

<b>Well Name:</b> GAVILON FED COM	<b>Well Location:</b> T20S / R33E / SEC 33 / SESW / 32.522775 / -103.670333	<b>County or Parish/State:</b> LEA / NM
<b>Well Number:</b> 603H	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM057683, NMNM57683	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b>
<b>US Well Number:</b> 3002547862	<b>Well Status:</b> Approved Application for Permit to Drill	<b>Operator:</b> ASCENT ENERGY LLC

**Notice of Intent**

**Sundry ID:** 2647482

**Type of Submission:** Notice of Intent

**Type of Action:** Other

**Date Sundry Submitted:** 12/07/2021

**Time Sundry Submitted:** 11:28

**Date proposed operation will begin:** 12/20/2021

**Procedure Description:** Ascent Energy respectfully requests approval on the Gavilon Fed Com 603H for an option to:

- Addition of an External Casing Packer on the 13-3/8" and 9-5/8" Casing
- Addition of a DV Tool on the 13-3/8" and 9-5/8" Casing
- Increase the casing size of our vertical casing strings
- Circulating Medium change to a combination of Cut Brine and/or Oil-Based Mud in the Production Hole Section.
- Revise proposed BOP beneath the base of the 20" surface shoe to setting the 1st Intermediate casing string only (13 3/8").

The reason for the request is based on improved drilling efficiencies and improved cementing in-place for each casing string. We believe the larger casing diameters in the vertical section will increase the likelihood of getting cement to surface for each string. There will be no change in Geology formations, and casing depths as noted in the COA of the approved APD. Please see the attached document for more detailed tables and diagrams of our request.

**Surface Disturbance**

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

**NOI Attachments**

**Procedure Description**

Gavilon\_603H\_Sundry\_2Dec\_2021\_CASING\_BOP\_MUD\_20211207112806.pdf

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**County or Parish/State:** LEA / NM

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**Type of Well:** OIL WELL

**Allottee or Tribe Name:**

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**Well Status:** Approved Application for Permit to Drill

**Operator:** ASCENT ENERGY LLC

### Conditions of Approval

#### Specialist Review

33\_20\_33\_N\_Sundry\_ID\_2647482\_Gavilon\_Fed\_Com\_603H\_Lea\_NM057683\_Ascent\_Energy\_LLC\_13\_22d\_11\_30\_2021\_LV\_20211208104300.pdf

Gavilon\_Fed\_Com\_603H\_Sundry\_ID\_2647482\_20211208104300.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:** BEN METZ

**Signed on:** DEC 07, 2021 11:28 AM

**Name:** ASCENT ENERGY LLC

**Title:** Vice President Exploration

**Street Address:** PO BOX 270983

**City:** LITTLETON **State:** CO

**Phone:** (303) 513-8590

**Email address:** BMETZ@ASCENTENERGY.US

### Field Representative

**Representative Name:**

**Street Address:**

**City:** **State:** **Zip:**

**Phone:**

**Email address:**

### BLM Point of Contact

**BLM POC Name:** CHRISTOPHER WALLS

**BLM POC Title:** Petroleum Engineer

**BLM POC Phone:** 5752342234

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

**Disposition:** Approved

**Disposition Date:** 12/09/2021

**Signature:** Chris Walls

33-20-33-N Sundry ID 2647482 Gavilon Fed Com 603H Lea NM057683 Ascent Energy LLC 13-22d 11-30-2021 LV

Gavilon Fed Com 603H

20		surface csg in a		26		inch hole.		Design Factors				Surface			
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight				
"A"	94.00		j 55	btc	9.59	0.67	1,555	3	2.14	1.20	146,170				
"B"				btc			0				0				
w/8.4#/g mud, 30min Sfc Csg Test psig: 798												Totals:	1,555		146,170
Comparison of Proposed to Minimum Required Cement Volumes															
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist				
26	1.5053	2915	4572	2341	95	9.60	984	2M			Hole-Cplg	2.50			
Site plot (pipe racks 3 or 4) as per D.D. 11010-3.1 not found.															

13 3/8		casing inside the		20		Design Factors				Int 1					
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight				
"A"	54.50		j 55	btc	4.76	0.66	3,307	2	1.97	1.15	180,232				
"B"							0				0				
w/8.4#/g mud, 30min Sfc Csg Test psig:												Totals:	3,307		180,232
The cement volume(s) are intended to achieve a top of 0 ft from surface or a 1555 overlap.															
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist				
17 1/2	0.6946	1796	3714	2802	33	10.00	1388	2M			Hole-Cplg	1.56			
D V Tool(s):												sum of sx	Σ CuFt	Σ% excess	
t by stage % :												3007	5325	90	
Class 'C' tail cmt yld > 1.35															

9 5/8		casing inside the		13 3/8		Design Factors				Int 2					
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight				
"A"	40.00		l 80	btc	4.60	1.24	5,022	2	1.85	2.23	200,880				
"B"							0				0				
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500												Totals:	5,022		200,880
The cement volume(s) are intended to achieve a top of 0 ft from surface or a 3307 overlap.															
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist				
12 1/4	0.3132	1127	2274	1737	31	9.60	3114	5M			Hole-Cplg	0.81			
Setting Depths for D V Tool(s):												sum of sx	Σ CuFt	Σ% excess	
% excess cmt by stage:												1753	3497	101	

5 1/2		casing inside the		9 5/8		Design Factors				Prod 1					
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight				
"A"	20.00		p 110	btc	2.82	1.97	21,743	2	4.06	3.56	434,860				
"B"							0				0				
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,505												Totals:	21,743		434,860
The cement volume(s) are intended to achieve a top of 3107 ft from surface or a 1915 overlap.															
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist				
8 3/4	0.2526	3642	6378	4723	35	9.50					Hole-Cplg	1.35			
Setting Depths for D V Tool(s):												sum of sx	sum of CuFt	Σ% excess	
% excess cmt by stage:												3642	6378	35	
Class 'H' tail cmt yld > 1.20 Capitan Reef est top 3745.															

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- Addition of a DV Tool on the 13-3/8” and 9-5/8” Casing
- Increase the casing size of our vertical casing strings
- Circulating Medium change to a combination of Cut Brine and/or Oil-Based Mud in the Production Hole Section.
- Revise proposed BOP beneath the base of the 20” surface shoe to setting the 1<sup>st</sup> Intermediate casing string only (13 3/8”).

The reason for the request is based on improved drilling efficiencies and improved cementing in-place for each casing string. We believe the larger casing diameters in the vertical section will increase the likelihood of getting cement to surface for each string.

There will be no change in Geology formations, and casing depths as noted in the COA of the approved APD.

**External Casing Packer/ DV Tool:**

Pending hole conditions, the addition of an External Casing Packer to the Intermediate #1 13-3/8” & Intermediate #2 9-5/8” casing string is requested. A DV Tool is also requested the Intermediate #1 13-3/8” & Intermediate #2 9-5/8” casing string.

**New/Optional proposed design:**

Casing:

DESCRIPTION	Hole Size (in)	CSG Size (in)	INTERVAL (ft)			WEIGHT (ppf)	GRADE	COUPLING	FORMATION PRESS @ CSG DEPTH (PPG)	MW @ CSG DEPTH (PPG)	SAFETY FACTORS		
			TOP MD	BTM TVD	BTM MD						BURST (psi)	COLLAPSE (psi)	TENSION (1000 lbs)
CONDUCTOR	36	30	0	120	120	---	---	WELD	---	---	---	---	---
SURFACE	26	20	0	1,555	1,555	94	J-55	BTC	8.3	9.0	2,110	520	1480
											3.0	2.8	10.1
INT. #1	17.5	13.375	0	3,287	3,307	54.5	J-55	BTC	8.3	10.0	2,730	1,130	853
											1.7	1.7	4.7
INT. #2	12.25	9.625	0	4,982	5,022	40	L-80	BTC	8.3	9.2	5,750	3,090	630
											1.5	4.3	3.1
PRODUCTION	8.75	5.5	0	11,387	21,743	20	P-110	BTC	8.7	9.6	12,630	11,100	641
											3.3	2.5	1.5

Cement:

DESCRIPTION	HOLE (IN)	CSG (IN)	TOP	BTM	LENGTH (FT)	SLURRY DESCRIPTION	FT <sup>3</sup>	EXCESS	WEIGHT (ppg)	YIELD (FT <sup>3</sup> /SK)
							SACKS			
CONDUCTOR	36	30	0	120	120	Class G	518	100%	15.8	1.17
							443			
SURFACE - LEAD	26	20	0	1,055	1,055	Class C	3067	100%	13.5	1.72
							1783			
SURFACE - TAIL	26	20	1,055	1,555	500	Class C	1506	100%	14.8	1.33
							1132			
INT #1 - LEAD	17.5	13.375	0	2,807	2,807	Class C	3107	75%	12.7	2.32
							1339			
INT #1 - TAIL	17.5	13.375	2,807	3,307	500	Class C	608	75%	14.8	1.33
							457			
INT #1 - DV TAIL	17.5	13.375	0	1,605	1,605	Class C	1610	75%	14.8	1.33
							1211			
INT #2 - LEAD	12.25	9.625	0	4,522	4,522	50/50Poz Class C	1961	100%	11.5	2.2
							891			
INT #2 - TAIL	12.25	9.625	4,522	5,022	500	Class C	313	100%	14.8	1.33
							236			
INT #2 - DV LEAD	12.25	9.625	0	2,857	2,857	50/50Poz Class C	988	50%	11.5	2.2
							449			
INT #2 - DV TAIL	12.25	9.625	2,857	3,357	500	Class C	235	50%	14.8	1.33
							177			
PRODUCTION - LEAD	8.75	5.5	0	9,000	9,000	Nine Lite	2516	20%	11.0	2.48
							1014			
PRODUCTION - TAIL	8.75	5.5	9,000	21,743	12,743	35/65 Poz Class H	3864	20%	13.2	1.47
							2628			

Note 1: Int 1 is two stage cement job. DVT and External Casing packer to be placed @ approximately 1605' MD, 50ft from previous casing shoe and will be adjusted real time

Note 2: Int 2 is two stage cement job. DVT and External Casing packer to be placed @ approximately 3357' MD, 50ft from previous casing shoe and will be adjusted real time

Circulating Medium / Mud Program:

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)
0	1,555	OTHER: Fresh Water	8.4	9.6
1,555	3,307	OTHER: Brine Water	10	10
3,307	5,022	OTHER: Fresh Water	8.4	9.6
5,022	21,743	Cut Brine / OBM	8.5	9.5

Note: Operator requests optionality to use a Cut Brine Mud in the Production section for the vertical, curve and partial lateral of the well prior to swapping mud fluid systems to an Oil-Based Mud to complete the Production section.

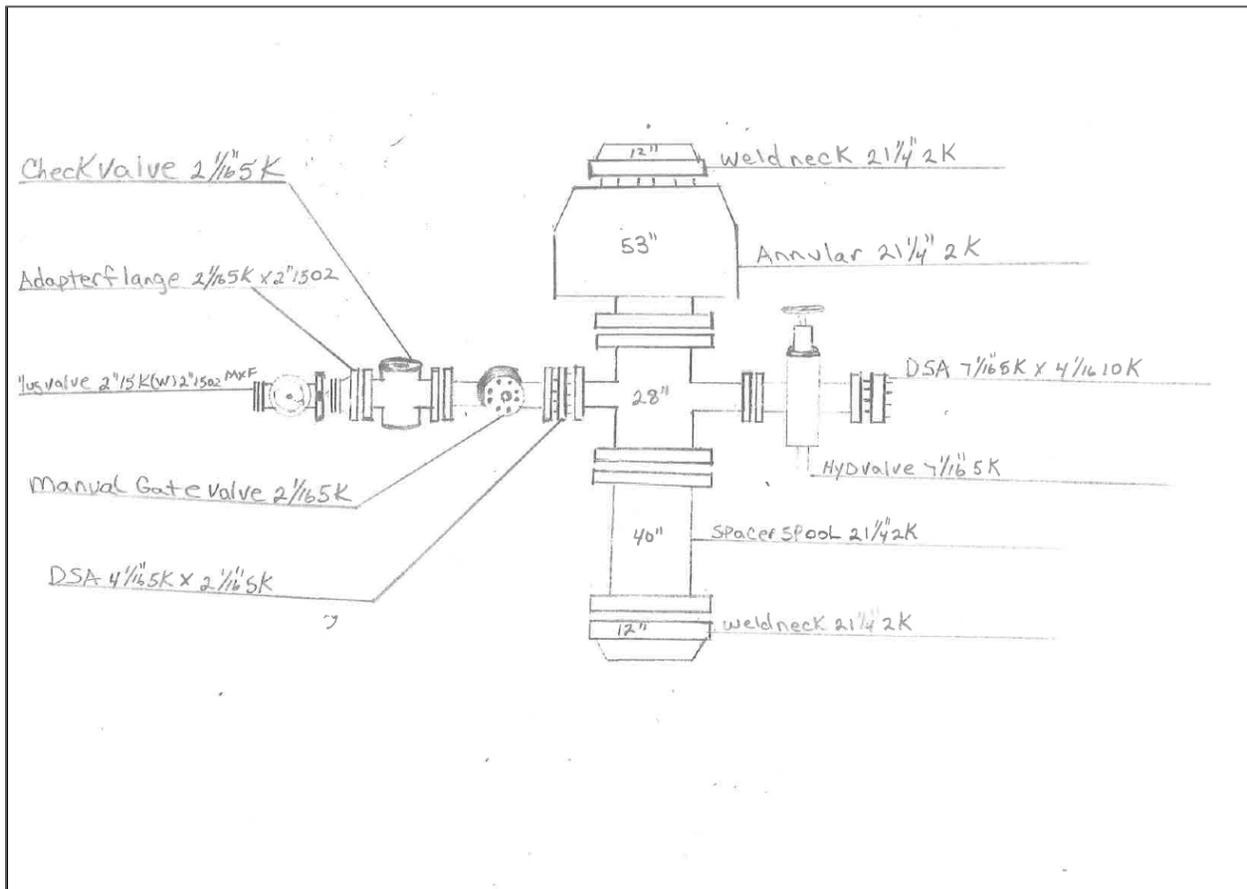
**New Proposed BOP:**

From the Base of the 20" Surface pipe, the well will be equipped with a 2M Annular system. Before drilling out the 20" surface pipe, the 2M system will be tested to 250psi low and 1000psi high by an 3<sup>rd</sup> party service company. The 2M BOPE and related equipment will meet or exceed the requirements of a 2M psi system as set forth in On Shore Order No. 2 while drilling below the 20" surface shoe and to TD of Intermediate #1 (13-3/8" Casing). Once the Intermediate #1 13-3/8" Casing is cemented the 20" 2M BOPE and 21-1/4" wellhead will be removed and a 13-5/8" Multi-bowl wellhead and previously permitted 13-5/8" 5M BOPE will be installed. From the base of the Intermediate #1 13-3/8" casing string through running of the 5-1/2" production string the 5M BOPE will be equipped.

The previously permitted 5M choke will be utilized in conjunction with the 2M Annular System.

ASCENT ENERGY

**2M ANNULAR BOPE & DIAGRAM**



## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Ascent Energy LLC
<b>LEASE NO.:</b>	NMNM057683
<b>LOCATION:</b>	Section 33, T.20 S., R.33 E., NMPM
<b>COUNTY:</b>	Lea County, New Mexico

<b>WELL NAME &amp; NO.:</b>	Gavilon Fed Com 603H
<b>SURFACE HOLE FOOTAGE:</b>	155'S & 2001'W
<b>BOTTOM HOLE FOOTAGE:</b>	50'N & 1650'W

COA

H2S	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Potash	<input type="radio"/> None	<input type="radio"/> Secretary	<input checked="" type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Cave/Karst Potential	<input type="radio"/> Critical		
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input type="radio"/> Multibowl	<input checked="" type="radio"/> Both
Wellhead Variance	<input type="radio"/> Diverter		
Other	<input checked="" type="checkbox"/> 4 String Area	<input checked="" type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input checked="" type="checkbox"/> Fluid Filled	<input type="checkbox"/> Pilot Hole	<input type="checkbox"/> Open Annulus
Cementing	<input type="checkbox"/> Cement Squeeze	<input type="checkbox"/> EchoMeter	
Special Requirements	<input type="checkbox"/> Water Disposal	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> Unit
Special Requirements Variance	<input type="checkbox"/> Break Testing	<input type="checkbox"/> Offline Cementing	

### A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Hat Mesa Pool**. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

**B. CASING**

**Surface casing must be kept fluid filled to meet BLM minimum collapse requirement.**

1. The **20** inch surface casing shall be set at approximately **1555 feet** (a minimum of **25 feet (Lea County)** 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 **24 hours in the Potash Area** 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.

**Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.**

2. The minimum required fill of cement behind the **13-3/8** inch intermediate casing shall be set at approximately **3307 feet** 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.**  
**Cement excess is less than 25%, more cement might be required.**

**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 R111 Potash Areas if cement does not circulate to surface on the first two salt protection casing strings, the cement on the 3rd casing salt string must come to surface.
3. 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, potash or capitan reef.  
Cement excess is less than 25%, more cement might be required.**

**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 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, potash or capitan reef.**

4. The minimum required fill of cement behind the 5-1/2 inch production casing is:
- Cement should tie-back at least **50 feet** on top of Capitan Reef top **or 200 feet** into the previous casing, whichever is greater. 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, potash or capitan reef.**

### C. 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.

#### Option 1:

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M) psi. Annular which shall be tested to 2000 (2M) psi.**
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **13-3/8** inch intermediate casing shoe shall be **3000 (3M) psi.**
- c. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch intermediate casing shoe shall be **5000 (5M) psi.**

#### Option 2:

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M) psi. Annular which shall be tested to 2000 (2M) psi.**
- b. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **13-3/8** inch intermediate casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **5000 (5M) psi.**
  - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - ii. 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.

- iii. Manufacturer representative shall install the test plug for the initial BOP test.
- iv. 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.
- v. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

#### **D. SPECIAL REQUIREMENT (S)**

##### **Communitization Agreement**

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

## 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)

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 2<sup>nd</sup> 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.
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 integrity 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 integrity 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. 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, 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 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.

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**District IV**  
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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**

CONDITIONS  
 Action 67058

**CONDITIONS**

Operator: ASCENT ENERGY, LLC. 1125 17th St Denver, CO 80202	OGRID: 325830
	Action Number: 67058
	Action Type: [C-103] NOI Change of Plans (C-103A)

**CONDITIONS**

Created By	Condition	Condition Date
pkautz	None	12/16/2021