

erry Roberts

**From:** AFMSS <blm-afmss-notifications@blm.gov>  
**Sent:** Tuesday, May 18, 2021 2:15 PM  
**To:** sroberts@mar-win.com  
**Cc:** mmsalas@blm.gov; j1sanchez@blm.gov; KBUSSELL@BLM.GOV; NDOMINGUEZ@BLM.GOV; OTORRES@BLM.GOV  
**Subject:** Well Name: GREASEWOOD FEDERAL, Well Number: 3H, Notification of Sundry Approval

The Bureau of Land Management

Notice of Notice Of Intent Approval

- Operator Name: **MARSHALL & WINSTON INCORPORATED**
- Well Name: **GREASEWOOD FEDERAL**
- Well Number: **3H**
- US Well Number:
- Sundry ID: **2387744**

Free Hose + Multi BOWL WH

The BLM received your Notice Of Intent, Other on 05/18/2021. This is to notify you that we are Approving your Notice Of Intent Other. Please login to your account in AFMSS II to see the final documents.

If this Notice Of Intent prompted the BLM to create another work task, it will generate in your worklist.

You may contact the field office if you have any questions.

This notification is automatically generated. Please do not reply to this message as this account is not monitored.



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

Sundry Print Report

05/18/2021

<b>Well Name:</b> GREASEWOOD FEDERAL	<b>Well Location:</b> T15S / R28E / SEC 12 / SESE / 33.024941 / -104.078066	<b>County or Parish/State:</b> CHAVES / NM
<b>Well Number:</b> 3H	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM121940	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b>
<b>US Well Number:</b>	<b>Well Status:</b> Approved Application for Permit to Drill	<b>Operator:</b> MARSHALL & WINSTON INCORPORATED

### Notice of Intent

**Type of Submission:** Notice of Intent

**Type of Action:** Other

**Date Sundry Submitted:** 05/18/2021

**Time Sundry Submitted:** 12:39

**Date proposed operation will begin:** 05/17/2021

**Procedure Description:** Request to upgrade to a flex hose as the choke line from the BOP to the choke manifold, instead of the conventional way. Will also be using a multibowl wellhead: a. Starting Head (J&W Wellhead MBS) 13-5/8" SOW x 13-5/8" 5M b. Tubing Spool 13-5/8" 5M x 7-1/16" 10M a. Wellhead company representative will be present during casing runs & welding operations to ensure proper installation. b. Operator will test all casing strings per Onshore Oil & Gas Order 2. Attached is the MBS Wellhead Schematic and Choke Hose Certification

### Surface Disturbance

**Is any additional surface disturbance proposed?:** No

### NOI Attachments

#### Procedure Description

Greasewood\_Fed\_3H\_Choke\_Hose\_Cert\_20210518123824.pdf

Greasewood\_Fed\_3H\_Wellhead\_Schematic\_20210518123403.pdf

<b>Well Name:</b> GREASEWOOD DERAL	<b>Well Location:</b> T15S / R28E / SEC 12 / SESE / 33.024941 / -104.078066	<b>County or Parish/State:</b> GRANT / NM
<b>Well Number:</b> 3H	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM121940	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b>
<b>US Well Number:</b>	<b>Well Status:</b> Approved Application for Permit to Drill	<b>Operator:</b> MARSHALL & WINSTON INCORPORATED

### Conditions of Approval

#### Specialist Review

Conditions\_of\_Approval\_20210518131430.pdf

### Operator Certification

*I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.*

**Operator Electronic Signature:** SHERRY ROBERTS

**Signed on:** MAY 18, 2021 12:28 PM

**Name:** MARSHALL & WINSTON INCORPORATED

**Title:** Operations Secretary

**Street Address:** 6 Desta Drive, Suite 3100

**City:** Midland

**State:** TX

**Phone:** (432) 684-6373

**Email address:** sroberts@mar-win.com

### Field Representative

**Representative Name:** Todd Passmore

**Street Address:** 6 Desta Drive, Suite 3100

**City:** Midland

**State:** TX

**Zip:** 79705

**Phone:** (432) 684-6373

**Email address:** tpassmore@mar-win.com

### BLM Point of Contact

**BLM POC Name:** JENNIFER SANCHEZ

**BLM POC Title:** Petroleum Engineer

**BLM POC Phone:** 5756270237

**BLM POC Email Address:** j1sanchez@blm.gov

**Disposition:** Approved

**Disposition Date:** 05/18/2021

**Signature:** Jennifer Sanchez

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>Marshall &amp; Winston Inc.</b>
<b>LEASE NO.:</b>	<b>NMNM-121940</b>
<b>WELL NAME &amp; NO.:</b>	<b>Greasewood Federal 3H</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>0600' FSL &amp; 0400' FEL</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>0020' FSL &amp; 0400' FEL Sec. 13, T. 15 S., R 28 E.</b>
<b>LOCATION:</b>	<b>Section 12, T. 15 S., R 28 E., NMPM</b>
<b>COUNTY:</b>	<b>Chaves County, New Mexico</b>

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.

1. **Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**
2. **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. If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**
3. **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 is located, this does not include the dog house or stairway area.**
4. **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

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.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

### 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.

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.

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

Possibility of lost circulation in the Queen and San Andres formations.

1. The 13-3/8 inch surface casing shall be set at approximately **225** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
  - 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 is to include the lead cement slurry.

- 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 9-5/8 inch intermediate casing is:

- ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

**The pilot hole plugging procedure is approved as written. Note whipstock depth on Subsequent Report sundry of drilling activities.**

**Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.**

3. The minimum required fill of cement behind the 7 X 5-1/2 inch production casing is:

- ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

4. 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.

## **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 53.
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. 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 **5000 (5M) psi. Operator may test as a 3M BOP.**
  - 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.

**NOTE: BOP SPECS SHEET SHALL BE ON LOCATION FOR PETROLEUM TECHNICANS**

4. 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. 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).



- c. 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.
- d. The results of the test shall be reported to the appropriate BLM office.
- 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 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.

#### **C. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

#### **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.

**JAM 05192021**



## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>Marshall &amp; Winston Inc.</b>
<b>LEASE NO.:</b>	<b>NMNM-121940</b>
<b>WELL NAME &amp; NO.:</b>	<b>Greasewood Federal 3H</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>0600' FSL &amp; 0400' FEL</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>0020' FSL &amp; 0400' FEL Sec. 13, T. 15 S., R 28 E.</b>
<b>LOCATION:</b>	<b>Section 12, T. 15 S., R 28 E., NMPM</b>
<b>COUNTY:</b>	<b>Chaves County, New Mexico</b>

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

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2. **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. If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**
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## A. CASING

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## **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 53.
- 2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M) psi**.
  - a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

**NOTE: BOP SPECS SHEET SHALL BE ON LOCATION FOR PETROLEUM TECHNICANS**

3. 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).
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**JAM 05172021**

**Cherry Roberts**

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**Sent:** Tuesday, May 18, 2021 2:15 PM  
**To:** sroberts@mar-win.com  
**Cc:** mmsalas@blm.gov; j1sanchez@blm.gov; KBUSSELL@BLM.GOV; NDOMINGUEZ@BLM.GOV; OTORRES@BLM.GOV  
**Subject:** Well Name: GREASEWOOD FEDERAL, Well Number: 3H, Notification of Sundry Approval

The Bureau of Land Management

#### Notice of Notice Of Intent Approval

- Operator Name: **MARSHALL & WINSTON INCORPORATED**
- Well Name: **GREASEWOOD FEDERAL**
- Well Number: **3H**
- US Well Number:
- Sundry ID: **2387744**

Free Hose + MultiBOWL WH

The BLM received your Notice Of Intent, Other on 05/18/2021. This is to notify you that we are Approving your Notice Of Intent Other. Please login to your account in AFMSS II to see the final documents.

If this Notice Of Intent prompted the BLM to create another work task, it will generate in your worklist.

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U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

Sundry Print Report

05/18/2021

<b>Well Name:</b> GREASEWOOD FEDERAL	<b>Well Location:</b> T15S / R28E / SEC 12 / SESE / 33.024941 / -104.078066	<b>County or Parish/State:</b> CHAVES / NM
<b>Well Number:</b> 3H	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM121940	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b>
<b>US Well Number:</b>	<b>Well Status:</b> Approved Application for Permit to Drill	<b>Operator:</b> MARSHALL & WINSTON INCORPORATED

### Notice of Intent

**Type of Submission:** Notice of Intent

**Type of Action:** Other

**Date Sundry Submitted:** 05/18/2021

**Time Sundry Submitted:** 12:39

**Date proposed operation will begin:** 05/17/2021

**Procedure Description:** Request to upgrade to a flex hose as the choke line from the BOP to the choke manifold, instead of the conventional way. Will also be using a multibowl wellhead: a. Starting Head (J&W Wellhead MBS) 13-5/8" SOW x 13-5/8" 5M b. Tubing Spool 13-5/8" 5M x 7-1/16" 10M a. Wellhead company representative will be present during casing runs & welding operations to ensure proper installation. b. Operator will test all casing strings per Onshore Oil & Gas Order 2. Attached is the MBS Wellhead Schematic and Choke Hose Certification

### Surface Disturbance

**Is any additional surface disturbance proposed?:** No

### NOI Attachments

#### Procedure Description

Greasewood\_Fed\_3H\_Choke\_Hose\_Cert\_20210518123824.pdf

Greasewood\_Fed\_3H\_Wellhead\_Schematic\_20210518123403.pdf



<b>Well Name:</b> GREASEWOOD DERAL	<b>Well Location:</b> T15S / R28E / SEC 12 / SESE / 33.024941 / -104.078066	<b>County or Parish/State:</b> GRANT / NM
<b>Well Number:</b> 3H	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM121940	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b>
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### Conditions of Approval

#### Specialist Review

Conditions\_of\_Approval\_20210518131430.pdf

### Operator Certification

*I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.*

**Operator Electronic Signature:** SHERRY ROBERTS

**Signed on:** MAY 18, 2021 12:28 PM

**Name:** MARSHALL & WINSTON INCORPORATED

**Title:** Operations Secretary

**Street Address:** 6 Desta Drive, Suite 3100

**City:** Midland

**State:** TX

**Phone:** (432) 684-6373

**Email address:** sroberts@mar-win.com

### Field Representative

**Representative Name:** Todd Passmore

**Street Address:** 6 Desta Drive, Suite 3100

**City:** Midland

**State:** TX

**Zip:** 79705

**Phone:** (432) 684-6373

**Email address:** tpassmore@mar-win.com

### BLM Point of Contact

**BLM POC Name:** JENNIFER SANCHEZ

**BLM POC Title:** Petroleum Engineer

**BLM POC Phone:** 5756270237

**BLM POC Email Address:** j1sanchez@blm.gov

**Disposition:** Approved

**Disposition Date:** 05/18/2021

**Signature:** Jennifer Sanchez

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>Marshall &amp; Winston Inc.</b>
<b>LEASE NO.:</b>	<b>NMNM-121940</b>
<b>WELL NAME &amp; NO.:</b>	<b>Greasewood Federal 3H</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>0600' FSL &amp; 0400' FEL</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>0020' FSL &amp; 0400' FEL Sec. 13, T. 15 S., R 28 E.</b>
<b>LOCATION:</b>	<b>Section 12, T. 15 S., R 28 E., NMPM</b>
<b>COUNTY:</b>	<b>Chaves County, New Mexico</b>

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.

1. **Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**
2. **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. If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**
3. **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 is located, this does not include the dog house or stairway area.**
4. **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

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.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

### 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.

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.

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

Possibility of lost circulation in the Queen and San Andres formations.

1. The 13-3/8 inch surface casing shall be set at approximately **225** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
  - 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 is to include the lead cement slurry.

- 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 9-5/8 inch intermediate casing is:

- ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

**The pilot hole plugging procedure is approved as written. Note whipstock depth on Subsequent Report sundry of drilling activities.**

**Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.**

3. The minimum required fill of cement behind the 7 X 5-1/2 inch production casing is:

- ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

4. 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.

## **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 53.
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. 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 **5000 (5M) psi. Operator may test as a 3M BOP.**
  - 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.

**NOTE: BOP SPECS SHEET SHALL BE ON LOCATION FOR PETROLEUM TECHNICANS**

4. 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. 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).

- c. 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.
- d. The results of the test shall be reported to the appropriate BLM office.
- 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 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.

#### **C. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

#### **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.

**JAM 05192021**

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1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
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**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

COMMENTS  
  
Action 60430

COMMENTS

Operator: MARSHALL & WINSTON INC P.O. Box 50880 Midland, TX 79710	OGRID: 14187
	Action Number: 60430
	Action Type: [C-103] NOI General Sundry (C-103X)

COMMENTS

Created By	Comment	Comment Date
jagarcia	Accepted, John Garcia, Petroleum Engineer	7/25/2022



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Created By	Condition	Condition Date
jagarcia	None	7/25/2022