135 ksi
Outside Diameter	5.500 in
Inside Diameter	4.778 in
Nominal Area	5.828 sq.in.
Yield Strength	729 kips
Ultimate Strength	787 kips
Min Internal Yield	14,360 psi
*High Collapse	12,090 psi

CONNECTION PROPERTIES

Connection OD	5.701 in
Connection ID	4.719 in
Make up Loss	5.132 in
Box Critical Area	4.083 sq.in.
%PB Section Area	70.1%
Pin Critical Area	4.123 sq.in.
%PB Section Area	70.7%
Yield Strength	510 kips
Parting Load	551 kips
Min Internal Yield	14,360 psi
*High Collapse	12,090 psi
Wk Compression	357 kips
Max Pure Bending	20 °/100 ft

TORQUE DATA ft-lb

min	opt	max
8,700	9,700	10,700

Contact: tech.support@vam-usa.com
Ref. Drawing: SI-PD 100414 Rev.B
Date: 14-Jun-16
Time: 2:31 PM

Metal One Corp. *Metal One*	MO-FXL Connection Data Sheet	Page	MCTP
		Date	3-Nov-16
		Rev.	0

MO-FXL

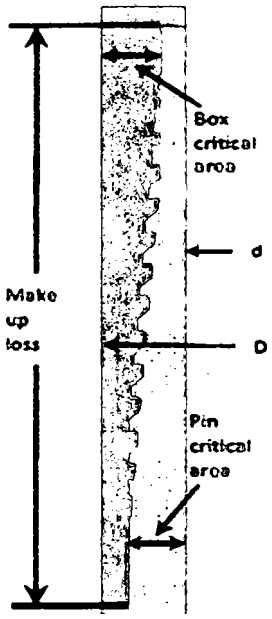
Geometry

Pipe Body

	Imperial		S.I.	
Grade	P110HC *1		P110HC *1	
Pipe OD (D)	7 5/8	in	193.68	mm
Weight	29.70	lb/ft	44.25	kg/m
Actual weight	29.04		43.26	kg/m
Wall Thickness (t)	0.375	in	9.53	mm
Pipe ID (d)	6.875	in	174.63	mm
Pipe body cross section	8.537	in^2	5,508	mm^2
Drift Dia.	6.750	in	171.45	mm

Connection

Box OD (W)	7.625	in	193.68	mm
PIN ID	6.875	in	174.63	mm
Make up Loss	4.219	in	107.16	mm
Box Critical Area	5.714	in^2	3686	mm^2
Joint load efficiency	70	%	70	%
Thread Taper	1 / 10 (1.2° per ft)			
Number of Threads	5 TPI			



Performance Properties for Pipe Body

M.I.Y.P. *1	10,760	psi	74.21	MPa

Note S.M.Y.S.= Specified Minimum YIELD Strength of Pipe body
M.I.Y.P. = Minimum Internal Yield Pressure of Pipe body
*1 Based on VSB P110HC (YS=125~140ksi)

Performance Properties for Connection

Min. Compression Yield	747 kips (70% of S.M.Y.S.)
External Pressure	100% of Collapse Strength

Recommended Torque

Opti.	17,200	ft-lb	23,300	N-m
Operational Max.	23,600	ft-lb	32,000	N-m

Note : Operational Max. torque can be applied for high torque application

eog resources

Revised Permit Information 6/13/2019

Abstract: Amend the cementing program and add bradenhead squeeze stage. Amend the casing program and revise annulus clearance criteria.

EOG requests that these amendments be applied to the following wells:

Well Name	API No.	Lease No.
Lobo Blanco 9 Fed #701H	30-025-46079	NMNM066927
Lobo Blanco 9 Fed #702H	30-025-46080	NMNM066927
Lobo Blanco 9 Fed #703H	30-025-46082	NMNM066927
Lobo Blanco 9 Fed #704H	30-025-46081	NMNM066927

Casing

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
12.25"	0' – 800'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
8.75"	0' – 11,690'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0' – 11,190'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60
6.75"	11,190'–11,690'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60
6.75"	11,690' – TD	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60

EOG also requests to retain the option to utilize previously permitted 4 string designs, if applicable

Annulus Clearance

EOG requests variance to allow deviation from the 0.422" annulus clearance requirement from Onshore Order #2 under the following conditions:

- Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500' overlap between both casing strings.
- Annular clearance less than 0.422" is acceptable for the curve and lateral portions of the production open hole section.

Cement

EOG requests a variance from the minimum standards to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated TOC @ the Brushy Canyon and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. A top out stage will be performed as a contingency.

Cementing Program:

Primary Plans For 7-5/8" cement Job:

Depth	No. Sacks	Wt. ppg	Yld Ft^3/sk	Slurry Description
800' 9-5/8"	640	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% $CaCl_2$ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	80	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 600')
11,690' 7-5/8"	580	14.2	1.11	1st Stage (Tail): Class C + 0.6% Halad-9 + 0.45% HR-601 + 3% Microbond (TOC @ 7,000')
	1,000	12.7	2.30	2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
TD 5-1/2"	950	14.2	1.31	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 11,190')

EOG also requests variance for the option to perform this cement procedure on previously permitted 4 string designs in the 7-5/8" 2nd Intermediate casing string as a contingency plan.

EOG will include the final fluid top verified by Echo-meter and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

Additive	Purpose
Bentonite Gel	Lightweight/Lost circulation prevention
Calcium Chloride	Accelerator
Cello-flake	Lost circulation prevention
Sodium Metasilicate	Accelerator
MagOx	Expansive agent
Pre-Mag-M	Expansive agent
Sodium Chloride	Accelerator
FL-62	Fluid loss control
Halad-344	Fluid loss control
Halad-9	Fluid loss control
HR-601	Retarder
Microbond	Expansive Agent

PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**EOG RESOURCES INCORPORATED**
LEASE NO.:	**NMNM66927**
WELL NAME & NO.:	**LOBO BLANCO 9 FED 701H, 702H, 703H, 704H**
SURFACE HOLE FOOTAGE:	**Multiple Wells**
BOTTOM HOLE FOOTAGE	**Multiple Wells**
LOCATION:	**SECTION 9, T26S, R34E, NMPM**
COUNTY:	**LEA**

These COAs Apply to Multiple Wells (Lobo Blanco 9 FED 701H, 702H, 703H & 704H)
All Previous COAs Still Apply, Except for the Following:

A. CASING

1. The **9 5/8"** surface casing shall be set at approximately **800 feet** (a minimum of 25' into the Rustler Anhydrite and above the salt) and cemented to surface.
   a. **If cement does not circulate to surface,** the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of **6 hours** after pumping cement, ideally between 8-10 hours after completing the cement job.
   b. WOC time for a primary cement job will be a minimum of **8 hours** or **500 psi** compressive strength, whichever is greater. This is to include the lead cement.
   c. If cement falls back, remedial cementing will be done prior to drilling out that string.
   d. WOC time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 psi compressive strength, whichever is greater.
2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage.

First Stage

- Operator will cement to **7,000** feet with intent to reach Top of Brushy Canyon.

Second Stage

- Operator will perform bradenhead squeeze with cement to surface.

Operator has proposed to pump down 9-5/8" X 7-5/8" annulus. Operator must run Echo-meter to verify fluid top and the volume of displacement fluid above the cement slurry in the annulus.

2. The minimum required fill of cement behind the **5-1/2"** production casing is:

    - Cement should tie-back at least **200 feet** into previous string. Operator shall provide method of verification.

B. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance approved to use a 5M annular. The annular must be tested to full working pressure (5,000 psi).**
    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed

JJP06172019

GENERAL REQUIREMENTS

1. The BLM is to be notified in advance for a representative to witness:

   a. Spudding well (minimum of 24 hours)
   b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
   c. BOPE tests (minimum of 4 hours)

   ☒ Chaves and Roosevelt Counties
   Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
   During office hours call (575) 627-0272.
   After office hours call (575)

   ☒ Eddy County
   Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

   ☒ Lea County
   Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log (one log per well pad is acceptable) run from TD to surface (horizontal well – vertical portion of hole) shall

be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a

larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
   a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
   b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
   c. Manufacturer representative shall install the test plug for the initial BOP test.
   d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
   e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

   a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done.

The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug. The results of the test shall be reported to the appropriate BLM office.

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes. This test shall be performed prior to the test at full stack pressure.

g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.