Form 3160-3 (June 2015) UNITED DEPARTMENT O BUREAU OF LAN APPLICATION FOR PERN	D MANAG	EMENT		BBS 0 ED			137 , 2018
1a. Type of work:       ✓       DRILL         1b. Type of Well:       ✓       Oil Well       Gas Well         1c. Type of Completion:       Hydraulic Fracturing	REEN	_	Multiple Zone		706H -	Well No.	Jame and No.
2. Name of Operator ASCENT ENERGY LLC [325830]					9. API Well No. <b>30-025-</b> 4	47560	
3a. Address 1621 18th Street, Suite 200, Denver, CO 80202		Phone N 20) 710-8	o. (include area cod 999	e)	10. Field and Pool, of WC-025 G-10 S213	-	
<ol> <li>Location of Well (Report location clearly and in ad At surface NENW / 100 FNL / 2030 FWL / L/ At proposed prod. zone NENW / 1271 FNL / 10</li> </ol>	AT 32.500040	5 / LONG	6 -103.620327	31565	11. Sec., T. R. M. or SEC 12/T21S/R32		Survey or Area
14. Distance in miles and direction from nearest town 22 miles	or post office*				12. County or Parish LEA	1	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)		16. No of acres in lease         17. Spac           480         200.0		-	ng Unit dedicated to th	his well	
<ul> <li>18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.</li> <li>25 feet</li> </ul>		· · · · · · · · · · · · · · · · · · ·		/BIA Bond No. in file //B001698			
21. Elevations (Show whether DF, KDB, RT, GL, etc. 3776 feet	10	22. Approximate date work will start* 10/01/2020			23. Estimated duration 90 days		
	2	4. Attac	hments				
<ol> <li>The following, completed in accordance with the requires (as applicable)</li> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National F SUPO must be filed with the appropriate Forest Ser</li> </ol>	orest System L		<ol> <li>Bond to cover th Item 20 above).</li> <li>Operator certific</li> </ol>	e operation	Aydraulic Fracturing runs unless covered by an mation and/or plans as	n existing	bond on file (see
			Name (Printed/Typed) BRIAN WOOD / Ph: (720) 710-89		Date 099 04/02/2020		020
Title President							
Approved by (Signature) Na			Name (Printed/Typed) Cody Layton / Ph: (575) 234-5959		Date 08/12/2020		020
Title Assistant Field Manager Lands & Minerals		Office Carlst	ad Field Office				
Application approval does not warrant or certify that t applicant to conduct operations thereon. Conditions of approval, if any, are attached.	he applicant ho	lds legal o	or equitable title to the	nose rights	in the subject lease wl	hich woul	d entitle the
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Sect of the United States any false, fictitious or fraudulent						any depart	iment or agency
CCP Rec 08/14/2020						1	

GCP Rec 08/14/2020





\*(Instructions on page 2)

# PECOS DISTRICT SURFACE USE CONDITIONS OF APPROVAL

	ASCENT ENERGY LLC
	NMNM092187
WELL NAME & NO.:	
SURFACE HOLE FOOTAGE:	
BOTTOM HOLE FOOTAGE	1271'/N & 2310'/W
LOCATION:	SECTION 12, T21S, R32E, NMPM
COUNTY:	LEA
OPERATOR'S NAME:	ASCENT ENERGY LLC
LEASE NO.:	NMNM092187
WELL NAME & NO.:	BIG BULL FED COM 306H
SURFACE HOLE FOOTAGE:	100'/N & 2005'/W
BOTTOM HOLE FOOTAGE	1271'/N & 1650'/W
LOCATION:	SECTION 12, T21S, R32E, NMPM
COUNTY:	LEA
OPERATOR'S NAME:	ASCENT ENERGY LLC
LEASE NO.:	NMNM092187
WELL NAME & NO.:	BIG BULL FED COM 403H
SURFACE HOLE FOOTAGE:	100'/N & 2055'/W
BOTTOM HOLE FOOTAGE	1271'/N & 2310'/W
LOCATION:	SECTION 12, T21S, R32E, NMPM
COUNTY:	LEA
OPERATOR'S NAME:	ASCENT ENERGY LLC
LEASE NO.:	NMNM092187
WELL NAME & NO.:	BIG BULL FED COM 504H
SURFACE HOLE FOOTAGE:	100'/S & 2054'/W
BOTTOM HOLE FOOTAGE	1271'/N & 2178'/W
LOCATION:	SECTION 1, T21S, R32E, NMPM
COUNTY:	LEA
OPERATOR'S NAME:	ASCENT ENERGY LLC
LEASE NO.:	NMNM092187
WELL NAME & NO.:	BIG BULL FED COM 602H
SURFACE HOLE FOOTAGE:	100'/S & 2029'/W
BOTTOM HOLE FOOTAGE	1271'/N & 1650'/W
LOCATION:	SECTION 1, T21S, R32E, NMPM
COUNTY:	LEA
OPERATOR'S NAME:	ASCENT ENERGY LLC
LEASE NO.:	NMNM092187
WELL NAME & NO.:	BIG BULL FED COM 705H
SURFACE HOLE FOOTAGE:	100'/S & 2079'/W
BOTTOM HOLE FOOTAGE	1271'/N & 2310'/W
LOCATION:	SECTION 1, T21S, R32E, NMPM
COUNTY:	LEA

OPERATOR'S NAME:	ASCENT ENERGY LLC
LEASE NO.:	NMNM092187
WELL NAME & NO.:	BIG BULL FED COM 706H
SURFACE HOLE FOOTAGE:	100'/N & 2030'/W
BOTTOM HOLE FOOTAGE	1271'/N & 1650'/W
LOCATION:	SECTION 12, T21S, R32E, NMPM
COUNTY:	LEA
OPERATOR'S NAME:	ASCENT ENERGY LLC
LEASE NO.:	NMNM092187
WELL NAME & NO.:	BIG BUCKS FED COM 301H
SURFACE HOLE FOOTAGE:	100'/N & 601'/E
BOTTOM HOLE FOOTAGE	1266'/N & 330'/E
LOCATION:	SECTION 12, T21S, R32E, NMPM
COUNTY:	LEA
OPERATOR'S NAME:	ASCENT ENERGY LLC
LEASE NO.:	NMNM092187
WELL NAME & NO.:	BIG BUCKS FED COM 302H
SURFACE HOLE FOOTAGE:	75'/N & 601'/E
BOTTOM HOLE FOOTAGE	1267'/N & 990'/E
LOCATION:	SECTION 12, T21S, R32E, NMPM
COUNTY:	LEA
OPERATOR'S NAME:	ASCENT ENERGY LLC
LEASE NO.:	NMNM092187
WELL NAME & NO.:	BIG BUCKS FED COM 401H
SURFACE HOLE FOOTAGE:	50'/N & 601'/E
BOTTOM HOLE FOOTAGE	1266'/N & 330'/E
LOCATION:	SECTION 12, T21S, R32E, NMPM
COUNTY:	LEA
OPERATOR'S NAME:	ASCENT ENERGY LLC
LEASE NO.:	NMNM092187
WELL NAME & NO.:	BIG BUCKS FED COM 502H
SURFACE HOLE FOOTAGE:	75'/N & 401'/E
BOTTOM HOLE FOOTAGE	1267'/N & 1254'/E
LOCATION:	SECTION 12, T21S, R32E, NMPM
COUNTY:	LEA
OPERATOR'S NAME:	ASCENT ENERGY LLC
LEASE NO.:	NMNM092187
WELL NAME & NO.:	BIG BUCKS FED COM 702H
SURFACE HOLE FOOTAGE:	25'/N & 601'/E
BOTTOM HOLE FOOTAGE	1267'/N & 990'/E
LOCATION:	SECTION 12, T21S, R32E, NMPM
COUNTY:	LEA
	·

OPERATOR'S NAME:	ASCENT ENERGY LLC
LEASE NO.:	NMNM092187
WELL NAME & NO.:	BIG STAG FED COM 303H
SURFACE HOLE FOOTAGE:	195'/N & 2166'/E
BOTTOM HOLE FOOTAGE	1268'/N & 1650'/E
LOCATION:	SECTION 12, T21S, R32E, NMPM
COUNTY:	LEA
OPERATOR'S NAME:	ASCENT ENERGY LLC
LEASE NO.:	NMNM092187
WELL NAME & NO.:	BIG STAG FED COM 304H
SURFACE HOLE FOOTAGE:	195'/N & 2241'/E
BOTTOM HOLE FOOTAGE	1270'/N & 2310'/E
LOCATION:	SECTION 12, T21S, R32E, NMPM
COUNTY:	LEA
OPERATOR'S NAME:	ASCENT ENERGY LLC
LEASE NO.:	NMNM092187
WELL NAME & NO.:	BIG STAG FED COM 402H
SURFACE HOLE FOOTAGE:	195'/N & 2191'/E
BOTTOM HOLE FOOTAGE	1268'/N & 1650'/E
LOCATION:	SECTION 12, T21S, R32E, NMPM
COUNTY:	LEA
OPERATOR'S NAME:	ASCENT ENERGY LLC
LEASE NO.:	NMNM092187
WELL NAME & NO.:	BIG STAG FED COM 704H
SURFACE HOLE FOOTAGE:	195'/N & 2216'/E
BOTTOM HOLE FOOTAGE	1270'/N & 2310'/E
LOCATION:	SECTION 12, T21S, R32E, NMPM
COUNTY:	LEA

# **TABLE OF CONTENTS**

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- General Provisions
- **Permit Expiration**
- Archaeology, Paleontology, and Historical Sites
- **Noxious Weeds**
- Special Requirements
  - Lesser Prairie-Chicken Timing Stipulations Ground-level Abandoned Well Marker Potash Minerals Range Infrastructure
  - Wildlife Water Construction

# **Construction**

# I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

# **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

# III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

# **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

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

# Wildlife:

# Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

**Ground-level Abandoned Well Marker to avoid raptor perching**: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

# New Wildlife Water Construction Stipulations

Ascent Energy LLC will be required to construct a new wildlife water to replace the QU #45 wildlife water and will contact Keith Simpson, President of Southeast New Mexico Wildlife (SENMW) and Tom Denniston at the Bureau of Land Management (BLM) prior to the start of dissembling of the Wildlife Water QU #45 or construction of the new wildlife water, whichever comes first. Keith may be reached at 575-361-2917 and Tom may be reached at 575-234-5923 (Idenniston@blm.gov). The new wildlife water will be constructed and approved before construction or drilling of any of the Big Bull, Big Stag, or Big Buck infrastructure. The old QU #45 wildlife water will be fully disassembled and taken to a state approved waste facility or recycled within 3 months of the first Big Stagg or Big Buck well spud date. Ascent will relocate the wildlife water QU #45 to:

-103 degrees 37'28.44"W, 32 degrees 29'38.82"N. Ascent will fully construct the new wildlife water to the approved specifications of the BLM Wildlife Department and SENMW. Ascent will be accepting all costs and labor to appropriately disassemble QU #45 wildlife water and to construct the new wildlife water. Lastly, Ascent LLC is required to contact Keith Simpson and Tom Denniston upon completion for the final approval of the new wildlife water. The new wildlife water will be assembled to BLM standards using the following:

- 3 C-perlin 25'
- 1 Gutter 26', 15' to center
- 1 Gutter downspout
- Angled spout 8" to 9"
- down spout 3'8"
- 1 1225 Gal Polytank
- Rainwater Drinker
- Overflow pipe
  - 3 90° Elbow Joints  $2^{3/4}$ " OD  $2^{1/2}$ " ID
  - o 1 PVC Pipe 2<sup>1/2</sup>"OD, 2<sup>1/4</sup>"ID
  - 2 PVC Pipe  $5^{1/2}$ " to 6"
  - 1 PVC Pipe Connector 2<sup>3/4</sup>"OD w/6 sided angel points
- 9 5 ft to 6 ft metal pipe 2<sup>1/4</sup>" dependent on slope of terrain
- 2 1" aluminum or metal pipe w/valve ass'y
- 1 1<sup>1/4</sup>" OD polypipe various length dependent on need.
- Fence
- 3 strand wire
  - Top 2 strand barbed wire
  - Bottom strand smooth wire
  - o T-posts
  - 4 metal pipe corner posts
- Each corner contains 3 metal pipes with diagonal posts
- Fence length
   ~50 yards X ~75 yards
- 1 Gate
  - o ~15'8"
  - $\circ$  3 strand smooth wire

- 2 T-posts that have the T removed
- The roofing needs to be at a slope so the rainwater drains down into the gutter.
- R Panel

Please contact Tom and Keith for wildlife water construction guidance and questions on BLM and SENMW wildlife water specifications.

#### Potash Resources:

Lessees must comply with the 2012 Secretarial Potash Order. The Order is designed to manage the efficient development of oil, gas, and potash resources. Section 6 of the Order provides general provisions which must be followed to minimize conflict between the industries and ensure the safety of operations. To minimize impacts to potash resources, the proposed well is confined within the boundaries of the established Big Bucks Drill Island.

# VI. CONSTRUCTION

# A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

# B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

# C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

# D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

# E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

# F. EXCLOSURE FENCING (CELLARS & PITS)

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#### **Exclosure Fencing**

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

# G. ON LEASE ACCESS ROADS

#### **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

#### Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

# Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

# Ditching

Ditching shall be required on both sides of the road.

#### Turnouts

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

# Drainage

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Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

**Cross Section of a Typical Lead-off Ditch** 



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

#### Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope:  $\underline{400'}_{4\%} + 100' = 200'$  lead-off ditch interval  $\underline{4\%}$ 

**Cattle guards** An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

**Fence Requirement** Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

**Livestock Watering Requirement** Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

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# **Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

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# VII. PRODUCTION (POST DRILLING)

# A. WELL STRUCTURES & FACILITIES

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

# **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

# **Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

# **Containment Structures**

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Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

#### Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, <u>Shale Green</u> from the BLM Standard Environmental Color Chart (CC-001: June 2008).

# **B. PIPELINES**

#### **BURIED PIPELINE STIPULATIONS**

A copy of the APD and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 <u>et seq.</u> (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, <u>et seq</u>. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, <u>et seq</u>.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system,

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impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-ofway.

6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be  $\underline{60}$  feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed <u>60</u> feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed <u>60</u> feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately <u>6</u> inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

() seed mixture 1	( ) seed mixture 3
() seed mixture 2	( ) seed mixture 4
(X) seed mixture 2/LPC	() Aplomado Falcon Mixture

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

18. <u>Escape Ramps</u> - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and

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humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

- a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
- b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.
- 19. Special Stipulations:

#### Wildlife:

#### Lesser Prairie-Chicken

Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

#### Ground-level Abandoned Well Marker to avoid raptor perching:

Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

#### **Hydrology:**

#### **BURIED PIPELINE(S):**

When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

# C. OIL AND GAS RELATED SITES

#### STANDARD STIPULATIONS FOR OIL AND GAS RELATED SITES

A copy of the application (Grant/Sundry Notice) and attachments, including stipulations and map, will be on location during construction. BLM personnel may request to view a copy of your permit during construction to ensure compliance with all stipulations.

The holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer, BLM.

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant and for all response costs, penalties, damages, claims, and other costs arising from the provisions of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Chap. 82, Section 6901 et. seq., from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. Chap. 109, Section 9601 et. seq., and from other applicable environmental statues.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et. seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et. seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et. seq.) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the site or related pipeline(s), any oil or other pollutant should be discharged from site facilities, the pipeline(s) or from containers or vehicles impacting Federal lands, the control and total removal, disposal, and cleanup of such oil of other pollutant, wherever

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found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting therefrom, the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

5. Sites shall be maintained in an orderly, sanitary condition at all times. Waste materials, both liquid and solid, shall be disposed of promptly at an appropriate, authorized waste disposal facility in accordance with all applicable State and Federal laws. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, petroleum products, brines, chemicals, oil drums, ashes, and equipment.

6. The operator will notify the Bureau of Land Management (BLM) authorized officer and nearest Fish and Wildlife Service (FWS) Law Enforcement office within 24 hours, if the operator discovers a dead or injured federally protected species (i.e., migratory bird species, bald or golden eagle, or species listed by the FWS as threatened or endangered) in or adjacent to a pit, trench, tank, exhaust stack, or fence. (If the operator is unable to contact the FWS Law Enforcement office, the operator must contact the nearest FWS Ecological Services office.)

7. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee. The color selected for this project is **Shale Green**, Munsell Soil Color Chart Number 5Y 4/2.

8. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

9. A sales contract for removal of mineral material (caliche, sand, gravel, fill dirt) from an authorized pit, site, or on location must be obtained from the BLM prior to commencing construction. There are several options available for purchasing mineral material: contact the BLM office (575-234-5972).

10. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

11. Once the site is no longer in service or use, the site must undergo final abandonment. At final abandonment, the site and access roads must undergo "final" reclamation so that the character and productivity of the land are restored. Earthwork for final reclamation must be completed within six (6) months of the abandonment of the site. All pads and facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact. After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

12. The holder shall stockpile an adequate amount of topsoil where blading occurs. The topsoil to be stripped is approximately <u>6</u> inches in depth. The topsoil will be segregated from other spoil piles. The topsoil will be used for final reclamation.

13. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

() seed mixture 1	( ) seed mixture 3
() seed mixture 2	() seed mixture 4
(X) seed mixture 2/LPC	() Aplomado Falcon Mixture

14. In those areas where erosion control structures are required to stabilize soil conditions, the holder shall install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound management practices. Any earth work will require prior approval by the Authorized Officer.

15. Open-topped Tanks - The operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the

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operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps

16. The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an

impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. <u>Use a maximum netting mesh size of 1 ½ inches.</u>

17. Open-Vent Exhaust Stack Exclosures – The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

18. Containment Structures - Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

#### 19. Special Stipulations:

- The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.
- Any water erosion that may occur due to the construction of the well pad during the life of the well will be corrected within two weeks and proper measures will be taken to prevent future erosion.

#### Wildlife:

#### Lesser Prairie-Chicken

Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exhaust noise from permanent engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

#### **Hydrology:**

The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

# VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce

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the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

# IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

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# Seed Mixture for LPC Sand/Shinnery Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be <u>no</u> primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

Species	lb/acre
Plains Bristlegrass Sand Bluestem	5lbs/A 5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

\*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Ascent Energy LLC
LEASE NO.:	NMNM127892
WELL NAME & NO.:	Big Bull Federal Com 706H
SURFACE HOLE FOOTAGE:	100'/N & 2030'/W
<b>BOTTOM HOLE FOOTAGE</b>	1271'/N & 1650'/W
LOCATION:	Section 12, T.21 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

# COA

H2S	O Yes	• No	
Potash	O None	Secretary	• R-111-P
Cave/Karst Potential	• Low	O Medium	O High
Cave/Karst Potential	Critical		
Variance	O None	Flex Hose	O Other
Wellhead	Conventional	Multibowl	O Both
Other	4 String Area	Capitan Reef	□ WIPP
Other	Fluid Filled	Cement Squeeze	Pilot Hole
Special Requirements	□ Water Disposal	COM	🗆 Unit

#### A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S 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.

# **B.** CASING

- 1. The **20 inch** surface casing shall be set at approximately **1,600 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.

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- 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.
- 2. The minimum required fill of cement behind the **13-3/8 inch** intermediate 1 casing and shall be set at approximately **3,136 feet** is:
  - 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.
  - In <u>R111 Potash Areas</u> if cement does not circulate to surface on the first two salt protection casing strings, the cement on the 3rd casing string must come to surface.
  - In <u>Capitan Reef 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:
     (Use this for 3 string wells in the Capitan Reef, if 4 string well ensure FW based mud used across the capitan interval)
    - 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.

# Intermediate 2 casing must be kept fluid filled to meet BLM minimum collapse requirement.

3. The minimum required fill of cement behind the **9-5/8 inch** intermediate 2 casing and shall be set at approximately **5,670 feet** is:

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#### **Option 1:**

• 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.

#### **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 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 **7-5/8 inch** intermediate 3 casing and shall be set at approximately **5,670 feet** is:
  - 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.
- 5. 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).'

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- 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, intermediate 1, and intermediate 2 casing shoes shall be 5000 (5M) psi. Variance is approved to use a 3000 (3M) Annular which shall be tested to 3000 (3M) psi.
- 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 intermediate 3 casing shoe shall be **5000** (**5M**) psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

# **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. <u>When the Communitization Agreement number is known, it shall also be on the sign.</u>

# **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.
- <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 hours</u>. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. <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. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
- 8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

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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 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

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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.

#### YJ (07/31/2020)



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

APD ID: 10400055850

Operator Name: ASCENT ENERGY LLC

Well Name: BIG BULL FED COM

Well Type: OIL WELL

#### Submission Date: 04/02/2020

Well Number: 706H

Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation			True Vertical	Measured			Producing
ID	Formation Name	Elevation	Depth	Depth	Lithologies	Mineral Resources	Formation
706463	QUATERNARY	3776	0	0	OTHER : None	NONE	N
706464	RUSTLER ANHYDRITE	2201	1575	1575	ANHYDRITE	NONE	N
706465	SALADO	1901	1875	1875	SALT	NONE	N
706466	BASE OF SALT	861	2915	2922	SALT	NONE	N
706467	TANSILL	651	3125	3136	LIMESTONE	NONE	N
706468	YATES	506	3270	3283	SANDSTONE, SHALE	NATURAL GAS, OIL	N
706469	CAPITAN REEF	171	3605	3627	LIMESTONE	USEABLE WATER	N
706470	DELAWARE SAND	-1854	5630	5670	SANDSTONE	NATURAL GAS, OIL	N
706471	CHERRY CANYON	-2144	5920	5960	SANDSTONE	NATURAL GAS, OIL	N
706472	BRUSHY CANYON	-3316	7092	7132	SANDSTONE	NATURAL GAS, OIL	N
706473	BONE SPRING LIME	-5039	8815	8855	LIMESTONE, SANDSTONE	NATURAL GAS, OIL	N
706474	BONE SPRING 1ST	-5966	9742	9782	LIMESTONE, SANDSTONE	NATURAL GAS, OIL	N
706461	BONE SPRING 2ND	-6279	10055	10095	LIMESTONE, SANDSTONE	OIL	N
706462	BONE SPRING 2ND	-6546	10322	10362	SANDSTONE	NATURAL GAS, OIL	N
706459	BONE SPRING 3RD	-7101	10877	10917	LIMESTONE, SANDSTONE	NATURAL GAS, OIL	N
706460	BONE SPRING 3RD	-7526	11302	11342	SANDSTONE	NATURAL GAS, OIL	N
706476	WOLFCAMP	-7798	11574	11628	SHALE	NATURAL GAS, OIL	N

Drilling Plan Data Report

08/12/2020

Well Name: BIG BULL FED COM

# **Section 2 - Blowout Prevention**

#### Pressure Rating (PSI): 5M

Rating Depth: 15000

**Equipment:** A 15,000 a 5,000 psi BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram, and 1 annular preventer will be used below surface casing to TD. See attachments for BOP and choke manifold diagrams. Also present will be an accumulator that meets the requirements of Onshore Order #2 for the pressure rating of the BOP stack. A rotating head will also be installed as needed. BOP will be inspected and operated as recommended in Onshore Order #2. A top drive check valve and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position. The wellhead will be a multi-bowl speed head.

#### Requesting Variance? YES

Variance request: Ascent requests a variance to run a multi-bowl speed head for setting the Intermediate 1, Intermediate 2, and Production Strings. Ascent requests a variance to drill this well using a co-flex line between the BOP and choke manifold (instead of the 4" OD steel line). Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Ascent requests a variance to have the option of batch drilling this well with other wells on the same pad. In the even the wells are batch drilled, after drilling surface, 1st intermediate, and 2nd intermediate hole sections and cementing 2nd intermediate casing, a 10M dry hole cap with bleed off valve will be installed. The rig will then walk to another well on the pad. When the rig returns to this well and BOPs are installed, the operator will perform a full BOP test. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe. Ascent requests a variance to wave the centralizer requirement for the run 7-5/8" EZGO FJ3 casing inside 8.75" hole. Variance is also requested to wave any centralizer requirements for the 5-1/2" EZGO HT casing the 6-3/4" hole size. Ascent requests approval to possibly utilize a spudder rig to drill and set casing for the surface interval on this well. The spudder rig will be possibly utilized in order to reduce cost and save time. The wellhead will be installed and tested as soon as the surface casing is cut off per the existing COAs. A blind flange with the same pressure rating as the wellhead will be installed on the well. Once the spudder rig is removed, Ascent will secure the wellhead area by placing a guard rail around the cellar. Pressure will be monitored and a means for intervention will be maintained while the drilling rig is not over the well. Spudder rig operations are expected to take 2-3 days per well. Three wells on the pad will have surface casing set by the spudder rig as a part of this operation. The BLM will be notified 24 hours prior to commencing spudder rig operations. Within 90 days of the departure of the spudder rig, drilling operations will recommence on these wells. This rig will have a BOP stack equal or greater to the pressure rating required in the COAs. The BLM will be notified 24 hours before the larger rig moves on the preset wells. Ascent will have supervision on the spudder rig to ensure compliance with all BLM and NMOCD regulations. **Testing Procedure:** After surface casing is set and the BOP is nippled up, the BOP pressure tests will be made with a third party tester to 250 psi low, 5000 psi high, and the annular preventer will be tested to 2,500 psi. The BOP will be tested in this manner after nipple-up if any break of the stack occurs as wells as every 30 days.

#### Choke Diagram Attachment:

BigBull\_706H\_BOP\_Choke\_20200720113146.pdf

#### **BOP Diagram Attachment:**

BigBull\_706H\_BOP\_Choke\_20200720113153.pdf

Well Number: 706H

# **Section 3 - Casing**

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	24	20.0	NEW	API	N	0	1600	0	1600	3776	2176	1600	J-55	133	BUTT	1.88	3.24	DRY	4.41	DRY	4.41
	INTERMED IATE	17.5	13.375	NEW	API	N	0	3136	0	3125	3777	651	3136	J-55	68	ST&C	1.2	1.87	DRY	2.15	DRY	2.15
	INTERMED IATE	12.2 5	9.625	NEW	API	N	0	5670	0	5630	3777	-1854	5670	J-55	40	LT&C	1.68	1.19	DRY	1.85	DRY	1.85
	INTERMED IATE	8.75	7.625	NEW	NON API	N	0	11628	0	11574	3777	-7798	11628	HCP -110		OTHER - EZGO HT	1.44	1.39	DRY	1.27	DRY	1.27
-	PRODUCTI ON	6.75	5.5	NEW	NON API	N	0	18259	0	11870	3776	-8094	18259	HCP -110	-	OTHER - EZGO HT	2.14	1.35	DRY	1.48	DRY	1.48

#### **Casing Attachments**

Casing ID: 1

String Type: SURFACE

**Inspection Document:** 

Spec Document:

**Tapered String Spec:** 

#### Casing Design Assumptions and Worksheet(s):

Casing\_Design\_Assumptions\_20200630140001.pdf

Well Number: 706H

#### **Casing Attachments**

Casing ID: 2 String Type: INTERMEDIATE

**Inspection Document:** 

Spec Document:

**Tapered String Spec:** 

#### Casing Design Assumptions and Worksheet(s):

 $Casing\_Design\_Assumptions\_20200630140020.pdf$ 

Casing ID: 3 String Type: INTERMEDIATE

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

#### Casing Design Assumptions and Worksheet(s):

Casing\_Design\_Assumptions\_20200630140042.pdf

Casing ID: 4 String Type: INTERMEDIATE

**Inspection Document:** 

Spec Document:

CDS\_7.625\_29.7lb\_P110\_HC\_EZGO\_HT\_\_7.9\_0D\_\_20200630125112.pdf

**Tapered String Spec:** 

#### Casing Design Assumptions and Worksheet(s):

Casing\_Design\_Assumptions\_20200630140202.pdf

#### **Casing Attachments**

Casing ID: 5 String Type: PRODUCTION

**Inspection Document:** 

#### **Spec Document:**

CDS\_5.5\_20lb\_P110\_HC\_EZGO\_HT\_\_5.9\_coupling\_od\_\_20200604152757.pdf

**Tapered String Spec:** 

#### Casing Design Assumptions and Worksheet(s):

Casing\_Design\_Assumptions\_20200630140226.pdf

# Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1100	1190	1.72	13.5	2054	100	Class C	None
SURFACE	Tail		1100	1600	780	1.33	14.8	960	100	Class C	None
INTERMEDIATE	Lead	2136	0	1886	270	2.32	12.7	621	10	Class C	None
INTERMEDIATE	Tail		1886	5670	350	1.33	14.8	448	10	Class C	None
INTERMEDIATE	Lead		0	2136	1210	2.32	12.7	2804	250	Class C	None
INTERMEDIATE	Tail		2136	3136	810	1.33	14.8	1042	50	Class C	None
INTERMEDIATE	Lead	2136	3186	4370	510	2.2	12.7	1113	200	Class C	None
INTERMEDIATE	Tail		4370	5670	400	1.33	148	448	10	Class C	None
INTERMEDIATE	Lead		0	5689	350	1.78	12	618	100	50/50 Poz H	None
INTERMEDIATE	Tail		5689	1162 8	800	1.14	14.8	897	50	25/75 Poz H	None
PRODUCTION	Lead		0	9000	340	2.48	11	838	10	TXI Nine Lite	None

#### Well Name: BIG BULL FED COM

#### Well Number: 706H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Tail		9000	1825 9	665	1.47	13.2	967	25	35/65 Poz H	None

# Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

**Describe what will be on location to control well or mitigate other conditions:** All necessary mud products (e. g., barite, cedar bark) for weight addition and fluid loss control will always be on site. Mud program is subject to change due to hole conditions.

**Describe the mud monitoring system utilized:** Electronic Pason mud monitor system complying with Onshore Order 1 will be used.

# **Circulating Medium Table**

Top Depth	Bottom Depth	Mud Type	Min Weight (Ibs/gal)	Max Weight (Ibs/gal)	Density (Ibs/cu ft)	Gel Strength (lbs/100 sqft)	Н	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1162 8	1825 9	OIL-BASED MUD	10	10.5							
0	1600	OTHER : Fresh water	8.4	9.6							
1600	3136	OTHER : Brine water	10	10							
3136	5670	OTHER : Fresh water	8.4	8.6							
5670	1162 8	OIL-BASED MUD	8.8	9.2							

Well Name: BIG BULL FED COM

# Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Electric Logging Program: No open-hole logs are planned at this time for the pilot hole.

GR will be collected while drilling through the MWD tools from 9.625 casing shoe to TD.

A 2-person mud logging program will be used from 9.625 casing shoe to TD. List of open and cased hole logs run in the well: GAMMA RAY LOG,MUD LOG/GEOLOGICAL LITHOLOGY LOG,

#### Coring operation description for the well:

No DSTs or cores are planned at this time.

## Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4000

Anticipated Surface Pressure: 1388

Anticipated Bottom Hole Temperature(F): 176

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

# Hydrogen Sulfide drilling operations plan required? YES

#### Hydrogen sulfide drilling operations plan:

BigBull\_H2S\_plan\_20200402160209.pdf

# **Section 8 - Other Information**

#### Proposed horizontal/directional/multi-lateral plan submission:

BigBull\_706H\_Horizontal\_Plan\_20200402160229.pdf

#### Other proposed operations facets description:

#### Other proposed operations facets attachment:

BigBull\_CoFlex\_Certs\_20200402160447.pdf BigBull\_706H\_Anticollision\_Report\_20200402160508.pdf BigBull\_speedhead\_20200402160609.pdf BigBull\_706H\_Drill\_Plan\_v2\_20200604152337.pdf

Other Variance attachment:

Ground Elevation above Sea Level: 3776'

#### DRILLING PROGRAM

Proposed Drilling Depth: 18,259' MD / 11,870' TVD

<u>Type of well:</u> Horizontal well, no pilot hole

<u>Permitted Well Type:</u> Oil

<u>Geologic Name of Surface Formation:</u> Quaternary Deposits

KOP Lat/Long (NAD83): 32.500907N / -103.631559 W

<u>TD Lat/Long (NAD83):</u> 32.482670 N / -103.631565 W

### 1. Estimated Tops

Formation	TVD	MD	Lithologies	Bearing
Quaternary Deposits	0	0	Surface	None
Rustler Anhydrite	1575	1575	Anhydrite	None
Salado	1875	1875	Salt	None
Base Salt	2915	2922		None
Tansil	3125	3136	Limestone	None
Yates	3270	3283	Shale/Sandstone	Hydrocarbons
Capitan Reef	3605	3627	Limestone	Water
Delaware Sand	5630	5670	Sandstone	Hydrocarbons
Cherry Canyon	5920	5960	Sandstone	Hydrocarbons
Brushy Canyon	7092	7132	Sandstone	Hydrocarbons
Bone Spring Lime	8815	8855	Lmst/SS	Hydrocarbons
1 <sup>st</sup> Bone Spring	9742	9782	Lmst/SS	Hydrocarbons
2 <sup>nd</sup> Bone Spring	10055	10095	Lmst/ SS	Hydrocarbons
2 <sup>nd</sup> Bone Spring Sand	10322	10362	Sandstone	Hydrocarbons
3 <sup>rd</sup> Bone Spring	10877	10917	Lmst/SS	Hydrocarbons
3 <sup>rd</sup> Bone Spring Sand	11302	11342	Sandstone	Hydrocarbons
Wolfcamp	11574	11628	Shale	Hydrocarbons

КОР	11254	11297	
TD	11870	18259	

#### 2. Notable Zones

WC A is the target formation.

#### 3. Pressure Control

Pressure Control Equipment (See Schematics):

A 15,000' a 5,000 psi BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram, and 1 annular preventer will be used below surface casing to TD. See attachments for BOP and choke manifold diagrams. Also present will be an accumulator that meets the requirements of Onshore Order #2 for the pressure rating of the BOP stack. A rotating head will also be installed as needed. BOP will be inspected and operated as recommended in Onshore Order #2. A top drive check valve and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position. The wellhead will be a multi-bowl speed head.

#### BOP Test procedure will be as follows:

After surface casing is set and the BOP is nippled up, the BOP pressure tests will be made with a thirdparty tester to 250 psi low, 5000 psi high, and the annular preventer will be tested to 2,500 psi. The BOP will be tested in this manner after nipple-up if any break of the stack occurs as wells as every 30 days.

#### Variance Requests:

Ascent requests a variance to run a multi-bowl speed head for setting the Intermediate 1, Intermediate 2, and Production Strings. Ascent requests a variance to drill this well using a co-flex line between the BOP and choke manifold (instead of the 4" OD steel line). Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Ascent requests a variance to have the option of batch drilling this well with other wells on the same pad. In the event the wells are batch drilled, after drilling surface, 1<sup>st</sup> intermediate, and 2<sup>nd</sup> intermediate hole sections and cementing 2<sup>nd</sup> intermediate casing, a 10M dry hole cap with bleed off valve will be installed. The rig will then walk to another well on the pad. When the rig returns to this well and BOPs are installed, the operator will perform a full BOP test. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

Ascent requests a variance to wave the centralizer requirement for the run 7-5/8" EZGO FJ3 casing inside 8.75" hole. Variance is also requested to wave any centralizer requirements for the 5-1/2" EZGO HT casing the 6-3/4" hole size.

Ascent requests approval to possibly utilize a spudder rig to drill and set casing for the surface interval on this well. The spudder rig will be possibly utilized in order to reduce cost and save time. The wellhead will be installed and tested as soon as the surface casing is cut off per the existing COAs. A blind flange with the same pressure rating as the wellhead will be installed on the well. Once the spudder rig is removed, Ascent will secure the wellhead area by placing a guard rail around the cellar. Pressure will be monitored and a means for intervention will be maintained while the drilling rig is not over the well. Spudder rig operations are expected to take 2-3 days per well. Three wells on the pad will have surface casing set by the spudder rig as a part of this operation. The BLM will be notified 24 hours prior to commencing spudder rig operations. Within 90 days of the departure of the spudder rig, drilling operations will recommence on these wells. This rig will have a BOP stack equal or greater to the pressure rating required in the COAs. The BLM will be notified 24 hours before the larger rig moves on the pre-set wells. Ascent will have supervision on the spudder rig to ensure compliance with all BLM and NMOCD regulations.

#### 4. Casing & Cement

	Hole	Ir	nterval	h	nterval				Conn		New/		DF	DF	DF
Interval	Size		MD		TVD	Csg OD	Weight	Grade	Туре	Conn	Used	Tappered	Collapse	Burst	Tension
Surface	24	0'	1,600'	0'	1,600'	20	133.0	J-55	BTC	API	New	No	1.88	3.24	4.41
1st Int	17.5	0'	3,136'	0'	3,125'	13.375	68.0	J-55	STC	API	New	No	1.20	1.87	2.15
2nd Int	12.25	0'	5,670'	0'	5,630'	9.625	40.0	J-55	LTC	API	New	No	1.68	1.19	1.85
3rd int	8.75	0'	11,628'	0'	11,574'	7.625	29.7	HCP-110	EZGO HT	Non-API	New	No	1.44	1.39	1.27
Production	6.75	0'	18,259'	0'	11,870'	5.5	20.0	HCP-110	EZGO HT	Non-API	New	No	2.14	1.35	1.48

All Casing will be new.

Section	Depth	Туре	Cmt Top	Excess	Ft <sup>3</sup>	Sacks	BBLS	Wt. ppg	Yld Ft³/sk	Slurry Description
Surface	20	Lead	0	100%	2,054	1190	366	13.5	1.728	Class C
Surface	1600'	Tail	1100'	100%	960	780	171	14.8	1.332	Class C
1 ct lot	13.375	Lead	0	250%	2,804	1210	499	12.7	2.32	Class C
1st Int	3136'	Tail	2136'	50%	1,042	810	186	14.8	1.33	Class C
2nd Int	9.625	Lead	3186	200%	1,113	510	198	12.7	2.2	Class C
1st Stg)	5670'	Tail	4370'	25%	509	400	91	14.8	1.33	Class C
2nd Int	7.625	Lead	0	10%	621	270	111	12.7	2.32	Class C
(2nd Stg)	5670'	Tail	1886'	10%	448	350	80	14.8	1.33	Class C
2 mil limb	7.625	Lead	0'	100%	618	350	110	12	1.78	50/50 Poz H
3rd Int	11628'	Tail	5680'	50%	897	800	160	14.8	1.14	25/75 Poz H
Draduction	5.5	Lead	0	10%	838	340	149	11	2.48	TXI Nine Lite Cement
Production	18,259'	Tail	9,000'	25%	967	665	172	13.2	1.472	35/65 Poz H

Note: Int 2 is a two-stage cement job. DVT to be placed @ approximately 2136'. 50ft from previous casing shoe and will be adjusted real time.

#### 5. Mud Program

Inter	val	Туре	Weight	Viscosity	Water Loss
0'	1,600'	Fresh Water	8.4-9.6	34-38	N/C
1,600'	3,136'	Brine Water	10	28-34	N/C
3,136'	5,670'	Fresh Water	8.4-8.6	28-34	N/C
5,670'	11,628'	OBM	8.8-9.2	28-34	N/C
11,628'	18,259'	OBM	10-10.5	40-45	N/C

Electronic Pason mud monitor system complying with Onshore Order 1 will be used. All necessary mud products (e. g., barite, cedar bark) for weight addition and fluid loss control will always be on site. Mud program is subject to change due to hole conditions. A closed loop system will be used.

#### 6. Cores, Tests, & Logs

- Electric Logging Program: No open-hole logs are planned at this time for the pilot hole.
- GR will be collected while drilling through the MWD tools from 9.625" casing shoe to TD.
- A 2-person mud logging program will be used from 9.625" casing shoe to TD.
- No DSTs or cores are planned at this time.

#### 7. Down Hole Conditions

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is  $\approx$ 4,000 psi. Expected bottom hole temperature is  $\approx$ 176° F.

- Kelly cock will be kept in the drill string at all times.
- A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.
- $\bullet~$   $H_2S$  monitoring and detection equipment will be utilized from surface casing point to TD.

Ascent does not anticipate that there will be enough H2S from the surface to the Bone Spring formations to meet the BLM's Onshore Order 6 requirements for the submission of an "H2S Drilling Operation Plan" or "Public Protection Plan" for drilling and completing this well. Ascent has an H2S safety package on all wells and an "H2S Drilling Operations Plan" is attached. Adequate flare lines will be installed off the mud/gas separator where gas may be safely flared. All personnel will be familiar with all aspects of safe operation of equipment being used.

#### 8. Other Information

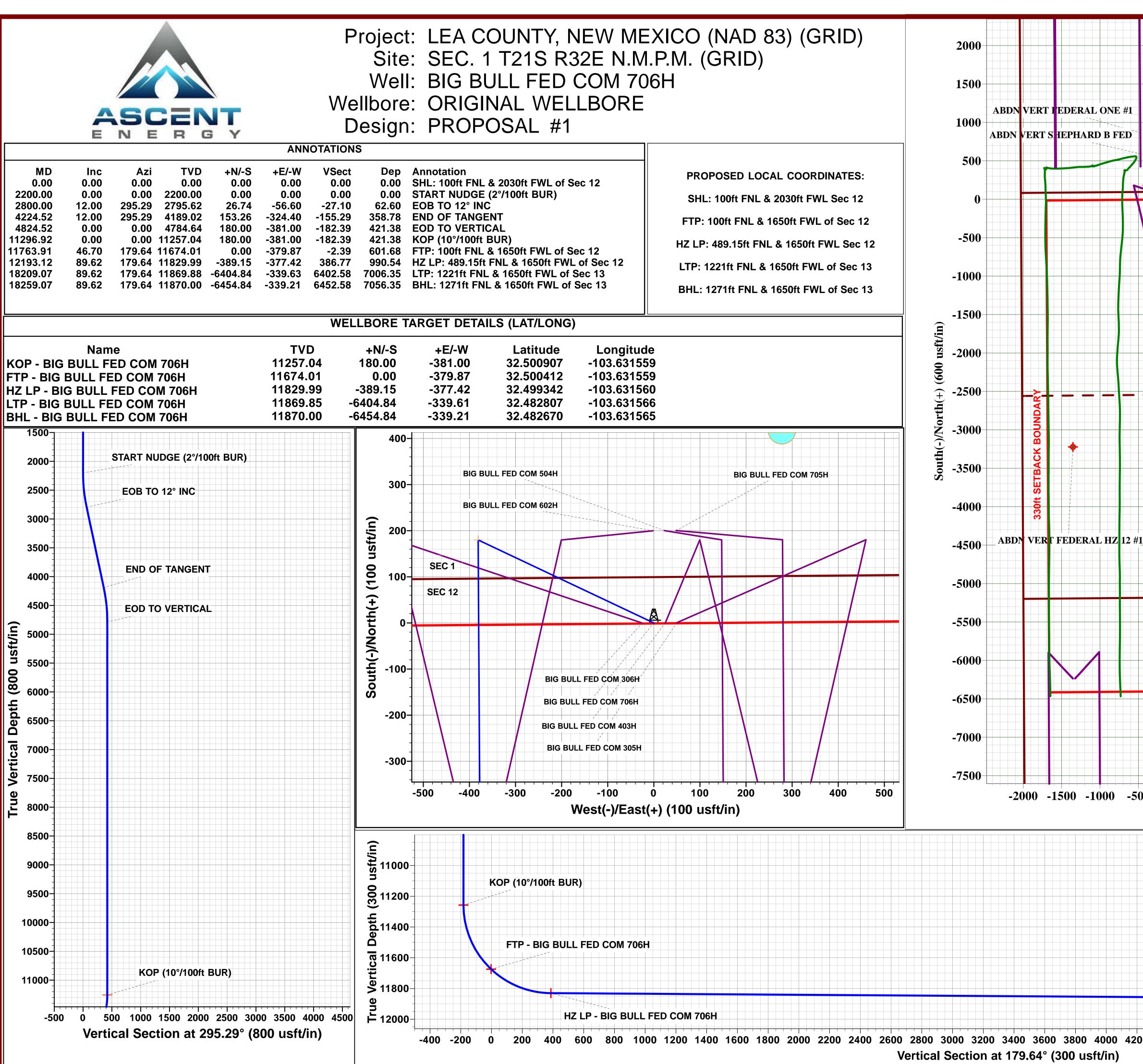
Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 30 days. If production casing is run an additional 60 days will be required to complete and construct surface facilities.

# **ASCENT ENERGY**

LEA COUNTY, NEW MEXICO (NAD 83) (GRID) SEC. 1 T21S R32E N.M.P.M. (GRID) BIG BULL FED COM 706H

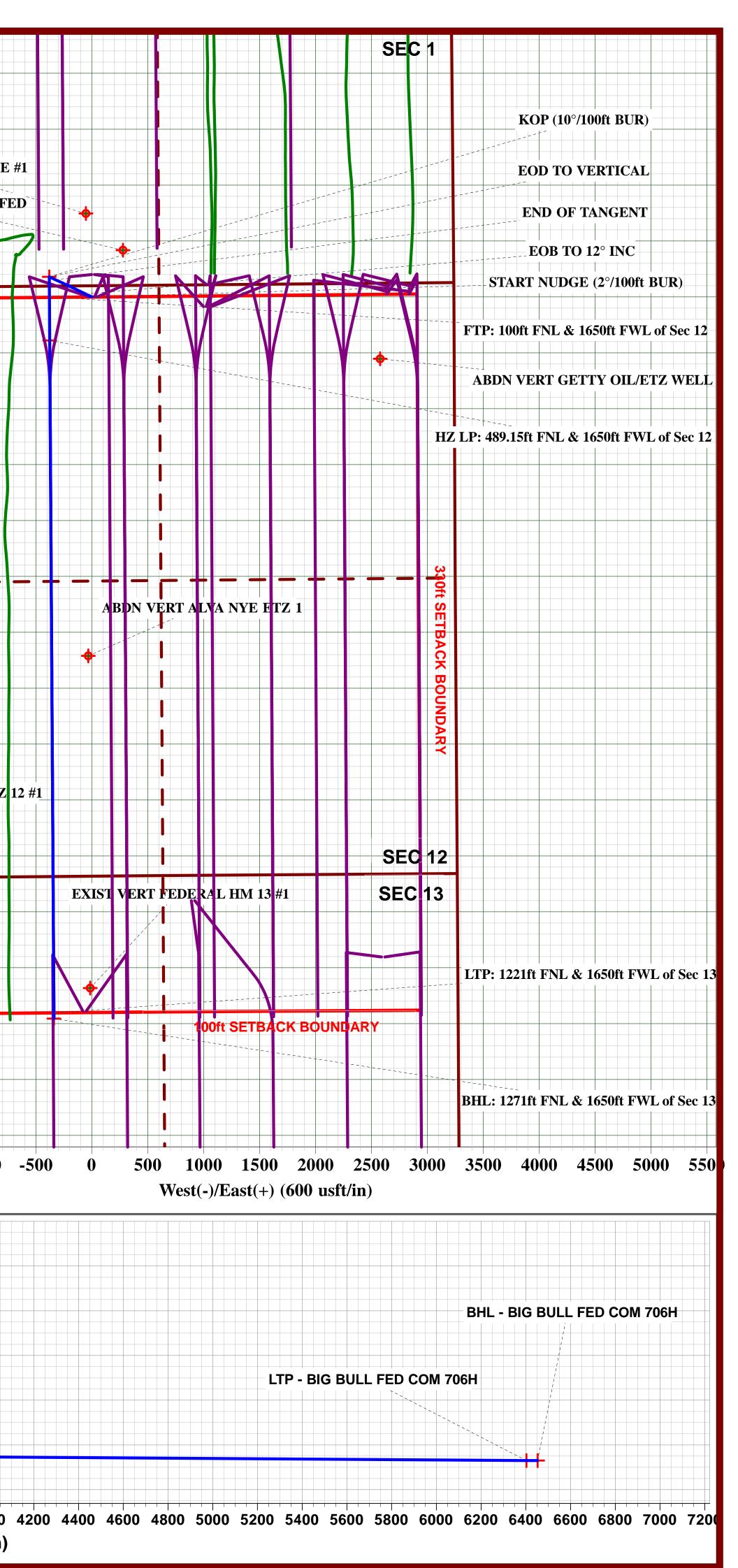
ORIGINAL WELLBORE 07 March, 2020

Plan: PROPOSAL #1



400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000 4200 4400 4600 4800 5000 5200 5400 5600 5800 6000 6200 6400 6600 6800 7000 720

Vertical Section at 179.64° (300 usft/in)



# Planning Report

Database: Company: Project:		Database 1 ASCENT E LEA COUN (GRID)		XICO (NAD 8	יד	ocal Co-oro /D Referen D Referenc		К	/ell BIG BULL B EST 25ft @ B EST 25ft @	2 3800.00us	ft
Site:			S R32E N.M.	P.M. (GRID)	N	orth Refere	nce:	G	irid		
Well:			ED COM 706	Η	S	urvey Calco	ulation Met	hod: N	linimum Curva	ature	
Wellbore:			WELLBORE								
Design:		PROPOSA	L #1								
Project		LEA COUNT	Y, NEW MEX	ICO (NAD 83	) (GRID)						
Map Syster		US State Plar		-	Sys	stem Datur	n:	Mea	an Sea Level		
Geo Datum Map Zone:		North America New Mexico E		3				Llei	ng geodetic s	calo factor	
Map Zone.								USI	ng geodetic s		
Site		SEC. 1 T218	6 R32E N.M.P	.M. (GRID)							
Site Positio	on:			Northing:		546,692.	70 <sub>usft</sub> La	titude:			32.500955
From:		Мар		Easting:		758,094.		ngitude:			-103.630248
Position Ur	ncertain	ty:	0.00 usft	Slot Radius	:	1.	10ft <b>Gr</b>	id Converg	gence:		0.38 °
Well		BIG BULL FE	ED COM 706H	1							
Well Positio	on	+N/-S	-200.21 usft	Northing	:	54	6,492.50 us	ft Latit	ude:		32.500405
		+E/-W	-23.20 usft	Easting:	•		8,071.40 us		gitude:		-103.630327
Position Ur	ncertain	ty	0.00 usft	Wellhead	d Elevation:		us	ft <b>Gro</b> u	und Level:		3,775.00 usft
Wellbore		ORIGINAL	WELLBORE								
Magnetics		Model Na	ame s	Sample Date	I	Declination	I	Dip Ar	ngle		Strength
		IGRF20	20	2020-03-05		(°) 6.74		(°) 60.1	0		( <b>nT)</b> 32692380
		IGRF20	20	2020-03-05		0.74		00.1	9	41,102.	32092360
Design		PROPOSAL	. #1								
Audit Notes	s:										
Version:				Phase:	PROTO	DTYPE	Tie O	n Depth:		0.00	
Vertical Se	ction:		Depth F	rom (TVD)	+	N/-S	+E/-W	1	Dire	ection	
			. (u	sft)	(	usft)	(usft)		(	(°)	
			0	.00	(	0.00	0.00		17	9.64	
Plan Sectio	ons										
							Dogleg	Build	Turn		
MD	Inc	Azi	Vertical	SS (usft)	+N/-S	+E/-W	Rate	Rate	Rate	TFO	
MD (usft)		(°)	Depth	(usft)	(usft)	(usft)	(°/100usf	(°/100usf	(°/100usf	(°)	Target
(usft)	(°)	.,				0.00	0.00	0.00	0.00	0.00	
	0.00	0.00	0.00	-3,800.00	0.00	0.00	0.00				
(usft) 0.00 2,200.00	0.00 0.00	0.00 0.00	2,200.00	-1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
(usft) 0.00 2,200.00 2,800.00	0.00 0.00 12.00	0.00 0.00 295.29	2,200.00 2,795.62	-1,600.00 -1,004.38	0.00 26.74	0.00 -56.60	0.00 2.00	0.00 2.00	0.00	0.00 295.29	
(usft) 0.00 2,200.00 2,800.00 4,224.52	0.00 0.00 12.00 12.00	0.00 0.00 295.29 295.29	2,200.00 2,795.62 4,189.02	-1,600.00 -1,004.38 389.02	0.00 26.74 153.26	0.00 -56.60 -324.40	0.00 2.00 0.00	0.00 2.00 0.00	0.00 0.00	0.00 295.29 0.00	
(usft) 0.00 2,200.00 2,800.00 4,224.52 4,824.52	0.00 0.00 12.00 12.00 0.00	0.00 0.00 295.29 295.29 0.00	2,200.00 2,795.62 4,189.02 4,784.64	-1,600.00 -1,004.38 389.02 984.64	0.00 26.74 153.26 180.00	0.00 -56.60 -324.40 -381.00	0.00 2.00 0.00 2.00	0.00 2.00 0.00 -2.00	0.00 0.00 0.00	0.00 295.29 0.00 180.00	
(usft) 0.00 2,200.00 2,800.00 4,224.52 4,824.52 11,296.92	0.00 0.00 12.00 12.00 0.00 0.00	0.00 0.00 295.29 295.29 0.00 0.00	2,200.00 2,795.62 4,189.02 4,784.64 11,257.04	-1,600.00 -1,004.38 389.02 984.64 7,457.04	0.00 26.74 153.26 180.00 180.00	0.00 -56.60 -324.40 -381.00 -381.00	0.00 2.00 0.00 2.00 0.00	0.00 2.00 0.00 -2.00 0.00	0.00 0.00 0.00 0.00	0.00 295.29 0.00 180.00 0.00	KOP - BIG BULL FI
(usft) 0.00 2,200.00 2,800.00 4,224.52 4,824.52	0.00 0.00 12.00 12.00 0.00	0.00 0.00 295.29 295.29 0.00 0.00 179.64	2,200.00 2,795.62 4,189.02 4,784.64	-1,600.00 -1,004.38 389.02 984.64	0.00 26.74 153.26 180.00	0.00 -56.60 -324.40 -381.00	0.00 2.00 0.00 2.00	0.00 2.00 0.00 -2.00	0.00 0.00 0.00	0.00 295.29 0.00 180.00	KOP - BIG BULL FI BHL - BIG BULL FE

Database: Company: Project:	Database 1 ASCENT ENERGY LEA COUNTY, NEW MEXICO (NAD 83)	Local Co-ordinate Reference: TVD Reference: MD Reference:	Well BIG BULL FED COM 706H KB EST 25ft @ 3800.00usft KB EST 25ft @ 3800.00usft
Site: Well:	(GRID) SEC. 1 T21S R32E N.M.P.M. (GRID) BIG BULL FED COM 706H	North Reference: Survey Calculation Method:	Grid Minimum Curvature
Wellbore: Design:	ORIGINAL WELLBORE PROPOSAL #1		

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
SHL:		2030ft FWL	of Sec 12							
0.00	0.00	0.00	0.00	<b>3,800.00</b>	<b>0.00</b>	0.00	<b>0.00</b>	0.00	0.00	0.00
100.00	0.00	0.00	100.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
		2°/100ft BUR)		4 600 00	0.00	0.00	0.00	0.00	0.00	0.00
<b>2,200.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2,200.00</b>	<b>1,600.00</b>	<b>0.00</b>	<i>0.00</i>	<i>0.00</i>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
2,300.00	2.00	295.29	2,299.98	1,500.02	0.75	-1.58	-0.76	2.00	2.00	0.00
2,400.00	4.00	295.29	2,399.84	1,400.16	2.98	-6.31	-3.02	2.00	2.00	0.00
2,500.00	6.00	295.29	2,499.45	1,300.55	6.70	-14.19	-6.79	2.00	2.00	0.00
2,600.00	8.00	295.29	2,598.70	1,201.30	11.91	-25.21	-12.07	2.00	2.00	0.00
2,700.00	10.00	295.29	2,697.47	1,102.53	18.59	-39.35	-18.84	2.00	2.00	0.00
EOB	TO 12° INC									
<b>2,800.00</b>	<b>12.00</b>	<b>295.29</b>	<b>2,795.62</b>	<b>1,004.38</b>	<b>26.74</b>	<b>-56.60</b>	<b>-27.10</b>	<b>2.00</b>	<b>2.00</b>	<b>0.00</b>
2,900.00	12.00	295.29	2,893.44	906.56	35.62	-75.40	-36.10	0.00	0.00	0.00
3,000.00 3,100.00 3,200.00 3,300.00 3,400.00	12.00 12.00 12.00 12.00 12.00	295.29 295.29 295.29 295.29 295.29 295.29	2,991.25 3,089.07 3,186.88 3,284.70 3,382.51	808.75 710.93 613.12 515.30 417.49	44.50 53.39 62.27 71.15 80.03	-94.20 -113.00 -131.80 -150.60 -169.40	-45.10 -54.09 -63.09 -72.09 -81.09	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
3,500.00 3,600.00 3,700.00 3,800.00 3,900.00	12.00 12.00 12.00 12.00 12.00	295.29 295.29 295.29 295.29 295.29 295.29	3,480.33 3,578.14 3,675.96 3,773.77 3,871.59	319.67 221.86 124.04 26.23 -71.59	88.91 97.79 106.67 115.56 124.44	-188.20 -206.99 -225.79 -244.59 -263.39	-90.09 -99.09 -108.09 -117.09 -126.09	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
4,000.00 4,100.00 4,200.00	12.00 12.00 12.00 <b>OF TANGEN</b>	295.29 295.29 295.29	3,969.40 4,067.22 4,165.03	-169.40 -267.22 -365.03	133.32 142.20 151.08	-282.19 -300.99 -319.79	-135.09 -144.09 -153.09	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
4,224.52	12.00	295.29	4,189.02	-389.02	153.26	-324.40	-155.29	0.00	0.00	0.00
4,300.00	10.49	295.29	4,263.04	-463.04	159.55	-337.70	-161.66	2.00	-2.00	0.00
4,400.00	8.49	295.29	4,361.67	-561.67	166.59	-352.61	-168.80	2.00	-2.00	0.00
4,500.00	6.49	295.29	4,460.81	-660.81	172.16	-364.40	-174.44	2.00	-2.00	0.00
4,600.00	4.49	295.29	4,560.35	-760.35	176.24	-373.05	-178.58	2.00	-2.00	0.00
4,700.00	2.49	295.29	4,660.16	-860.16	178.84	-378.55	-181.22	2.00	-2.00	0.00

Database:	Database 1	Local Co-ordinate Reference:	Well BIG BULL FED COM 706H
Company:	ASCENT ENERGY	TVD Reference:	KB EST 25ft @ 3800.00usft
Project:	LEA COUNTY, NEW MEXICO (NAD 83)	MD Reference:	KB EST 25ft @ 3800.00usft
	(GRID)		
Site:	SEC. 1 T21S R32E N.M.P.M. (GRID)	North Reference:	Grid
Well:	BIG BULL FED COM 706H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.00	0.49	295.29	4,760.12	-960.12	179.96	-380.91	-182.34	2.00	-2.00	0.00
EOD TO VERTICAL										
4,824.52	0.00	0.00	4,784.64	-984.64	180.00	-381.00	-182.39	2.00	-2.00	0.00
4,900.00	0.00	0.00	4,860.12	-1,060.12	180.00	-381.00	-182.39	0.00	0.00	0.00
5,000.00	0.00	0.00	4,960.12	-1,160.12	180.00	-381.00	-182.39	0.00	0.00	0.00
5,100.00	0.00	0.00	5,060.12	-1,260.12	180.00	-381.00	-182.39	0.00	0.00	0.00
5,200.00	0.00	0.00	5,160.12	-1,360.12	180.00	-381.00	-182.39	0.00	0.00	0.00
5,300.00	0.00	0.00	5,260.12	-1,460.12	180.00	-381.00	-182.39	0.00	0.00	0.00
5,400.00	0.00	0.00	5,360.12	-1,560.12	180.00	-381.00	-182.39	0.00	0.00	0.00
5,500.00	0.00	0.00	5,460.12	-1,660.12	180.00	-381.00	-182.39	0.00	0.00	0.00
5,600.00	0.00	0.00	5,560.12	-1,760.12	180.00	-381.00	-182.39	0.00	0.00	0.00
5,700.00	0.00	0.00	5,660.12	-1,860.12	180.00	-381.00	-182.39	0.00	0.00	0.00
5,800.00	0.00	0.00	5,760.12	-1,960.12	180.00	-381.00	-182.39	0.00	0.00	0.00
5,900.00	0.00	0.00	5,860.12	-2,060.12	180.00	-381.00	-182.39	0.00	0.00	0.00
6,000.00	0.00	0.00	5,960.12	-2,160.12	180.00	-381.00	-182.39	0.00	0.00	0.00
6,100.00	0.00	0.00	6,060.12	-2,260.12	180.00	-381.00	-182.39	0.00	0.00	0.00
6,200.00	0.00	0.00	6,160.12	-2,360.12	180.00	-381.00	-182.39	0.00	0.00	0.00
6,300.00	0.00	0.00	6,260.12	-2,460.12	180.00	-381.00	-182.39	0.00	0.00	0.00
6,400.00	0.00	0.00	6,360.12	-2,560.12	180.00	-381.00	-182.39	0.00	0.00	0.00
6,500.00	0.00	0.00	6,460.12	-2,660.12	180.00	-381.00	-182.39	0.00	0.00	0.00
6,600.00	0.00	0.00	6,560.12	-2,760.12	180.00	-381.00	-182.39	0.00	0.00	0.00
6,700.00	0.00	0.00	6,660.12	-2,860.12	180.00	-381.00	-182.39	0.00	0.00	0.00
6,800.00	0.00	0.00	6,760.12	-2,960.12	180.00	-381.00	-182.39	0.00	0.00	0.00
6,900.00	0.00	0.00	6,860.12	-3,060.12	180.00	-381.00	-182.39	0.00	0.00	0.00
7,000.00	0.00	0.00	6,960.12	-3,160.12	180.00	-381.00	-182.39	0.00	0.00	0.00
7,100.00	0.00	0.00	7,060.12	-3,260.12	180.00	-381.00	-182.39	0.00	0.00	0.00
7,200.00	0.00	0.00	7,160.12	-3,360.12	180.00	-381.00	-182.39	0.00	0.00	0.00
7,300.00	0.00	0.00	7,260.12	-3,460.12	180.00	-381.00	-182.39	0.00	0.00	0.00
7,400.00	0.00	0.00	7,360.12	-3,560.12	180.00	-381.00	-182.39	0.00	0.00	0.00
7,500.00	0.00	0.00	7,460.12	-3,660.12	180.00	-381.00	-182.39	0.00	0.00	0.00
7,600.00	0.00	0.00	7,560.12	-3,760.12	180.00	-381.00	-182.39	0.00	0.00	0.00
7,700.00	0.00	0.00	7,660.12	-3,860.12	180.00	-381.00	-182.39	0.00	0.00	0.00
7,800.00	0.00	0.00	7,760.12	-3,960.12	180.00	-381.00	-182.39	0.00	0.00	0.00
7,900.00	0.00	0.00	7,860.12	-4,060.12	180.00	-381.00	-182.39	0.00	0.00	0.00
8,000.00	0.00	0.00	7,960.12	-4,160.12	180.00	-381.00	-182.39	0.00	0.00	0.00
8,100.00	0.00	0.00	8,060.12	-4,260.12	180.00	-381.00	-182.39	0.00	0.00	0.00
8,200.00	0.00	0.00	8,160.12	-4,360.12	180.00	-381.00	-182.39	0.00	0.00	0.00
8,300.00	0.00	0.00	8,260.12	-4,460.12	180.00	-381.00	-182.39	0.00	0.00	0.00
8,400.00	0.00	0.00	8,360.12	-4,560.12	180.00	-381.00	-182.39	0.00	0.00	0.00
8,500.00	0.00	0.00	8,460.12	-4,660.12	180.00	-381.00	-182.39	0.00	0.00	0.00
8,600.00	0.00	0.00	8,560.12	-4,760.12	180.00	-381.00	-182.39	0.00	0.00	0.00
8,700.00	0.00	0.00	8,660.12	-4,860.12	180.00	-381.00	-182.39	0.00	0.00	0.00
8,800.00	0.00	0.00	8,760.12	-4,960.12	180.00	-381.00	-182.39	0.00	0.00	0.00
8,900.00	0.00	0.00	8,860.12	-5,060.12	180.00	-381.00	-182.39	0.00	0.00	0.00
9,000.00	0.00	0.00	8,960.12	-5,160.12	180.00	-381.00	-182.39	0.00	0.00	0.00
9,100.00 9,200.00	0.00 0.00	0.00 0.00	9,060.12 9,160.12	-5,260.12 -5,360.12	180.00 180.00	-381.00 -381.00	-182.39 -182.39	0.00 0.00	0.00 0.00	0.00 0.00
9,300.00	0.00	0.00	9,260.12	-5,460.12	180.00	-381.00	-182.39	0.00	0.00	0.00
9,400.00	0.00	0.00	9,360.12 9,460.12	-5,560.12	180.00	-381.00	-182.39	0.00	0.00	0.00
9,500.00	0.00	0.00		-5,660.12	180.00	-381.00	-182.39	0.00	0.00	0.00
9,600.00 9,700.00	0.00 0.00	0.00 0.00	9,560.12 9,660.12	-5,760.12 -5,860.12	180.00 180.00	-381.00 -381.00	-182.39 -182.39	0.00 0.00	0.00 0.00	0.00 0.00
3,100.00	0.00	0.00	3,000.12	-0,000.12	100.00	-301.00	-102.33	0.00	0.00	0.00

Database:	Database 1	Local Co-ordinate Reference:	Well BIG BULL FED COM 706H
Company:	ASCENT ENERGY	TVD Reference:	KB EST 25ft @ 3800.00usft
Project:	LEA COUNTY, NEW MEXICO (NAD 83) (GRID)	MD Reference:	KB EST 25ft @ 3800.00usft
Site:	SEC. 1 T21S R32E N.M.P.M. (GRID)	North Reference:	Grid
Well:	BIG BULL FED COM 706H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

9         9         000         0.00         0.00         9         000         0.00	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10.000.00 0.00 0.00 0.00 10.0012 6.560.12 180.00 -381.00 -182.39 0.00 0.00 0.00 0.00 10.200.00 0.00 10.160.12 6.560.12 180.00 -381.00 -182.39 0.00 0.00 0.00 0.00 10.400.00 0.00 10.400.00 0.00	9,800.00	0.00	0.00	9,760.12	-5,960.12	180.00	-381.00	-182.39	0.00	0.00	0.00
10,100.00       0.00       10,000.12       6.260.12       180.00       -182.39       0.00       0.00       0.00         10,200.00       0.00       0.00       10,200.20       381.00       -182.39       0.00       0.00       0.00         10,400.00       0.00       10,201.2       -5.661.12       180.00       -381.00       -182.39       0.00       0	9,900.00	0.00		9,860.12	-6,060.12	180.00			0.00		0.00
10.200.00 0.00 0.00 10.160.12 -6.360.12 180.00 -381.00 -182.39 0.00 0.00 0.00 10.360.00 0.00 10.360.12 +5.80.12 180.00 -381.00 -182.39 0.00 0.00 0.00 0.00 10.560.12 +5.80.12 180.00 -381.00 -182.39 0.00 0.00 0.00 0.00 10.560.12 +5.80.12 180.00 -381.00 -182.39 0.00 0.00 0.00 0.00 10.560.12 +5.86.12 180.00 -381.00 -182.39 0.00 0.00 0.00 0.00 10.560.12 +5.86.12 180.00 -381.00 -182.39 0.00 0.00 0.00 0.00 10.560.12 +5.86.12 180.00 -381.00 -182.39 0.00 0.00 0.00 0.00 10.560.12 +7.760.12 180.00 -381.00 -182.39 0.00 0.00 0.00 0.00 10.560.12 +7.760.12 180.00 -381.00 -182.39 0.00 0.00 0.00 0.00 11.00.00 0.00 10.560.12 +7.760.12 180.00 -381.00 -182.39 0.00 0.00 0.00 0.00 11.00.00 0.00 0.00	,										
13.200.00         0.00         10.260.12         e.4.60.12         180.00         -182.38         0.00         0.00         0.00           13.400.00         0.00         0.00         10.460.12         e.5.60.12         180.00         -182.38         0.00         0.00         0.00           10.500.00         0.00         0.00         10.660.12         e.5.660.12         180.00         -182.38         0.00         0.00         0.00         0.00           10.500.00         0.00         0.00         10.660.12         e.5.660.12         180.00         -381.00         -182.39         0.00         0.00         0.00           11.500.00         0.00         10.660.12         -7.660.12         180.00         -381.00         -182.39         0.00         0.00         0.00           11.500.00         0.00         0.00         11.661.12         -7.360.12         180.00         -381.00         -182.39         0.00											
10.400.00       0.00       10.360.12       -6.660.12       180.00       -381.00       -182.39       0.00       0.00       0.00         10.500.00       0.00       0.00       10.660.12       -6.660.12       180.00       -381.00       -182.39       0.00       0.00       0.00         10.700.00       0.00       0.00       10.660.12       -6.660.12       180.00       -381.00       -182.39       0.00       0.00       0.00         10.900.00       0.00       10.760.12       -6.760.12       180.00       -381.00       -182.39       0.00       0.00       0.00         11.900.00       0.00       10.966.12       -7.760.12       180.00       -381.00       -182.39       0.00       0.00       0.00         11.900.00       0.00       11.660.12       -7.261.2       180.00       -381.00       -182.39       0.00       0.00       0.00         11.200.00       0.00       11.277.04       -7.457.04       180.00       -381.00       -182.39       0.00       0.00       0.00         11.200.00       0.31       178.64       11.257.64       -7.457.04       180.00       -381.00       -182.39       0.00       0.00       0.00         11.400.00	10,200.00	0.00	0.00	10,160.12	-6,360.12	180.00	-381.00	-182.39	0.00	0.00	0.00
10.500.00       0.00       10.460.12       -6.660.12       180.00       -381.00       -182.39       0.00       0.00       0.00         10.600.00       0.00       10.660.12       -6.760.12       180.00       -381.00       -182.39       0.00       0.00       0.00         10.800.00       0.00       0.00       10.660.12       -6.660.12       180.00       -381.00       -182.39       0.00       0.00       0.00         11.900.00       0.00       10.860.12       -7.601.12       180.00       -381.00       -182.33       0.00       0.00       0.00         11.900.00       0.00       10.860.12       -7.601.12       180.00       -381.00       -182.33       0.00       0.00       0.00         11.900.00       0.00       11.60.12       -7.260.12       180.00       -381.00       -182.39       0.00       0.00       0.00         11.300.00       0.31       179.64       11.561.2       -7.661.2       179.99       -381.00       -182.39       0.00       0.00       0.00         11.300.00       0.31       179.64       11.561.2       -7.651.2       179.99       -381.00       -182.39       0.00       0.00       0.00         11.300.00	,										
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10,700.00 0.00 0.00 10,660.12 -6,660.12 180.00 -381.00 -182.39 0.00 0.00 0.00 10,860.00 0.00 0.00 10,760.12 -6,660.12 180.00 -381.00 182.39 0.00 0.00 0.00 11,900.00 0.00 0.00 11,660.12 -7,760.12 180.00 -381.00 182.39 0.00 0.00 0.00 11,100.00 0.00 0.00 11,660.12 -7,760.12 180.00 -381.00 182.39 0.00 0.00 0.00 11,200.00 0.00 0.00 11,160.12 -7,760.12 180.00 -381.00 182.39 0.00 0.00 0.00 11,300.00 0.01 11,267.04 -7,457.04 180.00 -381.00 182.39 0.00 0.00 0.00 11,300.00 0.31 179.64 11,359.55 -7,558.56 170.75 -380.94 173.14 10.00 10.00 0.00 11,600.00 0.331 179.64 11,355.89 144.39 -380.78 146.78 10.00 10.00 0.00 11,600.00 0.331 179.64 11,545.89 -7,558.56 170.75 -380.94 140.08 10.00 10.00 0.00 11,600.00 0.331 179.64 11,545.89 -7,558.59 144.39 -380.51 -044.08 10.00 10.00 0.00 11,600.00 0.331 179.64 11,547.67 -7,787.20 -270.87 4.397 -380.15 -46.36 10.00 10.00 0.00 11,700.00 40.31 179.64 11,547.68 -7,557.68 143.97 -380.15 -46.36 10.00 10.00 0.00 11,600.00 30.31 179.64 11,547.69 -7,877.61 4.377 5.25.51 10.00 10.00 0.00 11,700.00 0.331 179.64 11,547.67 -7,787.29 -270.3 378.77 -2.39 10.00 10.00 0.00 11,700.00 80.31 179.64 11,767.07 -7,877.82 -270.3 378.77 -2.39 10.00 10.00 0.00 12,000.00 70.31 179.64 11,767.47 -7,787.49 -10.4 377.81 10.76 10.00 10.00 0.00 12,000.00 80.31 179.64 11,764.77 -7,954.77 -10.14 377.81 81.067.57 10.00 10.00 0.00 12,000.00 70.31 179.64 11,782.99 -8,029.82 -290.49 -378.61 197.50 10.00 10.00 0.00 12,200.00 89.62 179.64 11,830.03 -6,330.03 -338.05 -377.72 383.64 0.00 0.00 0.00 12,200.00 89.62 179.64 11,830.03 -6,330.03 -378.57 5 433.64 0.00 0.00 0.00 12,200.00 89.62 179.64 11,830.03 -6,330.62 -377.73 383.64 0.00 0.00 0.00 12,200.00 89.62 179.64 11,830.03 -6,330.62 -377.73 383.64 0.00 0.00 0.00 12,200.00 89.62 179.64 11,830.68 -6,330.69 -376.57 493.64 0.00 0.00 0.00 12,200.00 89.62 179.64 11,830.03 -6,330.62 -377.57 383.64 0.00 0.00 0.00 12,200.00 89.62 179.64 11,830.68 -6,330.69 -376.57 493.64 0.00 0.00 0.00 12,200.00 89.62 179.64 11,830.68 -6,330.69 -376.57 493.64 0.00 0.00 0.00	,										
10.800.00       0.00       10.760.12       -6.960.12       180.00       -381.00       -182.39       0.00       0.00       0.00         11.900.00       0.00       0.00       10.860.12       -7.160.12       180.00       -381.00       -182.39       0.00       0.00       0.00         11.900.00       0.00       0.00       11.000.12       -7.260.12       180.00       -381.00       -182.39       0.00       0.00       0.00         11.200.00       0.00       11.601.12       -7.260.12       180.00       -381.00       -182.39       0.00       0.00       0.00         11.200.00       0.00       11.257.04       -7.457.04       180.00       -381.00       -182.38       10.00       10.00       0.00         11.400.00       0.31       179.64       11.255.96       7.755.956       170.75       -380.078       -146.78       10.00       10.00       0.00         11.600.00       20.31       179.64       11.674.01       -7.874.61       10.69       -380.15       -104.67       10.00       10.00       0.00         11.700.00       40.31       179.64       11.674.01       -7.874.61       0.00       -379.67       -2.39       10.00       10.00       0.00<											
10.900.00       0.00       10.860.12       -7.060.12       180.00       -381.00       -182.39       0.00       0.00       0.00         11.000.00       0.00       10.060.12       -7.260.12       180.00       -381.00       -182.39       0.00       0.00       0.00         11.200.00       0.00       0.00       11.257.04       -7.457.04       180.00       -381.00       -182.39       0.00       0.00       0.00         11.300.00       0.31       179.64       11.257.04       -7.457.04       180.00       -381.00       -182.39       0.00       0.00       0.00         11.300.00       0.31       179.64       11.455.89       -7.555.56       170.75       -380.94       -173.14       10.00       10.00       0.00         11.600.00       30.31       179.64       11.455.89       -7.655.89       144.43       -380.51       -104.08       10.00       10.00       0.00         11.700.00       40.31       179.64       11.697.92       -7.210       -379.77       -2.46.41       10.00       10.00       0.00         11.800.00       50.31       179.64       11.697.92       -2.70       -379.77       2.46.41       10.00       10.00       0.00       11.90.											
11,000.00       0.00       0.00       10,960.12       -7,160.12       180.00       -381.00       -182.39       0.00       0.00       0.00         11,200.00       0.00       0.00       11,160.12       -7,360.12       180.00       -381.00       -182.39       0.00       0.00       0.00         11,200.00       0.00       0.00       11,257.04       -7,457.04       180.00       -381.00       -182.39       0.00       0.00       0.00         11,300.00       0.31       179.64       11,257.04       -7,467.12       179.99       -381.00       -182.38       10.00       10.00       0.00         11,400.00       0.331       179.64       11,257.64       -7,457.858       170.75       -380.94       -173.14       10.00       10.00       0.00         11,600.00       30.31       179.64       11,627.68       -7,827.68       43.97       -380.78       -146.78       10.00       10.00       0.00         11,700.00       40.31       179.64       11,627.68       -7,874.01       0.00       -379.77       2.39       10.00       10.00       0.00         11,800.00       50.31       179.64       11,627.69       -7,984.77       -7.919.4       -379.718       3	- ,				,						
11,100.00       0.00       0.00       11,060.12       -7,260.12       180.00       -381.00       -182.39       0.00       0.00       0.00         KOP (10"/100ft BUR)       -7,457.04       180.00       -381.00       -182.39       0.00       0.00       0.00         11,300.00       0.31       179.64       11,260.12       -7,457.04       180.00       -182.39       0.00       0.00       0.00         11,400.00       0.31       179.64       11,355.95       -7,555.56       170.75       -380.94       -146.78       10.00       10.00       0.00         11,600.00       30.31       179.64       11,455.89       -7,655.89       144.78       146.78       10.00       10.00       0.00         11,700.00       40.31       179.64       11,627.68       -7,827.68       43.97       -380.15       -46.36       10.00       10.00       0.00         11,700.00       40.31       179.64       11,677.47       -7,954.77       -709.14       -379.87       -2.39       10.00       10.00       0.00         11,800.00       50.31       179.64       11,677.47       -7,954.77       -709.14       -379.87       -2.39       10.00       10.00       0.00 <td< td=""><td>,</td><td></td><td></td><td>,</td><td>,</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	,			,	,						
11,200.00         0.00         11,160.12         -7,360.12         180.00         -381.00         -182.39         0.00         0.00         0.00           KOP (10'/100ft BUR)         -7,457.04         180.00         -381.00         -182.39         0.00         0.00         0.00           11,300.00         0.31         179.64         11,257.04         -7,457.04         180.00         -381.00         -182.38         10.00         10.00         0.00           11,400.00         0.31         179.64         11,257.04         -7,559.56         170.75         -380.94         -173.14         10.00         10.00         0.00           11,600.00         30.31         179.64         11,627.68         -7,827.68         43.97         -380.15         -46.36         10.00         10.00         0.00           11,700.00         40.31         179.64         11,627.68         -7,874.01         0.00         -379.87         -2.39         10.00         10.00         0.00           11,800.00         50.31         179.64         11,627.68         -7,99.2         -27.03         -379.76         24.64         10.00         10.00         0.00           12,000.00         60.31         179.64         11,627.49         -996											
KOP (10'/100ft BUR)           11,226.52         0.00         0.00         11,257.04         -7,457.04         180.00         -381.00         -182.39         0.00         0.00         0.00           11,300.00         0.31         179.64         11,260.12         -7,450.12         179.99         381.00         -182.38         10.00         10.00         0.00           11,500.00         20.31         179.64         11,455.89         -7,655.89         143.39         -380.78         -146.78         10.00         10.00         0.00           11,600.00         30.31         179.64         11,657.68         -7,787.16         380.78         -146.78         10.00         10.00         0.00           11,700.00         40.31         179.64         11,674.01         -7,787.10         0.00         -378.97         -24.64         10.00         10.00         0.00           11,800.00         50.31         179.64         11,674.01         -7,874.01         0.00         -378.97         24.64         10.00         10.00         0.00           11,800.00         50.31         179.64         11,796.49         -7,964.47         -109.14         -379.16         10.00         10.00         0.00           12,000				,							
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11,500.00       20.31       179.64       11,455.89       -7,655.89       144.39       -380.78       -146.78       10.00       10.00       0.00         11,600.00       30.31       179.64       11,557.86       -7,827.68       43.97       -380.51       -104.08       10.00       10.00       0.00         FTP: 100ft FNL & 1650ft FWL of Sec 12											
11,700.00       40.31       179.64       11,627.68       -7,827.68       43.97       -380.15       -46.36       10.00       10.00       0.00         FTE: 1001 FNL & 18500f FWL of Sec 12											
FTP: 100ft FNL & 1650ft FWL of Sec 12           11,763.91         46.70         179.64         11,674.01         -7,874.01         0.00         -379.87         -2.39         10.00         10.00         0.00           11,800.00         60.31         179.64         11,787.7         -7,897.92         -27.03         -379.70         24.64         10.00         10.00         0.00           11,900.00         60.31         179.64         11,786.49         -7,996.49         -199.88         -378.61         197.50         10.00         10.00         0.00           12,100.00         80.31         179.64         11,821.82         -8,021.82         -296.49         -378.01         294.11         10.00         10.00         0.00           12,100.00         86.82         179.64         11,830.03         -8,030.3         -396.02         -377.42         386.77         10.00         10.00         0.00           12,200.00         86.82         179.64         11,830.69         -8,030.3         -396.02         -376.75         493.64         0.00         0.00         0.00           12,400.00         89.62         179.64         11,832.02         -8,030.20         -376.51         593.64         0.00         0.00         0.00<	11,600.00	30.31	179.64	11,546.18	-7,746.18	101.69	-380.51	-104.08	10.00	10.00	0.00
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	11,700.00	40.31	179.64	11,627.68	-7,827.68	43.97	-380.15	-46.36	10.00	10.00	0.00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	FTP: 1	00ft FNL &	1650ft FWL 0	of Sec 12							
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14,200.00         89.62         179.64         11,843.30         -8,043.30         -2,395.94         -364.81         2,393.60         0.00											
14,300.00 89.62 179.64 11,843.96 -8,043.96 -2,495.94 -364.19 2,493.60 0.00 0.00 0.00											
	14,300.00	89.62	179.64		-8,043.96	-2,495.94	-364.19	2,493.60		0.00	
,	14,400.00	89.62	179.64	11,844.62	-8,044.62	-2,595.93	-363.56	2,593.60	0.00	0.00	0.00

Database:	Database 1	Local Co-ordinate Reference:	Well BIG BULL FED COM 706H
Company:	ASCENT ENERGY	TVD Reference:	KB EST 25ft @ 3800.00usft
Project:	LEA COUNTY, NEW MEXICO (NAD 83) (GRID)	MD Reference:	KB EST 25ft @ 3800.00usft
Site:	SEC. 1 T21S R32E N.M.P.M. (GRID)	North Reference:	Grid
Well:	BIG BULL FED COM 706H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

		(°)	(usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Section (usft)	Rate (°/100usft)	Rate (°/100usft)	Rate (°/100usft)
14,500.00	89.62	179.64	11,845.28	-8,045.28	-2,695.93	-362.93	2,693.59	0.00	0.00	0.00
14,600.00	89.62	179.64	11,845.95	-8,045.95	-2,795.92	-362.30	2,793.59	0.00	0.00	0.00
14,700.00	89.62	179.64	11,846.61	-8,046.61	-2,895.92	-361.67	2,893.59	0.00	0.00	0.00
14,800.00	89.62	179.64	11,847.27	-8,047.27	-2,995.91	-361.04	2,993.59	0.00	0.00	0.00
14,900.00	89.62	179.64	11,847.94	-8,047.94	-3,095.91	-360.42	3,093.58	0.00	0.00	0.00
15,000.00	89.62	179.64	11,848.60	-8,048.60	-3,195.91	-359.79	3,193.58	0.00	0.00	0.00
15,100.00	89.62	179.64	11,849.26	-8,049.26	-3,295.90	-359.16	3,293.58	0.00	0.00	0.00
15,200.00	89.62	179.64	11,849.93	-8,049.93	-3,395.90	-358.53	3,393.58	0.00	0.00	0.00
15,300.00	89.62	179.64	11,850.59	-8,050.59	-3,495.89	-357.90	3,493.58	0.00	0.00	0.00
15,400.00	89.62	179.64	11,851.25	-8,051.25	-3,595.89	-357.28	3,593.57	0.00	0.00	0.00
15,500.00	89.62	179.64	11,851.92	-8,051.92	-3,695.89	-356.65	3,693.57	0.00	0.00	0.00
15,600.00	89.62	179.64	11,852.58	-8,052.58	-3,795.88	-356.02	3,793.57	0.00	0.00	0.00
15,700.00	89.62	179.64	11,853.24	-8,053.24	-3,895.88	-355.39	3,893.57	0.00	0.00	0.00
15,800.00	89.62	179.64	11,853.91	-8,053.91	-3,995.87	-354.76	3,993.57	0.00	0.00	0.00
15,900.00	89.62	179.64	11,854.57	-8,054.57	-4,095.87	-354.13	4,093.56	0.00	0.00	0.00
16,000.00	89.62	179.64	11,855.23	-8,055.23	-4,195.86	-353.51	4,193.56	0.00	0.00	0.00
16,100.00	89.62	179.64	11,855.90	-8,055.90	-4,295.86	-352.88	4,293.56	0.00	0.00	0.00
16,200.00	89.62	179.64	11,856.56	-8,056.56	-4,395.86	-352.25	4,393.56	0.00	0.00	0.00
16,300.00	89.62	179.64	11,857.22	-8,057.22	-4,495.85	-351.62	4,493.55	0.00	0.00	0.00
16,400.00	89.62	179.64	11,857.89	-8,057.89	-4,595.85	-350.99	4,593.55	0.00	0.00	0.00
16,500.00	89.62	179.64	11,858.55	-8,058.55	-4,695.84	-350.36	4,693.55	0.00	0.00	0.00
16,600.00	89.62	179.64	11,859.21	-8,059.21	-4,795.84	-349.74	4,793.55	0.00	0.00	0.00
16,700.00	89.62	179.64	11,859.88	-8,059.88	-4,895.84	-349.11	4,893.55	0.00	0.00	0.00
16,800.00	89.62	179.64	11,860.54	-8,060.54	-4,995.83	-348.48	4,993.54	0.00	0.00	0.00
16,900.00	89.62	179.64	11,861.20	-8,061.20	-5,095.83	-347.85	5,093.54	0.00	0.00	0.00
17,000.00	89.62	179.64	11,861.87	-8,061.87	-5,195.82	-347.22	5,193.54	0.00	0.00	0.00
17,100.00	89.62	179.64	11,862.53	-8,062.53	-5,295.82	-346.59	5,293.54	0.00	0.00	0.00
17,200.00	89.62	179.64	11,863.19	-8,063.19	-5,395.81	-345.97	5,393.53	0.00	0.00	0.00
17,300.00	89.62	179.64	11,863.86	-8,063.86	-5,495.81	-345.34	5,493.53	0.00	0.00	0.00
17,400.00	89.62	179.64	11,864.52	-8,064.52	-5,595.81	-344.71	5,593.53	0.00	0.00	0.00
17,500.00	89.62	179.64	11,865.18	-8,065.18	-5,695.80	-344.08	5,693.53	0.00	0.00	0.00
17,600.00	89.62	179.64	11,865.84	-8,065.84	-5,795.80	-343.45	5,793.53	0.00	0.00	0.00
17,700.00	89.62	179.64	11,866.51	-8,066.51	-5,895.79	-342.82	5,893.52	0.00	0.00	0.00
17,800.00	89.62	179.64	11,867.17	-8,067.17	-5,995.79	-342.20	5,993.52	0.00	0.00	0.00
17,900.00	89.62	179.64	11,867.83	-8,067.83	-6,095.79	-341.57	6,093.52	0.00	0.00	0.00
18,000.00	89.62	179.64	11,868.50	-8,068.50	-6,195.78	-340.94	6,193.52	0.00	0.00	0.00
18,100.00	89.62	179.64	11,869.16	-8,069.16	-6,295.78	-340.31	6,293.51	0.00	0.00	0.00
18,200.00	89.62	179.64	11,869.82	-8,069.82	-6,395.77	-339.68	6,393.51	0.00	0.00	0.00
		1650ft FWL								
18,209.07	89.62	179.64	11,869.88	-8,069.88	-6,404.84	-339.63	6,402.58	0.00	0.00	0.00
		& 1650ft FWL		0.070.07	o /= / o ·					
18,259.07	89.62	179.64	11,870.00	-8,070.00	-6,454.84	-339.21	6,452.58	0.00	0.00	0.00

# Planning Report

Database: Company: Project:	Database 1 ASCENT ENERGY LEA COUNTY, NEW MEXICO (NAD 83) (GRID)	Local Co-ordinate Reference: TVD Reference: MD Reference:	Well BIG BULL FED COM 706H KB EST 25ft @ 3800.00usft KB EST 25ft @ 3800.00usft
Site:	SEC. 1 T21S R32E N.M.P.M. (GRID)	North Reference:	Grid
Well:	BIG BULL FED COM 706H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

**Plan Annotations** 

		Local Co	ordinates	
MD (usft)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Comment
0.00	0.00	0.00	0.00	SHL: 100ft FNL & 2030ft FWL of Sec 12
2,200.00	2,200.00	0.00	0.00	START NUDGE (2°/100ft BUR)
2,800.00	2,795.62	26.74	-56.60	EOB TO 12° INC
4,224.52	4,189.02	153.26	-324.40	END OF TANGENT
4,824.52	4,784.64	180.00	-381.00	EOD TO VERTICAL
11,296.92	11,257.04	180.00	-381.00	KOP (10°/100ft BUR)
11,763.91	11,674.01	0.00	-379.87	FTP: 100ft FNL & 1650ft FWL of Sec 12
12,193.12	11,829.99	-389.15	-377.42	HZ LP: 489.15ft FNL & 1650ft FWL of Sec 12
18,209.07	11,869.88	-6,404.84	-339.63	LTP: 1221ft FNL & 1650ft FWL of Sec 13
18,259.07	11,870.00	-6,454.84	-339.21	BHL: 1271ft FNL & 1650ft FWL of Sec 13



- a. All personnel will be trained in  $H_2S$  working conditions as required by Onshore Order 6 before drilling out of the surface casing.
- b. Two briefing areas will be established. Each briefing area will be  $\geq 150'$  from the wellhead, perpendicular from one another, and easily entered and exited. See H<sub>2</sub>S page 5 for more details.
- c. H<sub>2</sub>S Safety Equipment/Systems:
  - i. Well Control Equipment
  - Flare line will be  $\geq 150$ ' from the wellhead and ignited by a flare gun.
  - Beware of SO<sub>2</sub> created by flaring.
  - Choke manifold will have a remotely operated choke.
  - Mud gas separator
  - ii. Protective Equipment for Personnel
  - Every person on site will wear a personal  $H_2S$  and  $SO_2$  monitor at all times while on site. Monitors will not be worn on hard hats. Monitors will be worn on the front of the waist or chest.
  - One self-contained breathing apparatus (SCBA) 30-minute rescue pack will be at each briefing area. Two 30-minute SCBA packs will be stored in the safety trailer.
  - Four work/escape packs will be on the rig floor. Each pack will have a sufficiently long hose to allow unimpaired work activity.
  - Four emergency escape packs will be in the doghouse for emergency evacuation.
  - Hand signals will be used when wearing protective breathing apparatus.
  - Stokes litter or stretcher
  - Two full OSHA compliant body harnesses
  - A 100' long x 5/8" OSHA compliant rope
  - One 20-pound ABC fire extinguisher
  - iii. H<sub>2</sub>S Detection & Monitoring Equipment
  - Every person on site will wear a personal  $H_2S$  and  $SO_2$  monitor at all times while on site. Monitors will not be worn on hard hats. Monitors will be worn on the front of the waist or chest.

- A stationary detector with three sensors will be in the doghouse.
- Sensors will be installed on the rig floor, bell nipple, and at the end of the flow line or where drilling fluids are discharged.
- Visual alarm will be triggered at 10 ppm.
- Audible alarm will be triggered at 10 ppm.
- Calibration will occur at least every 30 days. Gas sample tubes will be kept in the safety trailer.
- iv. Visual Warning System
- A color-coded  $H_2S$  condition sign will be set at each pad entrance.
- Color-coded condition flag will be installed to indicate current  $\rm H_2S$  conditions.
- Two wind socks will be installed that will be visible from all sides.
- v. Mud Program
- A water based mud with a pH of  $\geq$ 10 will be maintained to control corrosion, H<sub>2</sub>S gas returns to the surface, and minimize sulfide stress cracking and embrittlement.
- Drilling mud containing  $H_2S$  gas will be degassed at an optimum location for the rig configuration.
- This gas will be piped into the flare system.
- Enough mud additives will be on site to scavenge and/or neutralize  $H_2S$  where formation pressures are unknown.
- vi. Metallurgy
- All equipment that has the potential to be exposed to  $H_2S$  will be suitable for  $H_2S$  service.
- Equipment that will meet these metallurgical standards include the drill string, casing, wellhead, BOP assembly, casing head and spool, rotating head, kill lines, choke, choke manifold and lines, valves, mud-gas separators, DST tools, test units, tubing, flanges, and other related equipment (elastomer packings and seals).
- vii. Communication from well site
- Cell phones and/or two-way radios will be used to communicate from the well site.

d. A remote-controlled choke, mud-gas separator, and a rotating head will be installed before drilling or testing any formation expected to contain  $H_2S$ .

# Company Personnel to be Notified

Dean Gimbel, Vice President Completions	Office: (720) 710-8995
	Mobile: (303) 945-1323
Matt Ward, Chief Operations Officer	Mobile: (303) 506-6647
Ascent Emergency Contact Number	(303) 281-9951

# Local & County Agencies

Monument Fire Department	911 or (575) 393-4339
Hobbs Fire Marshal	(575) 391-8185
Lea County Sheriff (Lovington)	911 or (575) 396-3611
Lea County Emergency Management (Lovington)	(575) 396-8602
Lea Regional Medical Center Hospital (Hobbs)	(575) 492-5000

# State Agencies

NM State Police (Hobbs)	(575) 392-5588
NM Oil Conservation (Hobbs)	(575) 370-3186
NM Oil Conservation (Santa Fe)	(505) 476-3440
NM Dept. of Transportation (Roswell)	(575) 637-7201

(214) 665-6444

# Federal AgenciesBLM Carlsbad Field Office(575) 234-5972BLM Hobbs Field Station(575) 393-3612National Response Center(800) 424-8802US EPA Region 6 (Dallas)(800) 887-6063

# <u>Veterinarians</u>

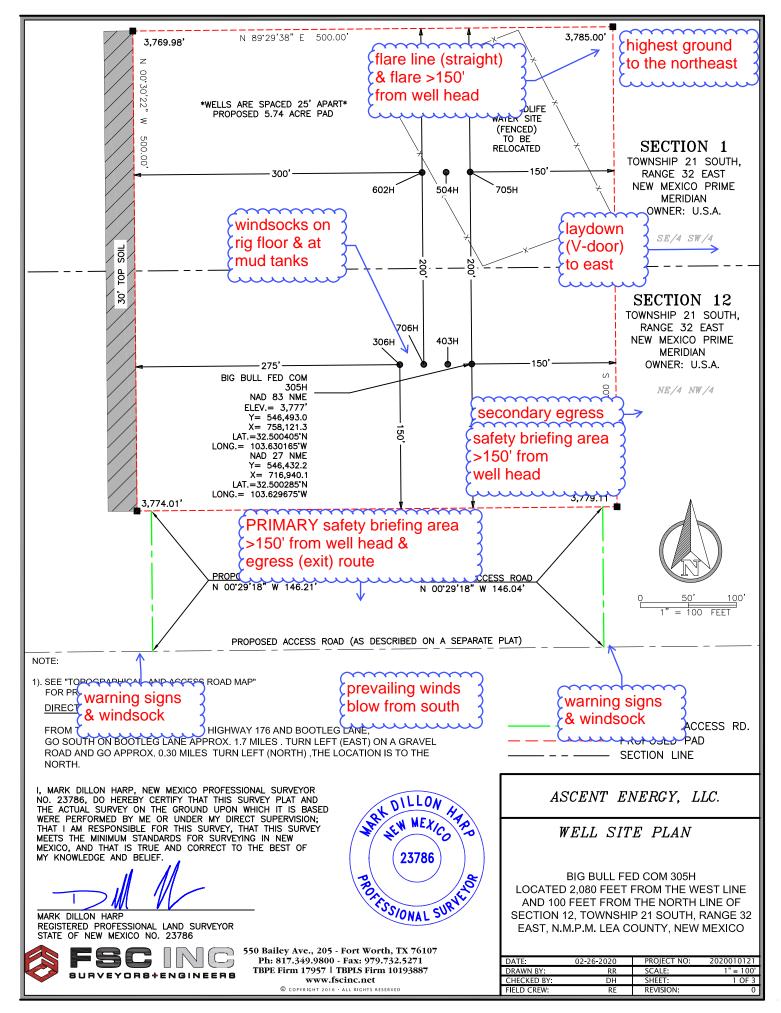
Dal Paso Animal Hospital (Hobbs)	(575) 397-2286
Hobbs Animal Clinic & Pet Care (Hobbs)	(575) 392-5563
Great Plains Veterinary Clinic & Hospital (Hobbs)	(575) 392-5513

# Residents within 2 miles

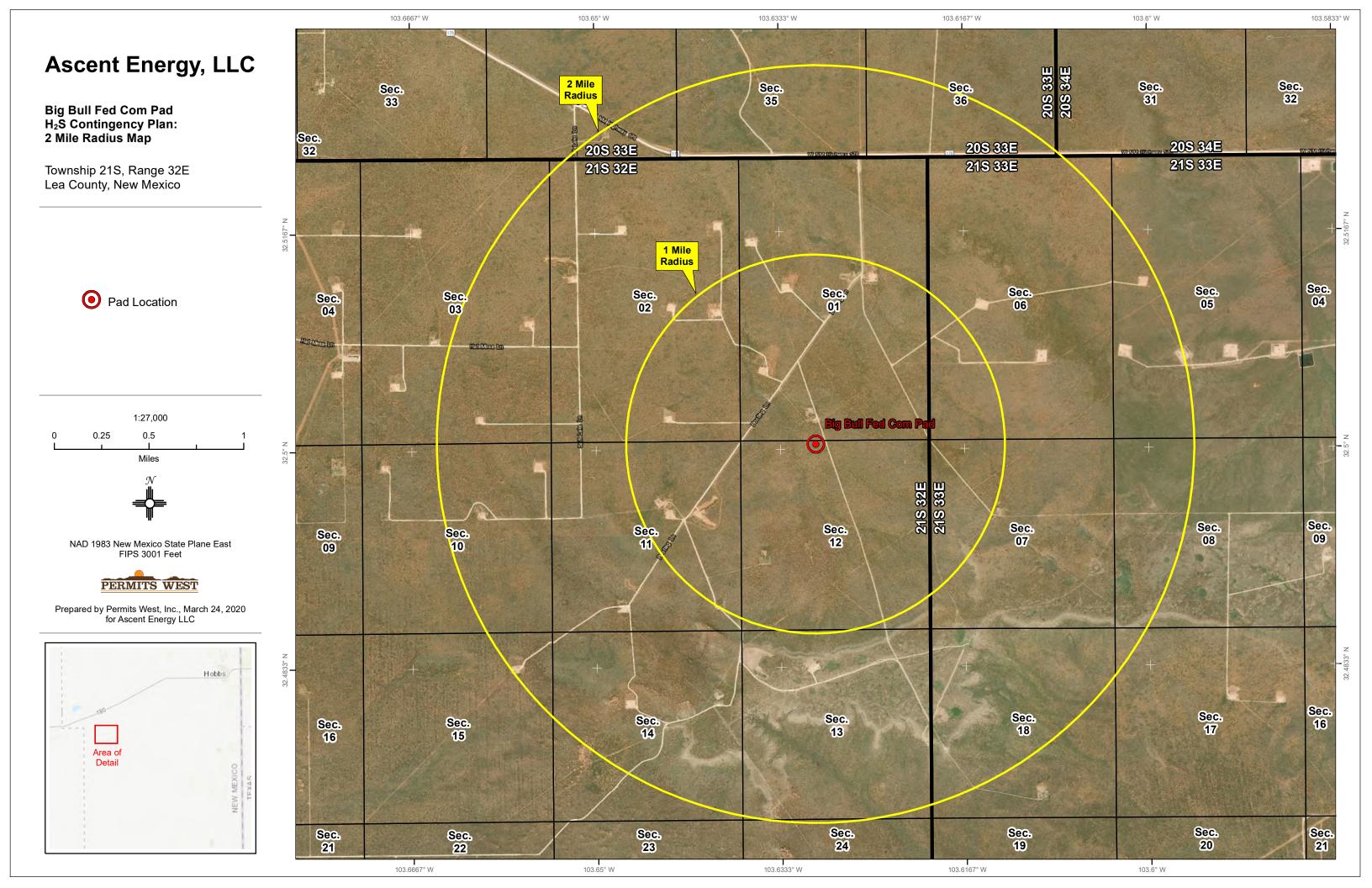
No residents are within 2 miles.

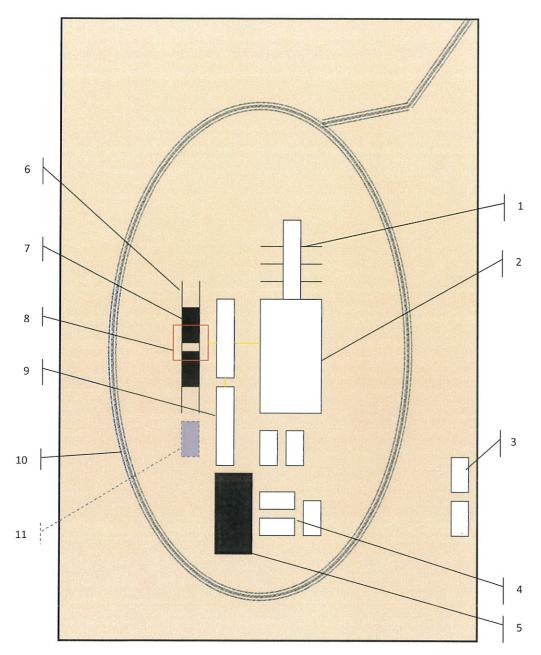
# <u>Air Evacuation</u>

Med Flight Air Ambulance (Albuquerque)	(800) 842-4431			
Lifeguard (Albuquerque)	(888) 866-7256			



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Schematic Closed Loop Drilling Rig\*

- 1. Pipe Rack
- 2. Drill Rig
- 3. House Trailers/ Offices
- 4. Generator/Fuel/Storage
- 5. Overflow-Frac Tank
- 6. Skids
- 7. Roll Offs
- 8. Hopper or Centrifuge
- 9. Mud Tanks
- 10. Loop Drive
- 11. Generator (only for use with centrifuge)

\*Not drawn to scale: Closed loop system requires at least 30 feet beyond mud tanks. Ideally 60 feet would be available



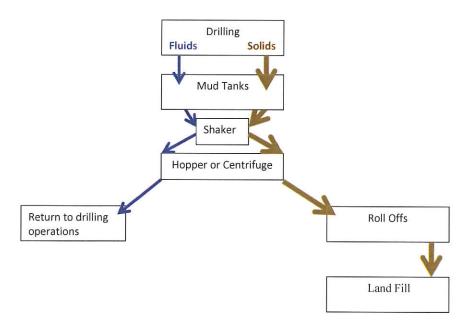


Above: Centrifugal Closed Loop System



Closed Loop Drilling System: Mud tanks to right (1) Hopper in air to settle out solids (2) Water return pipe (3) Shaker between hopper and mud tanks (4) Roll offs on skids (5)









District I

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 Road, Aztec, NM 87410

Phone: (505) 334-6178 Fax: (505) 334-6170 District IV

1220 S. St. Francis Dr. Santa Fe. NM 87505

Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

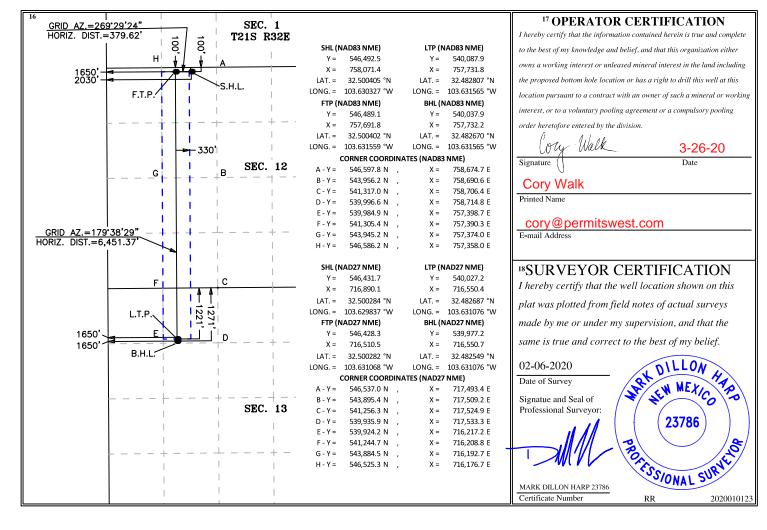
Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
Submit one copy to appropriate District Office

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#### WELL LOCATION AND ACREAGE DEDICATION PLAT

1			<sup>2</sup> Pool Code		<sup>3</sup> Pool Name					
	30-025	1/560		98033		WC-025 G-10 S213328O; WOLFCAMP				
<sup>4</sup> Property C			<sup>5</sup> Property Name					<sup>6</sup> Well Number		
328893	328893 BIG BULL FED COM							706H		
<sup>7</sup> OGRID I	<sup>7</sup> OGRID No. <sup>8</sup> Operator Name							<sup>9</sup> Elevation		
325830	325830 ASCENT ENERGY, LLC.							3,776'		
<sup>10</sup> Surface Location										
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	e East/West lin		County
С	12	21 S	32 E		100	NORTH	2,030	WEST		LEA
<sup>11</sup> Bottom Hole Location If Different From Surface										
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	ne East/West lin		County
С	13	21 S	32 E		1,271	NORTH	1,650	WE	ST	LEA
<sup>12</sup> Dedicated Acres <sup>13</sup> Joint or Infill <sup>14</sup> Consolidation Code <sup>15</sup> Order No.										
200										

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



State of New Mexico Energy, Minerals and Natural Resources Department

OCD - HOBBS **Oil Conservation Division** 1220 South St. Francis Dr. Santa Fe, NM 87505

08|14|2020

CEIVE

GAS CAPTURE PLAN

Date: 3-24-20

X Original

Operator & OGRID No.: Ascent Energy, LLC (325830)

□ Amended - Reason for Amendment:

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

#### Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

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Well Name	API	SHL (ULSTR)	SHL	Expected	Flared or	Comments
			Footages	MCF/D	Vented	
Big Bull Fed Com 305H	30-025-	C-12-21s-32e	100' FNL & 2080' FWL	200	$\approx$ 30 days	flare until well clean, then connect
Big Bull Fed Com 306H	30-025-	C-12-21s-32e	100' FNL & 2005' FWL	200	$\approx 30 \text{ days}$	flare until well clean, then connect
Big Bull Fed Com 403H	30-025-	C-12-21s-32e	100' FNL & 2055' FWL	200	$\approx 30 \text{ days}$	flare until well clean, then connect
Big Bull Fed Com 504H	30-025-	N-1-21s-32e	100' FSL & 2054' FWL	200	$\approx 30 \text{ days}$	flare until well clean, then connect
Big Bull Fed Com 602H	30-025-	N-1-21s-32e	100' FSL & 2029' FWL	200	$\approx 30 \text{ days}$	flare until well clean, then connect
Big Bull Fed Com 705H	30-025-	N-1-21s-32e	100' FSL & 2079' FWL	200	$\approx 30 \text{ days}$	flare until well clean, then connect
Big Bull Fed Com 706H	30-025- <b>47560</b>	C-12-21s-32e	100' FNL & 2030' FWL	200	$\approx 30 \text{ days}$	flare until well clean, then connect

#### **Gathering System and Pipeline Notification**

Well will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. Gas produced from this production facility has not yet been dedicated. Ascent Energy, LLC will provide (periodically) to 3Bear Field Services, LLC a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Ascent Energy, LLC and 3Bear Field Services, LLC will have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at 3Bear Field Services, LLC Processing Plant at Marathon Road. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

#### **Flowback Strategy**

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on 3Bear Field Services, LLC system at that time. Based on current information, it is <u>Ascent Energy</u>, <u>LLC's</u> belief the system ultimately can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

#### **Alternatives to Reduce Flaring**

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal On lease

Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines