<u>.</u>	DE BI	UNITED STATES PARTMENT OF THE IN JREAU OF LAND MANAG	S NTERIOR GEMENT		FORM OMB N Expires: J	APPROVED O. 1004-0137 anuary 31, 2018
	SUNDRY Do not use thi abandoned wel	NOTICES AND REPO s form for proposals to l. Use form 3160-3 (APL	RTS ON WELLS drill or to rejenter an D) for such proposals		NMNM03677 CMf Indian, Allottee or Tribe Name	
<u>,</u>	SUBMIT IN 1	RIPLICATE - Other inst	ructions on page 2 MAR	1 1 2019	7. If Unit or CA/Agre	ement, Name and/or No.
1. Type of Well	Gas Well 🔲 Oth	er	PE	CEIVED	8. Well Name and No. STEBBINS 19 FE	D 204H
2. Name of Operator MATADOR PF		Contact: DMPANYE-Mail: cade.labolt	CADE LABOLT @matadorresources.com		9. API Well No. 30-015-44167-()0-X1
3a. Address ONE LINCOLI DALLAS, TX	N CENTER 5400 75240) LBJ FREEWAY SUITE	3b. Phone No. (include area co 1 500 972-629-2158	ode)	10. Field and Pool or BURTON FLAT	Exploratory Area
4. Location of Well	(Footage, Sec., T.	, R., M., or Survey Description))		11. County or Parish,	State
Sec 19 T20S I 32.552177 N I	R29E SESE 210 _at, 104.105633	FSL 110FEL W Lon			EDDY COUNT	Y, NM
12. C	THECK THE AP	PROPRIATE BOX(ES)	TO INDICATE NATURE	E OF NOTICE	, REPORT, OR OTI	IER DATA
TYPE OF SUI	BMISSION		ТҮРЕ	OF ACTION		
Notice of Int	ent	Acidize	Deepen	Produc	tion (Start/Resume)	□ Water Shut-Off
	ent	🛛 Alter Casing	🗖 Hydraulic Fracturi	ng 🔲 Reclam	ation	Well Integrity
Subsequent F	Report	Casing Repair	New Construction	🗖 Recom	plete	Other
🗖 Final Abando	onment Notice	Change Plans	Plug and Abandon	🗖 Tempo	rarily Abandon	
		Convert to Injection	Plug Back	🗖 Water I	Disposal	
Attach the Bond u following comple testing has been c determined that th	to deepen directional under which the wor tion of the involved ompleted. Final Ab he site is ready for fi	Ity of recomplete horizontally, k will be performed or provide operations. If the operation res andonment Notices must be file nal inspection.	give subsurface locations and me the Bond No. on file with BLM/ sults in a multiple completion or ed only after all requirements, inc	easured and true v BIA. Required su recompletion in a cluding reclamatic	ertical depths of all pertir bsequent reports must be new interval, a Form 316 on, have been completed	ent markers and zones. filed within 30 days .0-4 must be filed once and the operator has
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system once 1			α.			
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Additional data for EC transaction #452349 that would not fit on the form

32. Additional remarks, continued

Please do not hesitate to contact Tyler Brooking (Drilling) at 972-371-5493 if you have any questions

Revisions to Operator-Submitted EC Data for Sundry Notice #452349

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	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	CSG-ALTER NOI	CSG-ALTER NOI
Lease:	NMNM03677	NMNM03677
Agreement:		
Operator:	MATADOR PRODUCTION COMPANY 5400 LBJ FREEWAY SUITE 1500 DALLAS, TX 75240 Ph: 972-629-2158	MATADOR PRODUCTION COMPANY ONE LINCOLN CENTER 5400 LBJ FREEWAY SUITE 1500 DALLAS, TX 75240 Ph: 972.371.5200
Admin Contact:	CADE LABOLT ASSOCIATE LANDMAN E-Mail: cade.labolt@matadorresources.com	CADE LABOLT ASSOCIATE LANDMAN E-Mail: cade.labolt@matadorresources.com
	Ph: 972-629-2158	Ph: 972-629-2158
Tech Contact:	TYLER BROOKING PETROLEUM ENGINEER E-Mail: TBrooking@matadorresources.com	TYLER BROOKING PETROLEUM ENGINEER E-Mail: TBrooking@matadorresources.com
	Ph: 972-371-5493	Ph: 972-371-5493
Location: State: County:	NM EDDY	NM EDDY
Field/Pool:	PURPLE SAGE; WOLFCAMP	BURTON FLAT
Well/Facility:	STEBBINS 19 FED COM 204H Sec 19 T20S R29E Mer NMP 420FSL 130FEL	STEBBINS 19 FED 204H Sec 19 T20S R29E SESE 210FSL 110FEL 32.552177 N Lat, 104.105633 W Lon

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ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.

S1SURVEYIMATADOR_RESOURCESISTEBBINS_FED_19 & 20-20S-29EFFINAL_PRODUCTSILO_STEBBINS_19_FED_COM_204H_REV5,DWG 1/11/2019 5:05:54 PM opafford

VICINITY MAP







5/SURVEYWATADOR_RESOURCES/STEBBINS_FED_19 & 20-205-29E/FINAL_PRODUCTS/LO_STEBBINS_19_FED_COM_204H_REV5,DWG 1/11/2019 5/05/57 PM cgalford



Casing

Name	Hole Size	Casing Size	Wt/Grade	Thread Collar	Setting Depth	Top Cement
Surface	26"	20" (new)	94# J-55	BTC	400	Surface
Intermediate 1	17-1/2"	13-3/8" (new)	54.5# J-55	BTC	1200	Surface
Intermediate 2	12-1/4"	9-5/8" (new)	40# J-55	BTC	3100	Surface
Production	8-3/4"	5-1/2" (new)	20# P-110	DWC/C	14100	1180'

Spec sheet for 5-1/2" 20# P-110 DWC/C is attached. Mud

Name	Hole Size	Mud Weight	Visc	Fluid Loss	Type Mud
Surface	20"	8.40	28	NC	FW Spud Mud
Intermediate 1	17-1/2"	10.00	30-32	NC	Brine Water
Intermediate 2	12-1/4"	8.4-8.6	28-30	NC	FW
Production	8-3/4"	9.00	30-32	NC	FW/Cut Brine

<u>Cement</u>

Name	Туре	Sacks	Yield	Weight	Blend
Surface	Tail	873	1.38	14.8	Class C + 5% NaCl + LCM
TOC = 0	TOC = 0'		LOO% Exces	s	Centralizers per Onshore Order 2.III.B.1f
Intermediate					
1	Lead	637	1.73	13.5	Class C + Bentonite + 1% CaCL2 + 8% NaCl + LCM
	Tail	309	1.35	14.8	Class C + 5% NaCl + LCM
TOC = 0		· 1	LOO% Exces	S	2 on btm jt, 1 on 2nd jt, 1 every 4th jt to surface
Intermediate					
2	Lead	715	1.73	13.5	Class C + Bentonite + 2% CaCL2 + 3% NaCl + LCM
a	Tail	288	1.35	14.8	Class C + 5% NaCl + LCM
TOC = 0'		100% Excess			2 on btm jt, 1 on 2nd jt, 1 every 4th jt to surface
Production	Lead	943	2.22	11.5	TXI + Fluid Loss + Dispersant + Retarder + LCM
	Tail	1574	1.37	13.2	TXI + Fluid Loss + Dispersant + Retarder + LCM
TOC = 1180'		35% Excess		,	2 on btm jt, 1 on 2nd jt, 1 every 5th jt to top of tail cement (1000' above TOC)

Matador requests the option to cut off 20" SOW wellhead and run 13-3/8" SOW multi-bowl wellhead system once 1st intermediate string is run and cemented.

Matador requests the option to run a DV tool with annular packer as contingency in the intermediate 1 or 2 section on 13-3/8" or 9-5/8" casing if lost circulation is encountered. If losses occur, the DV tool with packer will be placed at least 100' above the loss zone to give the option to pump cement as either a single stage or two stage.

Example:

Assuming DV tool is set at 1500' MD but if the setting depth changes, cement volumes will be adjusted proportionately.

Stage 1:

Lead	695	1.78	13.5	Class C + Bentonite + 2% CaCL2 + 3% NaCl + LCM		
Tail	288	1.35	14.4	Class C + 5% NaCl + LCM		
100% excess, TOC = 0' MD						

Stage 2:

Lead	350	1.78	13.5	Class C + Bentonite + 2% CaCL2 + 3% NaCl + LCM		
100% excess, TOC = 0' MD						

Matador requests to change BHL on Stebbins 19 Fed Com 204H from 330' FSL & 240' FWL to 330' FSL & 100' FWL.

Please see the attached table design changes showing casing changes from 5 string to 4 string.

04/12/18 10:29 AM

Connection Type: DWC/C-HT-IS PLUS Casing STANDARD

Material

P110RY Grade 110,000 Minimum Yield Strength (psi.) 125,000 Minimum Ultimate Strength (psi.)

Technical Specifications

Weight (Wall):

20.00 lb./ft. (0.361in)

Size(O.D.):

5.500in

Pipe Dimensions

- 5.500 Nominal Pipe Body O.D. (in.)
- 4.778 Nominal Pipe Body I.D.(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

- 641,000 Minimum Pipe Body Yield Strength (lbs.)
- 11,100 Minimum Collapse Pressure (psi.)
- 12,640 Minimum Internal Yield Pressure (psi.)
- 11,600 Hydrostatic Test Pressure (psi.)

Connection Dimensions

- 6.300 Connection O.D. (in.)
- 4.778 Connection I.D. (in.)
- 4.653 Connection Drift Diameter (in.)
- 4.13 Make-up Loss (in.)
- 5.828 Critical Area (sq in.)
- 100.00 Joint Efficiency (%)

Connection Performance Properties

- 641,000 Joint Strength (lbs.)
- 22,890 Reference String Length (ft.) 1.4 Design Factor
- 667,000 API Joint Strength (lbs.)
- 641,000 Compression Rating (lbs.)
- 11,100 API Collapse Pressure Rating (psi.)
- 12,640 API Internal Pressure Resistance (psi.)
 - 91.7 Maximum Uniaxial Bend Rating [degrees/100 ft]

Appoximated Field End Torque Values

- 15,900 Minimum Final Torque (ft.-lbs.)
- 18,200 Maximum Final Torque (ft.-lbs.)
- 24,700 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@vam-usa.com



For detailed information on performance properties, refer to DWC Connection Data Notes on following page(s).

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 were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

All information is provided by VAM USA or its affiliates at user's sole risk, without liability for loss, damage or injury resulting from the use thereof; and on an "AS IS" basis without warranty or representation of any kind, whether express or implied, including without limitation any warranty of merchantability, fitness for purpose or completeness. This document and its contents are subject to change without notice. In no event shall VAM USA or its affiliates be responsible for any indirect, special, incidental, punitive, exemplary or consequential loss or damage (including without limitation, loss of use, loss of bargain, loss of revenue, profit or anticipated profit) however caused or arising, and whether such losses or damages were foreseeable or VAM USA or its affiliates was advised of the possibility of such damages.

1 of 2

Grade: P110RY

04/12/18 10:29 AM

Technical Specifications

DWC Connection Data Notes:

1. DWC connections are available with a seal ring (SR) option. 2. All standard DWC/C connections are interchangeable for a give pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.

3. Connection performance properties are based on nominal pipe body and connection dimensions.

4. DWC connection internal and external pressure resistance is calculated using the API rating for buttress connections. API Internal pressure resistance is calculated from formulas 31, 32, and 35 in the API Bulletin 5C3.

5. DWC joint strength is the minimum pipe body yield strength multiplied by the connection critical area.

6. API joint strength is for reference only. It is calculated from formulas 42 and 43 in the API Bulletin 5C3.

 Bending efficiency is equal to the compression efficiency.
 The torque values listed are recommended. The actual torque required may be affected by field conditions such as temperature, thread compound, speed of make-up, weather conditions, etc.

9. Connection yield torque is not to be exceeded.
10. Reference string length is calculated by dividing the joint strength by both the nominal weight in air and a design factor (DF) of 1.4. These values are offered for reference only and do not include load factors such as bending, buoyancy, temperature, load dynamics, etc.

11. DWC connections will accommodate API standard drift diameters.

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



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PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Matador Production Company
LEASE NO.:	NMNM03677
WELL NAME & NO.:	204H-Stebbins 19 Fed Com
SURFACE HOLE FOOTAGE:	420'/S & 130'/E
BOTTOM HOLE FOOTAGE	330'/S & 100'/W
LOCATION:	Section 19, T.20 S., R.29 E., NMPM
COUNTY:	Eddy County, New Mexico



H2S	← Yes	€ No	
Potash	• None		C R-111-P
Cave/Karst Potential	с _{Low}		High
Variance	∩ None	• Flex Hose	C Other
Wellhead	Conventional	Multibowl	
Other	4 String Area	🔽 Capitan Reef	₩IPP
Other	Fluid Filled	Cement Squeeze	F Pilot Hole
Special Requirements		IF COM .	Unit Unit

ALL PREVIOUS COAs STILL APPLY

A. CASING

Casing Design:

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- 1. The 20 inch surface casing shall be set at approximately 400 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the 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 six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of <u>8</u>
 <u>hours</u> or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The minimum required fill of cement behind the 13-3/8 inch intermediate casing is:

Option 1 (Single Stage):

• Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

- In <u>High Cave/Karst Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
- Special Capitan Reef requirements. If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:
 - Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
 - Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

3. T The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

Option 1 (Single Stage):

• Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- c. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- d. Second stage above DV tool:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office. Excess calculates to 18% - additional cement may be required.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

- In <u>High Cave/Karst Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
- Special Capitan Reef requirements. If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:
 - Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
 - Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

- 4. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back **500 feet** into the previous casing. Operator shall provide method of verification.

GENERAL REQUIREMENTS

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 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.
- <u>Wait on cement (WOC) for Potash Areas:</u> 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 <u>24</u> hours. WOC time will be recorded in the driller's log.
- <u>Wait on cement (WOC) for Water Basin:</u> 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 <u>8 hours</u>. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.
- 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: 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. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - e. 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.
- 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.
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- 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. The results of the test shall be reported to the appropriate BLM office.
- f. 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.
- g. 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 if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. 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.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.