Form 3160-3
(June 2015)

OCD – HOBBS
09/14/2020
RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM127892

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.
BIG BULL FED COM [328893]
305H

2. Name of Operator
ASCENT ENERGY LLC [325830]

9. API Well No.
30-025-47758

3a. Address
1621 18th Street, Suite 200, Denver, CO 80202

3b. Phone No. *(include area code)*
(720) 710-8999

10. Field and Pool, or Exploratory [97895]
WC-025 G-08 S213304D; BONE SPRING

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface NENW / 100 FNL / 2080 FWL / LAT 32.5000405 / LONG -103.630165
At proposed prod. zone NENW / 1271 FNL / 2310 FWL / LAT 32.482674 / LONG -103.629425

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 12/T21S/R32E/NMP

14. Distance in miles and direction from nearest town or post office*
22 miles

12. County or Parish
LEA

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
100 feet

16. No of acres in lease
480

17. Spacing Unit dedicated to this well
200.0

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
25 feet

19. Proposed Depth
9170 feet / 15647 feet

20. BLM/BIA Bond No. in file
FED: NMB001698

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3777 feet

22. Approximate date work will start*
10/01/2020

23. Estimated duration
90 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	BRIAN WOOD / Ph: (720) 710-8999	04/02/2020

Title
President

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575) 234-5959	08/28/2020

Title	Office
Assistant Field Manager Lands & Minerals	Carlsbad Field Office

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

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

GCP Rec 09/14/2020

SL

APPROVED WITH CONDITIONS

KZ
10/05/2020

Approval Date: 08/28/2020

(Continued on page 2)

*(Instructions on page 2)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Ascent Energy LLC**
LEASE NO.:	**NMNM127892**
WELL NAME & NO.:	Big Bull Federal Com 305H
SURFACE HOLE FOOTAGE:	100'/N & 2080'/W
BOTTOM HOLE FOOTAGE	1271'/N & 2310'/W
LOCATION:	Section 12, T.21 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

1. The **13-3/8 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.

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 **9-5/8 inch** intermediate 1 casing and shall be set at approximately **3,140 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 R111 Potash Areas 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 Capitan Reef Areas 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.

3. The minimum required fill of cement behind the **7-5/8 inch** intermediate 2 casing and shall be set at approximately **5,708 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.**

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

    - Cement should tie-back at least **50 feet** on top of Capitan Reef top **or 200 feet** into the previous casing, whichever is greater. If cement does not circulate see B.1.a, c-d above.
      Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, potash or capitan reef.

C. PRESSURE CONTROL

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

2. 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.**

    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. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

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

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

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

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

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

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

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

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

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

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

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

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

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

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

B. PRESSURE CONTROL

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

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

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

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

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

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

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including

lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

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

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

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

e. The results of the test shall be reported to the appropriate BLM office.

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

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

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

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

YJ (08/12/2020)

APD ID: 10400055788

Submission Date: 04/02/2020

Operator Name: ASCENT ENERGY LLC

Well Name: BIG BULL FED COM

Well Number: 305H

Well Type: OIL WELL

Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
704612	QUATERNARY	3777	0	0	OTHER : None	NONE	N
704613	RUSTLER ANHYDRITE	2202	1575	1575	ANHYDRITE	NONE	N
704614	SALADO	1902	1875	1875	SALT	NONE	N
704615	BASE OF SALT	862	2915	2926	SALT	NONE	N
704616	TANSILL	652	3125	3140	LIMESTONE	NONE	N
704617	YATES	507	3270	3287	SANDSTONE, SHALE	NATURAL GAS, OIL	N
704618	CAPITAN REEF	172	3605	3631	LIMESTONE	USEABLE WATER	N
704619	DELAWARE SAND	-1888	5665	5708	SANDSTONE	NATURAL GAS, OIL	N
704620	CHERRY CANYON	-2158	5935	5978	SANDSTONE	NATURAL GAS, OIL	N
704621	BRUSHY CANYON	-3333	7110	7153	SANDSTONE	NATURAL GAS, OIL	N
704622	BONE SPRING LIME	-5048	8825	8869	LIMESTONE, SANDSTONE	NATURAL GAS, OIL	N
704623	BONE SPRING	-5191	8968	9028	LIMESTONE, OTHER, SANDSTONE : Avalon	NATURAL GAS, OIL	N
704624	BONE SPRING	-5388	9165	9326	LIMESTONE, OTHER, SANDSTONE : Leonard	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Operator Name: ASCENT ENERGY LLC

Well Name: BIG BULL FED COM **Well Number:** 305H

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 pre-set 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_choke_20200401075724.pdf

BOP Diagram Attachment:

BigBull_BOP_20200401075815.pdf

Operator Name: ASCENT ENERGY LLC

Well Name: BIG BULL FED COM **Well Number:** 305H

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	17.5	13.75	NEW	API	N	0	1600	0	1600	3777	2177	1600	J-55	54.5	ST&C	1.41	2.89	DRY	2.75	DRY	2.75
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	3140	0	3125	3777	652	3140	J-55	40	LT&C	1.58	1.91	DRY	2.01	DRY	2.01
3	INTERMEDIATE	8.75	7.625	NEW	NON API	N	0	5708	0	5665	3777	-1888	5708	HCP-110	29.7	OTHER - EZGO FJ3	3.47	2.27	DRY	2.27	DRY	2.27
4	PRODUCTION	6.75	5.5	NEW	NON API	N	0	15647	0	9170	3777	-5393	15647	HCP-110	20	OTHER - EZGO HT	2.67	2.65	DRY	1.76	DRY	1.76

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20200401081644.pdf

Operator Name: ASCENT ENERGY LLC

Well Name: BIG BULL FED COM **Well Number:** 305H

Casing Attachments

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20200401081809.pdf

Casing ID: 3 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

CDS_7.625_29.7lbs_P110_HC_EZGO_FJ3_20200401082155.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20200401082238.pdf

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

CDS_5.5_20lb_P110_HC_EZGO_HT__5.9_coupling_od__20200401082339.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20200401082409.pdf

Section 4 - Cement

Operator Name: ASCENT ENERGY LLC

Well Name: BIG BULL FED COM **Well Number:** 305H

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	865	1.72	13.5	1487	100	Class C HALCEM System	4% Bentonite
SURFACE	Tail		1100	1600	550	1.33	14.8	695	100	Class C HALCEM System	None
INTERMEDIATE	Lead		0	2140	535	1.72	12.7	919	100	Class C HALCEM System	4% Bentonite
INTERMEDIATE	Tail		2140	3140	485	1.33	14.8	626	100	Class C HALCEM System	None
INTERMEDIATE	Lead		0	4408	265	2.03	12.7	532	50	Class C EconoCem HLC	5% Salt + 3% Microbond + 3 lbm/sk Kol-Seal + 0.3% HR 800
INTERMEDIATE	Tail		4408	5708	155	1.37	14.8	196		Class C HALCEM System	3% Microbond
PRODUCTION	Lead		0	5500	165	2.88	11	464	25	NeoCem PL	3% Microbond
PRODUCTION	Tail		5500	15647	2185	1.47	13.2	3204		NeoCem PT	3% Microbond

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 (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics

Operator Name: ASCENT ENERGY LLC

Well Name: BIG BULL FED COM **Well Number:** 305H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1600	OTHER : Fresh water	8.4	9.6							
1600	3140	OTHER : Brine water	10	10							
3140	5708	OTHER : Fresh water	8.4	8.6							
5708	15647	OTHER : Cut brine/gel	8.5	9.3							

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: 5000 **Anticipated Surface Pressure:** 2982

Anticipated Bottom Hole Temperature(F): 152

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_20200401084006.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

BigBull_305H_Horizontal_Plan_20200401084037.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

BigBull_CoFlex_Certs_20200401084118.pdf
BigBull_305H_Anticollision_Report_20200401084150.pdf
BigBull_speedhead_20200401084206.pdf
BigBull_305H_Drill_Plan_v2_20200602121824.pdf

Other Variance attachment:

Big Bull Fed Com 305H
Drilling Operations Plan
SHL 100' FNL & 2080' FWL, Sec. 12
BHL 1271' FNL & 2310' FWL, Sec. 13
T. 21S., R. 32E Lea County, NM

Ground Elevation above Sea Level: 3777'

DRILLING PROGRAM

Proposed Drilling Depth:
15,647' MD / 9,170' TVD

Type of well:
Horizontal well, no pilot hole

Permitted Well Type:
Oil

Geologic Name of Surface Formation:
Quaternary Deposits

KOP Lat/Long (NAD83):
32.500893 N / -103.628831 W

TD Lat/Long (NAD83):
32.499351 N / -103.629257 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	2926		None
Tansil	3125	3140	Limestone	None
Yates	3270	3287	Shale/Sandstone	Hydrocarbons
Capitan Reef	3605	3631	Limestone	Water
Delaware Sand	5665	5708	Sandstone	Hydrocarbons
Cherry Canyon	5935	5978	Sandstone	Hydrocarbons
Brushy Canyon	7110	7153	Sandstone	Hydrocarbons
Bone Spring Lime	8825	8869	Lmst/SS	Hydrocarbons
Avalon	8968	9028	Lmst/SH	Hydrocarbons
Leonard	9165	9326	Lmst/ SH	Hydrocarbons
KOP	8630	8673		
TD	9170	15647		

Big Bull Fed Com 305H
Drilling Operations Plan
SHL 100' FNL & 2080' FWL, Sec. 12
BHL 1271' FNL & 2310' FWL, Sec. 13
T. 21S., R. 32E Lea County, NM

2. Notable Zones

Leonard B 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 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.

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 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 pre-set wells. Ascent will have supervision on the spudder rig to ensure compliance with all BLM and NMOCD regulations.

4. Casing & Cement

All Casing will be new.

Interval	Hole Size	Interval MD		Interval TVD		Csg OD	Weight	Grade	Conn Type	Conn	New/ Used	Tappered	DF Collapse	DF Burst	DF Tension
Surface	17.5	0'	1,600'	0'	1,600'	13.375	54.5	J-55	STC	API	New	No	1.41	2.89	2.75
1st Int	12.25	0'	3,140'	0'	3,125'	9.625	40.0	J-55	LTC	API	New	No	1.58	1.91	2.01
2nd Int	8.75	0'	5,708'	0'	5,665'	7.625	29.7	HCP-110	EZGO FJ3	Non-API	New	No	3.47	2.27	2.27
Production	6.75	0'	15,647'	0'	9,170'	5.5	20.0	HCP-110	EZGO HT	Non-API	New	No	2.67	2.65	1.76

Section	Depth	Type	Cmt Top	Excess	Ft^3	Sacks	BBLS	Wt. ppg	Yld Ft^3/sk	Mix Water Gal/sk	Slurry Description
Surface	13.375	Lead	0	100%	1,487	865	265	13.5	1.728	9.21	Class C HALCEM System+ 4% Bentonite
	1600'	Tail	1100'	100%	695	550	124	14.8	1.332	6.42	Class C HALCEM System
Int	9.625	Lead	0	100%	919	535	164	12.7	1.728	10.67	Class C HALCEM System+ 4% Bentonite
	3140'	Tail	2140'	100%	626	485	112	14.8	1.332	6.42	Class C HALCEM System
2nd Int	7.625	Lead	0	50%	532	265	95	12.7	2.039	10.67	Class C EconoCem HLC + 5% Salt + 3% Microbond + 3 lbm/sk Kol-Seal + 0.3% HR-800
	5708'	Tail	4408'	50%	196	155	35	14.8	1.368	6.42	Class C HALCEM System + 3% Microbond
Production	5.5	Lead	0	25%	464	165	83	11	2.887	17.38	NeoCem PL + 3% Microbond
	15,647'	Tail	5,500'	25%	3,204	2185	571	13.2	1.472	7.47	NeoCem PT + 3% Microbond

5. Mud Program

Interval		Type	Weight	Viscosity	Water Loss
0'	1,600'	Fresh Water	8.4-9.6	34-38	N/C
1,600'	3,140'	Brine Water	10	28-34	N/C
3,140'	5,708'	Fresh Water	8.4-8.6	28-34	N/C
5,708'	15,647'	Cut Brine/Gel	8.5-9.3	28-34	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.

Big Bull Fed Com 305H
Drilling Operations Plan
SHL 100' FNL & 2080' FWL, Sec. 12
BHL 1271' FNL & 2310' FWL, Sec. 13
T. 21S., R. 32E Lea County, NM

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 ≈5,000 psi. Expected bottom hole temperature is ≈152˚ 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.
- 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 305H

ORIGINAL WELLBORE
07 March, 2020

Plan: PROPOSAL #1

ASCENT ENERGY

Project: LEA COUNTY, NEW MEXICO (NAD 83) (GRID)
Site: SEC. 1 T21S R32E N.M.P.M. (GRID)
Well: BIG BULL FED COM 305H
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Dep	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL: 100ft FNL & 2080ft FWL of Sec 12
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	START NUDGE (2°/100ft BUR)
2600.00	12.00	66.31	2595.62	25.15	57.33	-24.79	62.60	EOB TO 12° INC
4152.56	12.00	66.31	4114.26	154.85	352.92	-152.63	385.40	END OF TANGENT
4752.56	0.00	0.00	4709.88	180.00	410.25	-177.42	448.00	EOD TO VERTICAL
8672.72	0.00	0.00	8630.04	180.00	410.25	-177.42	448.00	KOP (10°/100ft BUR)
9145.96	47.32	192.79	9051.28	0.00	369.39	2.32	632.69	FTP: 100ft FNL & 2449.39ft FWL of Sec 12
9575.82	90.31	192.79	9202.99	-381.76	282.72	383.53	1024.06	HZ LP: 481.76ft FNL & 2360ft FWL of Sec 12
10014.16	90.31	179.64	9200.60	-816.57	235.38	818.03	1462.39	EOT TO 179.64° AZ
15597.33	90.31	179.64	9170.27	-6399.54	270.50	6401.12	7045.48	LTP: 1221ft FNL & 2310ft FWL of Sec 13
15647.33	90.31	179.64	9170.00	-6449.54	270.81	6451.11	7095.48	BHL: 1271ft FNL & 2310ft FWL of Sec 13

PROPOSED LOCAL COORDINATES:

SHL: 100ft FNL & 2080ft FWL Sec 12

FTP: 100ft FNL & 2449.39ft FWL of Sec 12

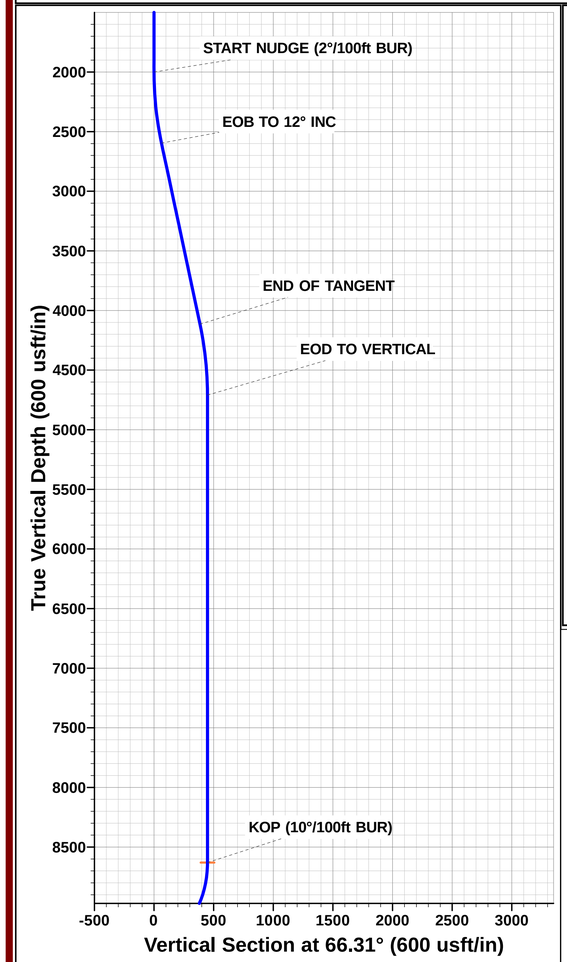
HZ LP: 481.76ft FNL & 2360ft FWL Sec 12

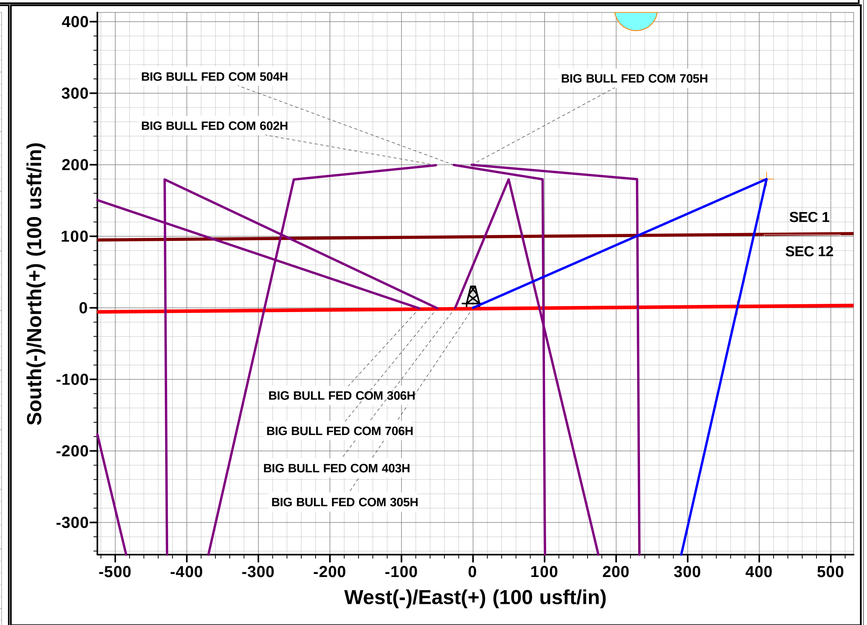
LTP: 1221ft FNL & 2310ft FWL of Sec 13

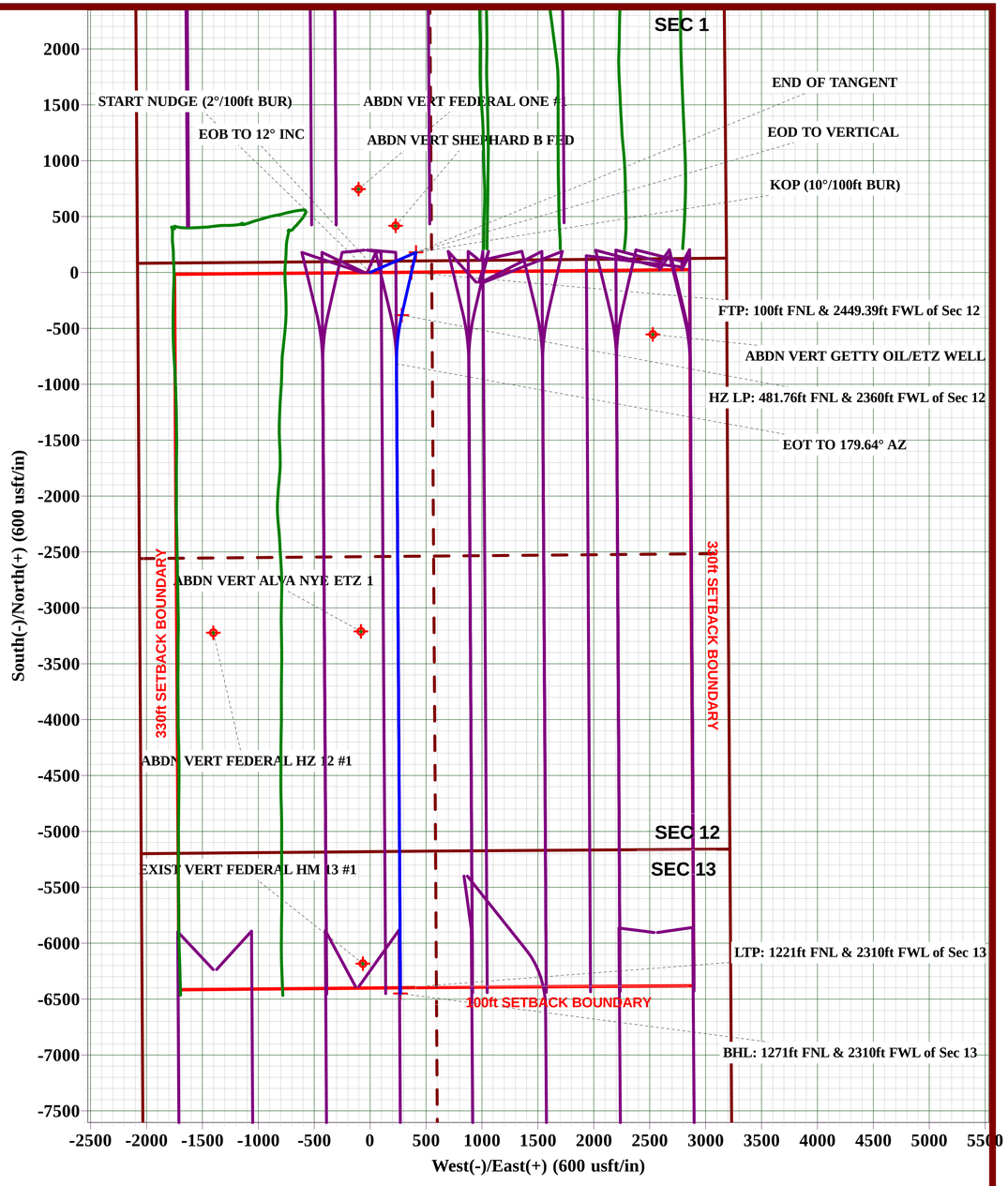
BHL: 1271ft FNL & 2310ft FWL of Sec 13

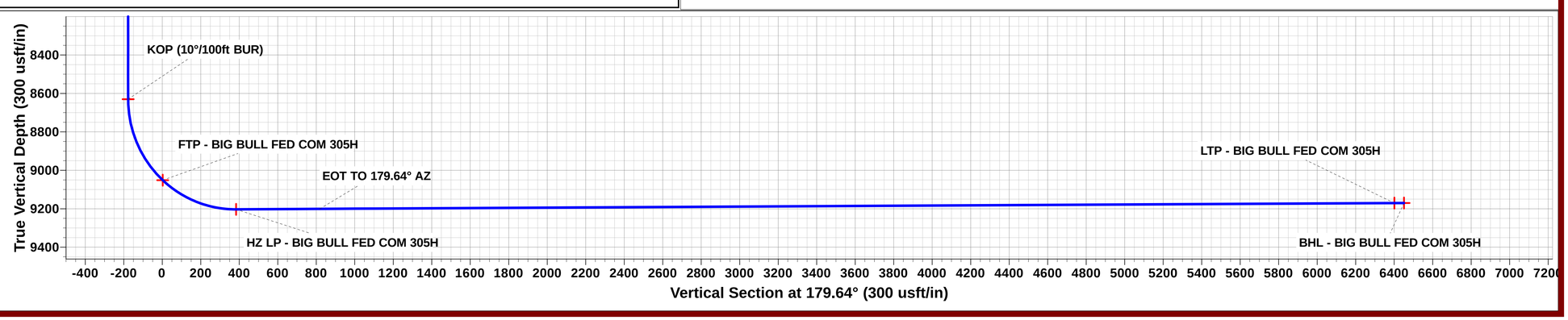
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - BIG BULL FED COM 305H	8630.04	180.00	410.25	32.500893	-103.628831
FTP - BIG BULL FED COM 305H	9051.28	0.00	369.39	32.500399	-103.628967
BHL - BIG BULL FED COM 305H	9170.00	-6449.54	270.81	32.482674	-103.629425
LTP - BIG BULL FED COM 305H	9170.27	-6399.54	270.50	32.482811	-103.629425
HZ LP - BIG BULL FED COM 305H	9202.99	-381.76	282.72	32.499351	-103.629257









Database:	Database 1	**Local Co-ordinate Reference:**	Well BIG BULL FED COM 305H
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 305H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Project LEA COUNTY, NEW MEXICO (NAD 83) (GRID)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site SEC. 1 T21S R32E N.M.P.M. (GRID)

Site Position:		**Northing:**	546,692.70 usft	**Latitude:**	32.500955
From:	Map	**Easting:**	758,094.60 usft	**Longitude:**	-103.630248
Position Uncertainty:	0.00 usft	**Slot Radius:**	1.10 ft	**Grid Convergence:**	0.38 °

Well BIG BULL FED COM 305H

Well Position	**+N/-S**	-199.71 usft	**Northing:**	546,493.00 usft	**Latitude:**	32.500405
	+E/-W	26.70 usft	**Easting:**	758,121.30 usft	**Longitude:**	-103.630166
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,775.00 usft

Wellbore ORIGINAL WELLBORE

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	2020-03-05	6.74	60.19	47,782.34403431

Design PROPOSAL #1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.64

Plan Sections

MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usf	Build Rate (°/100usf	Turn Rate (°/100usf	TFO (°)	Target
0.00	0.00	0.00	0.00	-3,800.00	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	
2,600.00	12.00	66.31	2,595.62	-1,204.38	25.15	57.33	2.00	2.00	0.00	66.31	
4,152.56	12.00	66.31	4,114.26	314.26	154.85	352.92	0.00	0.00	0.00	0.00	
4,752.56	0.00	0.00	4,709.88	909.88	180.00	410.25	2.00	-2.00	0.00	180.00	
8,672.72	0.00	0.00	8,630.04	4,830.04	180.00	410.25	0.00	0.00	0.00	0.00	KOP - BIG BULL FE
9,575.82	90.31	192.79	9,202.99	5,402.99	-381.76	282.72	10.00	10.00	0.00	192.79	
10,014.16	90.31	179.64	9,200.60	5,400.60	-816.57	235.38	3.00	0.00	-3.00	-89.96	
15,647.33	90.31	179.64	9,170.00	5,370.00	-6,449.54	270.81	0.00	0.00	0.00	0.00	BHL - BIG BULL FE

Database:	Database 1	**Local Co-ordinate Reference:**	Well BIG BULL FED COM 305H
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 305H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey

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: 100ft FNL & 2080ft FWL of Sec 12										
0.00	***0.00***	***0.00***	***0.00***	***3,800.00***	***0.00***	***0.00***	***0.00***	***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
START NUDGE (2°/100ft BUR)										
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	2.00	66.31	2,099.98	1,700.02	0.70	1.60	-0.69	2.00	2.00	0.00
2,200.00	4.00	66.31	2,199.84	1,600.16	2.80	6.39	-2.76	2.00	2.00	0.00
2,300.00	6.00	66.31	2,299.45	1,500.55	6.31	14.37	-6.22	2.00	2.00	0.00
2,400.00	8.00	66.31	2,398.70	1,401.30	11.20	25.53	-11.04	2.00	2.00	0.00
2,500.00	10.00	66.31	2,497.47	1,302.53	17.49	39.86	-17.24	2.00	2.00	0.00
EOB TO 12° INC										
2,600.00	***12.00***	***66.31***	***2,595.62***	***1,204.38***	***25.15***	***57.33***	***-24.79***	***2.00***	***2.00***	***0.00***
2,700.00	12.00	66.31	2,693.44	1,106.56	33.51	76.37	-33.03	0.00	0.00	0.00
2,800.00	12.00	66.31	2,791.25	1,008.75	41.86	95.41	-41.26	0.00	0.00	0.00
2,900.00	12.00	66.31	2,889.07	910.93	50.21	114.44	-49.49	0.00	0.00	0.00
3,000.00	12.00	66.31	2,986.88	813.12	58.57	133.48	-57.73	0.00	0.00	0.00
3,100.00	12.00	66.31	3,084.70	715.30	66.92	152.52	-65.96	0.00	0.00	0.00
3,200.00	12.00	66.31	3,182.51	617.49	75.27	171.56	-74.19	0.00	0.00	0.00
3,300.00	12.00	66.31	3,280.33	519.67	83.63	190.60	-82.43	0.00	0.00	0.00
3,400.00	12.00	66.31	3,378.14	421.86	91.98	209.64	-90.66	0.00	0.00	0.00
3,500.00	12.00	66.31	3,475.96	324.04	100.33	228.68	-98.90	0.00	0.00	0.00
3,600.00	12.00	66.31	3,573.77	226.23	108.69	247.72	-107.13	0.00	0.00	0.00
3,700.00	12.00	66.31	3,671.59	128.41	117.04	266.76	-115.36	0.00	0.00	0.00
3,800.00	12.00	66.31	3,769.40	30.60	125.40	285.80	-123.60	0.00	0.00	0.00
3,900.00	12.00	66.31	3,867.22	-67.22	133.75	304.84	-131.83	0.00	0.00	0.00
4,000.00	12.00	66.31	3,965.03	-165.03	142.10	323.88	-140.06	0.00	0.00	0.00
4,100.00	12.00	66.31	4,062.84	-262.84	150.46	342.92	-148.30	0.00	0.00	0.00
END OF TANGENT										
4,152.56	***12.00***	***66.31***	***4,114.26***	***-314.26***	***154.85***	***352.92***	***-152.63***	***0.00***	***0.00***	***0.00***
4,200.00	11.05	66.31	4,160.74	-360.74	158.66	361.60	-156.38	2.00	-2.00	0.00
4,300.00	9.05	66.31	4,259.20	-459.20	165.67	377.58	-163.29	2.00	-2.00	0.00
4,400.00	7.05	66.31	4,358.21	-558.21	171.29	390.41	-168.84	2.00	-2.00	0.00
4,500.00	5.05	66.31	4,457.65	-657.65	175.53	400.06	-173.01	2.00	-2.00	0.00
4,600.00	3.05	66.31	4,557.39	-757.39	178.37	406.53	-175.81	2.00	-2.00	0.00
4,700.00	1.05	66.31	4,657.32	-857.32	179.81	409.81	-177.23	2.00	-2.00	0.00

Database:	Database 1	**Local Co-ordinate Reference:**	Well BIG BULL FED COM 305H
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 305H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey

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)
EOD TO VERTICAL										
4,752.56	***0.00***	***0.00***	***4,709.88***	***-909.88***	***180.00***	***410.25***	***-177.42***	***2.00***	***-2.00***	***0.00***
4,800.00	0.00	0.00	4,757.32	-957.32	180.00	410.25	-177.42	0.00	0.00	0.00
4,900.00	0.00	0.00	4,857.32	-1,057.32	180.00	410.25	-177.42	0.00	0.00	0.00
5,000.00	0.00	0.00	4,957.32	-1,157.32	180.00	410.25	-177.42	0.00	0.00	0.00
5,100.00	0.00	0.00	5,057.32	-1,257.32	180.00	410.25	-177.42	0.00	0.00	0.00
5,200.00	0.00	0.00	5,157.32	-1,357.32	180.00	410.25	-177.42	0.00	0.00	0.00
5,300.00	0.00	0.00	5,257.32	-1,457.32	180.00	410.25	-177.42	0.00	0.00	0.00
5,400.00	0.00	0.00	5,357.32	-1,557.32	180.00	410.25	-177.42	0.00	0.00	0.00
5,500.00	0.00	0.00	5,457.32	-1,657.32	180.00	410.25	-177.42	0.00	0.00	0.00
5,600.00	0.00	0.00	5,557.32	-1,757.32	180.00	410.25	-177.42	0.00	0.00	0.00
5,700.00	0.00	0.00	5,657.32	-1,857.32	180.00	410.25	-177.42	0.00	0.00	0.00
5,800.00	0.00	0.00	5,757.32	-1,957.32	180.00	410.25	-177.42	0.00	0.00	0.00
5,900.00	0.00	0.00	5,857.32	-2,057.32	180.00	410.25	-177.42	0.00	0.00	0.00
6,000.00	0.00	0.00	5,957.32	-2,157.32	180.00	410.25	-177.42	0.00	0.00	0.00
6,100.00	0.00	0.00	6,057.32	-2,257.32	180.00	410.25	-177.42	0.00	0.00	0.00
6,200.00	0.00	0.00	6,157.32	-2,357.32	180.00	410.25	-177.42	0.00	0.00	0.00
6,300.00	0.00	0.00	6,257.32	-2,457.32	180.00	410.25	-177.42	0.00	0.00	0.00
6,400.00	0.00	0.00	6,357.32	-2,557.32	180.00	410.25	-177.42	0.00	0.00	0.00
6,500.00	0.00	0.00	6,457.32	-2,657.32	180.00	410.25	-177.42	0.00	0.00	0.00
6,600.00	0.00	0.00	6,557.32	-2,757.32	180.00	410.25	-177.42	0.00	0.00	0.00
6,700.00	0.00	0.00	6,657.32	-2,857.32	180.00	410.25	-177.42	0.00	0.00	0.00
6,800.00	0.00	0.00	6,757.32	-2,957.32	180.00	410.25	-177.42	0.00	0.00	0.00
6,900.00	0.00	0.00	6,857.32	-3,057.32	180.00	410.25	-177.42	0.00	0.00	0.00
7,000.00	0.00	0.00	6,957.32	-3,157.32	180.00	410.25	-177.42	0.00	0.00	0.00
7,100.00	0.00	0.00	7,057.32	-3,257.32	180.00	410.25	-177.42	0.00	0.00	0.00
7,200.00	0.00	0.00	7,157.32	-3,357.32	180.00	410.25	-177.42	0.00	0.00	0.00
7,300.00	0.00	0.00	7,257.32	-3,457.32	180.00	410.25	-177.42	0.00	0.00	0.00
7,400.00	0.00	0.00	7,357.32	-3,557.32	180.00	410.25	-177.42	0.00	0.00	0.00
7,500.00	0.00	0.00	7,457.32	-3,657.32	180.00	410.25	-177.42	0.00	0.00	0.00
7,600.00	0.00	0.00	7,557.32	-3,757.32	180.00	410.25	-177.42	0.00	0.00	0.00
7,700.00	0.00	0.00	7,657.32	-3,857.32	180.00	410.25	-177.42	0.00	0.00	0.00
7,800.00	0.00	0.00	7,757.32	-3,957.32	180.00	410.25	-177.42	0.00	0.00	0.00
7,900.00	0.00	0.00	7,857.32	-4,057.32	180.00	410.25	-177.42	0.00	0.00	0.00
8,000.00	0.00	0.00	7,957.32	-4,157.32	180.00	410.25	-177.42	0.00	0.00	0.00
8,100.00	0.00	0.00	8,057.32	-4,257.32	180.00	410.25	-177.42	0.00	0.00	0.00
8,200.00	0.00	0.00	8,157.32	-4,357.32	180.00	410.25	-177.42	0.00	0.00	0.00
8,300.00	0.00	0.00	8,257.32	-4,457.32	180.00	410.25	-177.42	0.00	0.00	0.00
8,400.00	0.00	0.00	8,357.32	-4,557.32	180.00	410.25	-177.42	0.00	0.00	0.00
8,500.00	0.00	0.00	8,457.32	-4,657.32	180.00	410.25	-177.42	0.00	0.00	0.00
8,600.00	0.00	0.00	8,557.32	-4,757.32	180.00	410.25	-177.42	0.00	0.00	0.00
KOP (10°/100ft BUR)										
8,672.72	***0.00***	***0.00***	***8,630.04***	***-4,830.04***	***180.00***	***410.25***	***-177.42***	***0.00***	***0.00***	***0.00***
8,700.00	2.73	192.79	8,657.31	-4,857.31	179.37	410.11	-176.79	10.00	10.00	0.00
8,800.00	12.73	192.79	8,756.27	-4,956.27	166.27	407.13	-163.71	10.00	10.00	0.00
8,900.00	22.73	192.79	8,851.41	-5,051.41	136.61	400.40	-134.10	10.00	10.00	0.00
9,000.00	32.73	192.79	8,939.81	-5,139.81	91.30	390.11	-88.85	10.00	10.00	0.00
9,100.00	42.73	192.79	9,018.80	-5,218.80	31.70	376.58	-29.33	10.00	10.00	0.00
FTP: 100ft FNL & 2449.39ft FWL of Sec 12										
9,145.96	***47.32***	***192.79***	***9,051.28***	***-5,251.28***	***0.00***	***369.39***	***2.32***	***10.00***	***10.00***	***0.00***
9,200.00	52.73	192.79	9,085.98	-5,285.98	-40.37	360.22	42.63	10.00	10.00	0.00
9,300.00	62.73	192.79	9,139.31	-5,339.31	-122.72	341.53	124.86	10.00	10.00	0.00
9,400.00	72.73	192.79	9,177.16	-5,377.16	-212.85	321.07	214.86	10.00	10.00	0.00

Database:	Database 1	**Local Co-ordinate Reference:**	Well BIG BULL FED COM 305H
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 305H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey

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)
9,500.00	82.73	192.79	9,198.39	-5,398.39	-308.02	299.47	309.89	10.00	10.00	0.00
HZ LP: 481.76ft FNL & 2360ft FWL of Sec 12										
9,575.82	***90.31***	***192.79***	***9,202.99***	***-5,402.99***	***-381.76***	***282.72***	***383.53***	***10.00***	***10.00***	***0.00***
9,600.00	90.31	192.06	9,202.86	-5,402.86	-405.38	277.52	407.11	3.00	0.00	-3.00
9,700.00	90.31	189.06	9,202.32	-5,402.32	-503.67	259.19	505.29	3.00	0.00	-3.00
9,800.00	90.31	186.06	9,201.77	-5,401.77	-602.79	246.03	604.32	3.00	0.00	-3.00
9,900.00	90.31	183.06	9,201.22	-5,401.22	-702.46	238.07	703.94	3.00	0.00	-3.00
10,000.00	90.31	180.06	9,200.68	-5,400.68	-802.41	235.34	803.87	3.00	0.00	-3.00
EOT TO 179.64° AZ										
10,014.16	***90.31***	***179.64***	***9,200.60***	***-5,400.60***	***-816.57***	***235.38***	***818.03***	***3.00***	***0.00***	***-3.00***
10,100.00	90.31	179.64	9,200.14	-5,400.14	-902.40	235.92	903.87	0.00	0.00	0.00
10,200.00	90.31	179.64	9,199.59	-5,399.59	-1,002.40	236.54	1,003.87	0.00	0.00	0.00
10,300.00	90.31	179.64	9,199.05	-5,399.05	-1,102.40	237.17	1,103.86	0.00	0.00	0.00
10,400.00	90.31	179.64	9,198.51	-5,398.51	-1,202.39	237.80	1,203.86	0.00	0.00	0.00
10,500.00	90.31	179.64	9,197.96	-5,397.96	-1,302.39	238.43	1,303.86	0.00	0.00	0.00
10,600.00	90.31	179.64	9,197.42	-5,397.42	-1,402.39	239.06	1,403.86	0.00	0.00	0.00
10,700.00	90.31	179.64	9,196.88	-5,396.88	-1,502.38	239.69	1,503.86	0.00	0.00	0.00
10,800.00	90.31	179.64	9,196.33	-5,396.33	-1,602.38	240.32	1,603.86	0.00	0.00	0.00
10,900.00	90.31	179.64	9,195.79	-5,395.79	-1,702.37	240.95	1,703.85	0.00	0.00	0.00
11,000.00	90.31	179.64	9,195.25	-5,395.25	-1,802.37	241.58	1,803.85	0.00	0.00	0.00
11,100.00	90.31	179.64	9,194.70	-5,394.70	-1,902.37	242.21	1,903.85	0.00	0.00	0.00
11,200.00	90.31	179.64	9,194.16	-5,394.16	-2,002.36	242.83	2,003.85	0.00	0.00	0.00
11,300.00	90.31	179.64	9,193.62	-5,393.62	-2,102.36	243.46	2,103.85	0.00	0.00	0.00
11,400.00	90.31	179.64	9,193.07	-5,393.07	-2,202.36	244.09	2,203.85	0.00	0.00	0.00
11,500.00	90.31	179.64	9,192.53	-5,392.53	-2,302.35	244.72	2,303.85	0.00	0.00	0.00
11,600.00	90.31	179.64	9,191.99	-5,391.99	-2,402.35	245.35	2,403.84	0.00	0.00	0.00
11,700.00	90.31	179.64	9,191.44	-5,391.44	-2,502.35	245.98	2,503.84	0.00	0.00	0.00
11,800.00	90.31	179.64	9,190.90	-5,390.90	-2,602.34	246.61	2,603.84	0.00	0.00	0.00
11,900.00	90.31	179.64	9,190.36	-5,390.36	-2,702.34	247.24	2,703.84	0.00	0.00	0.00
12,000.00	90.31	179.64	9,189.81	-5,389.81	-2,802.34	247.87	2,803.84	0.00	0.00	0.00
12,100.00	90.31	179.64	9,189.27	-5,389.27	-2,902.33	248.50	2,903.84	0.00	0.00	0.00
12,200.00	90.31	179.64	9,188.73	-5,388.73	-3,002.33	249.12	3,003.84	0.00	0.00	0.00
12,300.00	90.31	179.64	9,188.18	-5,388.18	-3,102.33	249.75	3,103.83	0.00	0.00	0.00
12,400.00	90.31	179.64	9,187.64	-5,387.64	-3,202.32	250.38	3,203.83	0.00	0.00	0.00
12,500.00	90.31	179.64	9,187.10	-5,387.10	-3,302.32	251.01	3,303.83	0.00	0.00	0.00
12,600.00	90.31	179.64	9,186.55	-5,386.55	-3,402.32	251.64	3,403.83	0.00	0.00	0.00
12,700.00	90.31	179.64	9,186.01	-5,386.01	-3,502.31	252.27	3,503.83	0.00	0.00	0.00
12,800.00	90.31	179.64	9,185.47	-5,385.47	-3,602.31	252.90	3,603.83	0.00	0.00	0.00
12,900.00	90.31	179.64	9,184.92	-5,384.92	-3,702.31	253.53	3,703.83	0.00	0.00	0.00
13,000.00	90.31	179.64	9,184.38	-5,384.38	-3,802.30	254.16	3,803.82	0.00	0.00	0.00
13,100.00	90.31	179.64	9,183.84	-5,383.84	-3,902.30	254.79	3,903.82	0.00	0.00	0.00
13,200.00	90.31	179.64	9,183.30	-5,383.30	-4,002.30	255.42	4,003.82	0.00	0.00	0.00
13,300.00	90.31	179.64	9,182.75	-5,382.75	-4,102.29	256.04	4,103.82	0.00	0.00	0.00
13,400.00	90.31	179.64	9,182.21	-5,382.21	-4,202.29	256.67	4,203.82	0.00	0.00	0.00
13,500.00	90.31	179.64	9,181.67	-5,381.67	-4,302.28	257.30	4,303.82	0.00	0.00	0.00
13,600.00	90.31	179.64	9,181.12	-5,381.12	-4,402.28	257.93	4,403.82	0.00	0.00	0.00
13,700.00	90.31	179.64	9,180.58	-5,380.58	-4,502.28	258.56	4,503.81	0.00	0.00	0.00
13,800.00	90.31	179.64	9,180.04	-5,380.04	-4,602.27	259.19	4,603.81	0.00	0.00	0.00
13,900.00	90.31	179.64	9,179.49	-5,379.49	-4,702.27	259.82	4,703.81	0.00	0.00	0.00
14,000.00	90.31	179.64	9,178.95	-5,378.95	-4,802.27	260.45	4,803.81	0.00	0.00	0.00
14,100.00	90.31	179.64	9,178.41	-5,378.41	-4,902.26	261.08	4,903.81	0.00	0.00	0.00
14,200.00	90.31	179.64	9,177.86	-5,377.86	-5,002.26	261.71	5,003.81	0.00	0.00	0.00
14,300.00	90.31	179.64	9,177.32	-5,377.32	-5,102.26	262.33	5,103.80	0.00	0.00	0.00

Database:	Database 1	**Local Co-ordinate Reference:**	Well BIG BULL FED COM 305H
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 305H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey

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)
14,400.00	90.31	179.64	9,176.78	-5,376.78	-5,202.25	262.96	5,203.80	0.00	0.00	0.00
14,500.00	90.31	179.64	9,176.23	-5,376.23	-5,302.25	263.59	5,303.80	0.00	0.00	0.00
14,600.00	90.31	179.64	9,175.69	-5,375.69	-5,402.25	264.22	5,403.80	0.00	0.00	0.00
14,700.00	90.31	179.64	9,175.15	-5,375.15	-5,502.24	264.85	5,503.80	0.00	0.00	0.00
14,800.00	90.31	179.64	9,174.60	-5,374.60	-5,602.24	265.48	5,603.80	0.00	0.00	0.00
14,900.00	90.31	179.64	9,174.06	-5,374.06	-5,702.24	266.11	5,703.80	0.00	0.00	0.00
15,000.00	90.31	179.64	9,173.52	-5,373.52	-5,802.23	266.74	5,803.79	0.00	0.00	0.00
15,100.00	90.31	179.64	9,172.97	-5,372.97	-5,902.23	267.37	5,903.79	0.00	0.00	0.00
15,200.00	90.31	179.64	9,172.43	-5,372.43	-6,002.23	268.00	6,003.79	0.00	0.00	0.00
15,300.00	90.31	179.64	9,171.89	-5,371.89	-6,102.22	268.63	6,103.79	0.00	0.00	0.00
15,400.00	90.31	179.64	9,171.34	-5,371.34	-6,202.22	269.25	6,203.79	0.00	0.00	0.00
15,500.00	90.31	179.64	9,170.80	-5,370.80	-6,302.22	269.88	6,303.79	0.00	0.00	0.00
LTP: 1221ft FNL & 2310ft FWL of Sec 13										
15,597.33	***90.31***	***179.64***	***9,170.27***	***-5,370.27***	***-6,399.54***	***270.50***	***6,401.12***	***0.00***	***0.00***	***0.00***
15,600.00	90.31	179.64	9,170.26	-5,370.26	-6,402.21	270.51	6,403.79	0.00	0.00	0.00
BHL: 1271ft FNL & 2310ft FWL of Sec 13										
15,647.33	***90.31***	***179.64***	***9,170.00***	***-5,370.00***	***-6,449.54***	***270.81***	***6,451.11***	***0.00***	***0.00***	***0.00***

Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
0.00	0.00	0.00	0.00	SHL: 100ft FNL & 2080ft FWL of Sec 12
2,000.00	2,000.00	0.00	0.00	START NUDGE (2°/100ft BUR)
2,600.00	2,595.62	25.15	57.33	EOB TO 12° INC
4,152.56	4,114.26	154.85	352.92	END OF TANGENT
4,752.56	4,709.88	180.00	410.25	EOD TO VERTICAL
8,672.72	8,630.04	180.00	410.25	KOP (10°/100ft BUR)
9,145.96	9,051.28	0.00	369.39	FTP: 100ft FNL & 2449.39ft FWL of Sec 12
9,575.82	9,202.99	-381.76	282.72	HZ LP: 481.76ft FNL & 2360ft FWL of Sec 12
10,014.16	9,200.60	-816.57	235.38	EOT TO 179.64° AZ
15,597.33	9,170.27	-6,399.54	270.50	LTP: 1221ft FNL & 2310ft FWL of Sec 13
15,647.33	9,170.00	-6,449.54	270.81	BHL: 1271ft FNL & 2310ft FWL of Sec 13

ASCENT ENERGY

H_2S Drilling Operations Plan

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 ≥150' from the wellhead, perpendicular from one another, and easily entered and exited. See H_2S page 5 for more details.

c. H_2S Safety Equipment/Systems:

i. Well Control Equipment

- Flare line will be ≥150' from the wellhead and ignited by a flare gun.
- Beware of SO_2 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_2S 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 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_2S 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

Federal Agencies

BLM Carlsbad Field Office	(575) 234-5972
BLM Hobbs Field Station	(575) 393-3612
National Response Center	(800) 424-8802
US EPA Region 6 (Dallas)	(800) 887-6063
	(214) 665-6444

Veterinarians

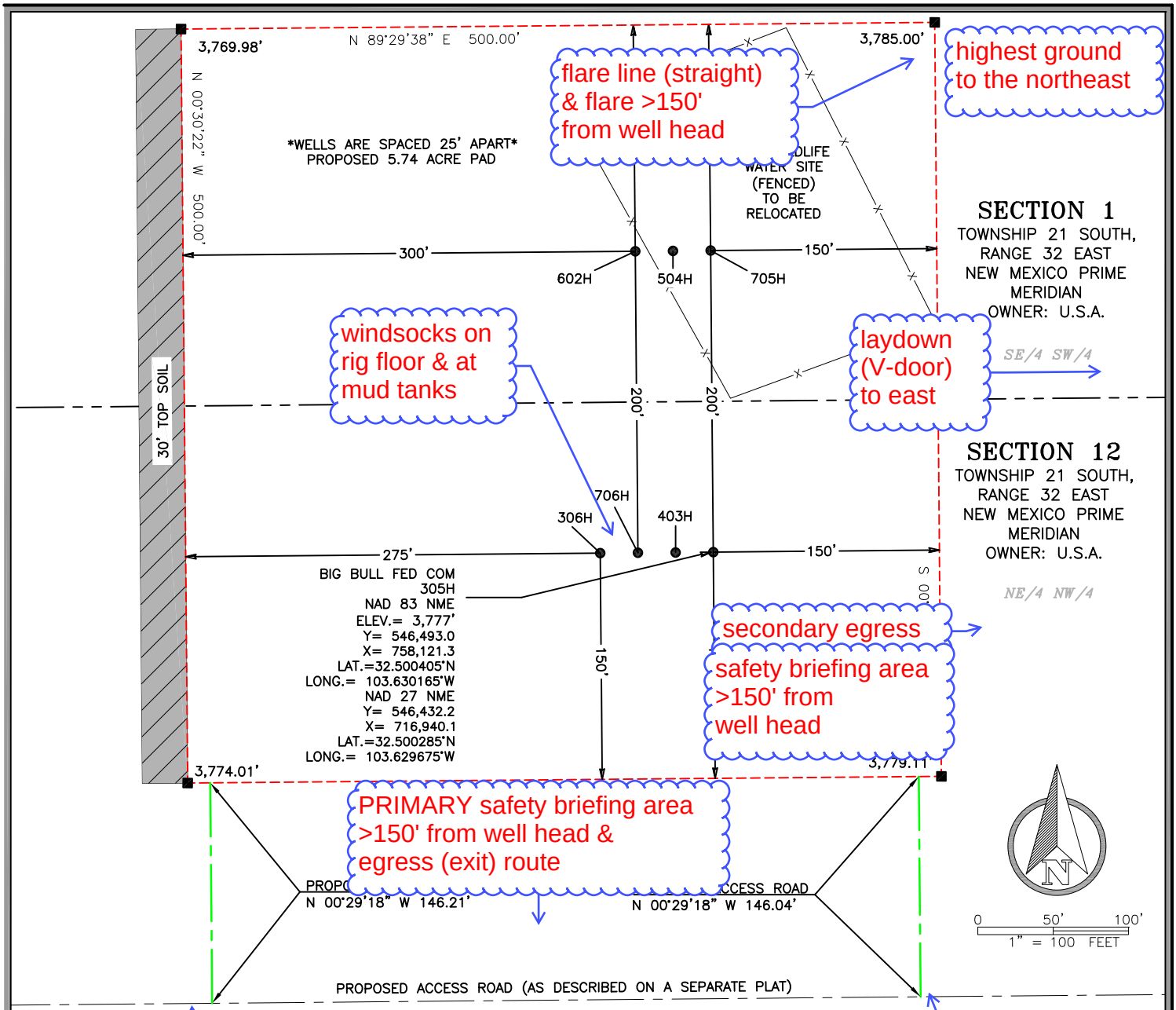
Dal Paso Animal Hospital (Hobbs)	(575) 397-2286
Hobbs Animal Clinic & Pet Care (Hobbs)	(575) 392-5563
Great Plains Veterinary Clinic & Hospital (Hobbs)	(575) 392-5513

Residents within 2 miles

No residents are within 2 miles.

Air Evacuation

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



NOTE:

1). SEE "TOPOGRAPHICAL AND ACCESS ROAD MAP" FOR PROPOSED ACCESS ROAD ROUTE FROM HIGHWAY 176 AND BOOTLEG LANE, GO SOUTH ON BOOTLEG LANE APPROX. 1.7 MILES . TURN LEFT (EAST) ON A GRAVEL ROAD AND GO APPROX. 0.30 MILES TURN LEFT (NORTH) ,THE LOCATION IS TO THE NORTH.

warning signs & windsock

prevailing winds blow from south

warning signs & windsock

ACCESS RD.

PROPOSED PAD

SECTION LINE

I, MARK DILLON HARP, NEW MEXICO PROFESSIONAL SURVEYOR NO. 23786, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO, AND THAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

MARK DILLON HARP
REGISTERED PROFESSIONAL LAND SURVEYOR
STATE OF NEW MEXICO NO. 23786

MARK DILLON HARP NEW MEXICO 23786 PROFESSIONAL SURVEYOR

FSC INC
SURVEYORS+ENGINEERS
550 Bailey Ave., 205 - Fort Worth, TX 76107
Ph: 817.349.9800 - Fax: 979.732.5271
TBPE Firm 17957 | TBPLS Firm 10193887
www.fscinc.net

ASCENT ENERGY, LLC.

WELL SITE PLAN

BIG BULL FED COM 305H
LOCATED 2,080 FEET FROM THE WEST LINE AND 100 FEET FROM THE NORTH LINE OF SECTION 12, TOWNSHIP 21 SOUTH, RANGE 32 EAST, N.M.P.M. LEA COUNTY, NEW MEXICO

DATE:	02-26-2020	PROJECT NO:	2020010121
DRAWN BY:	RR	SCALE:	1" = 100'
CHECKED BY:	DH	SHEET:	1 OF 3
FIELD CREW:	RE	REVISION:	0

P:\PROJECTS\2020\2020010121-ASCENT-BIG_BULL_FED_COM_305H-LEA\DWG\PACKET\2020010121-ASCENT-BIG_BULL_305H_WELL_SITE.dwg

Ascent Energy, LLC

Big Bull Fed Com Pad
H_2S Contingency Plan:
2 Mile Radius Map

Township 21S, Range 32E
Lea County, New Mexico

Pad Location

1:27,000

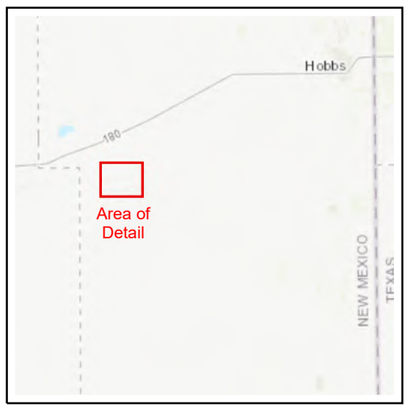
0 0.25 0.5 1

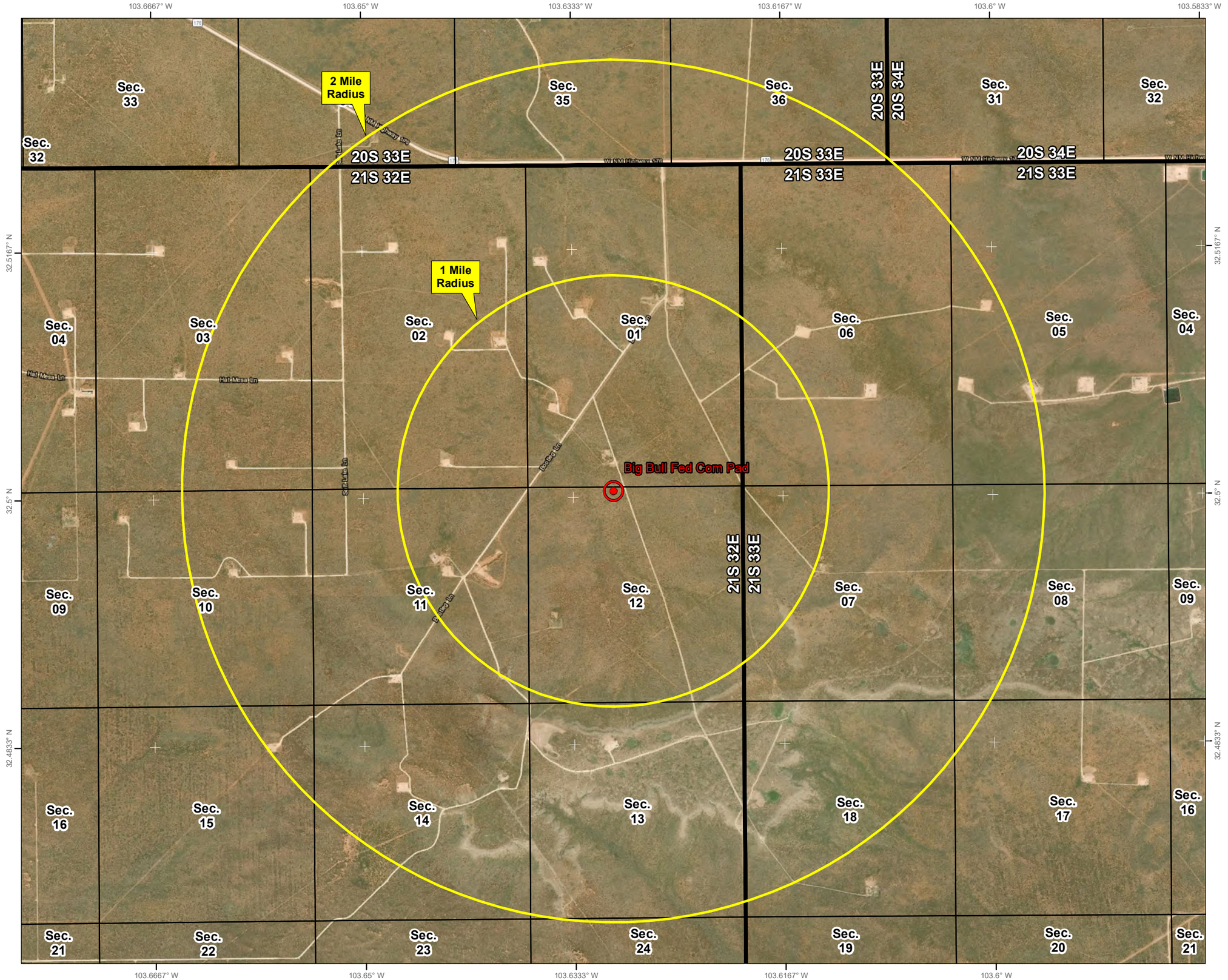
Miles

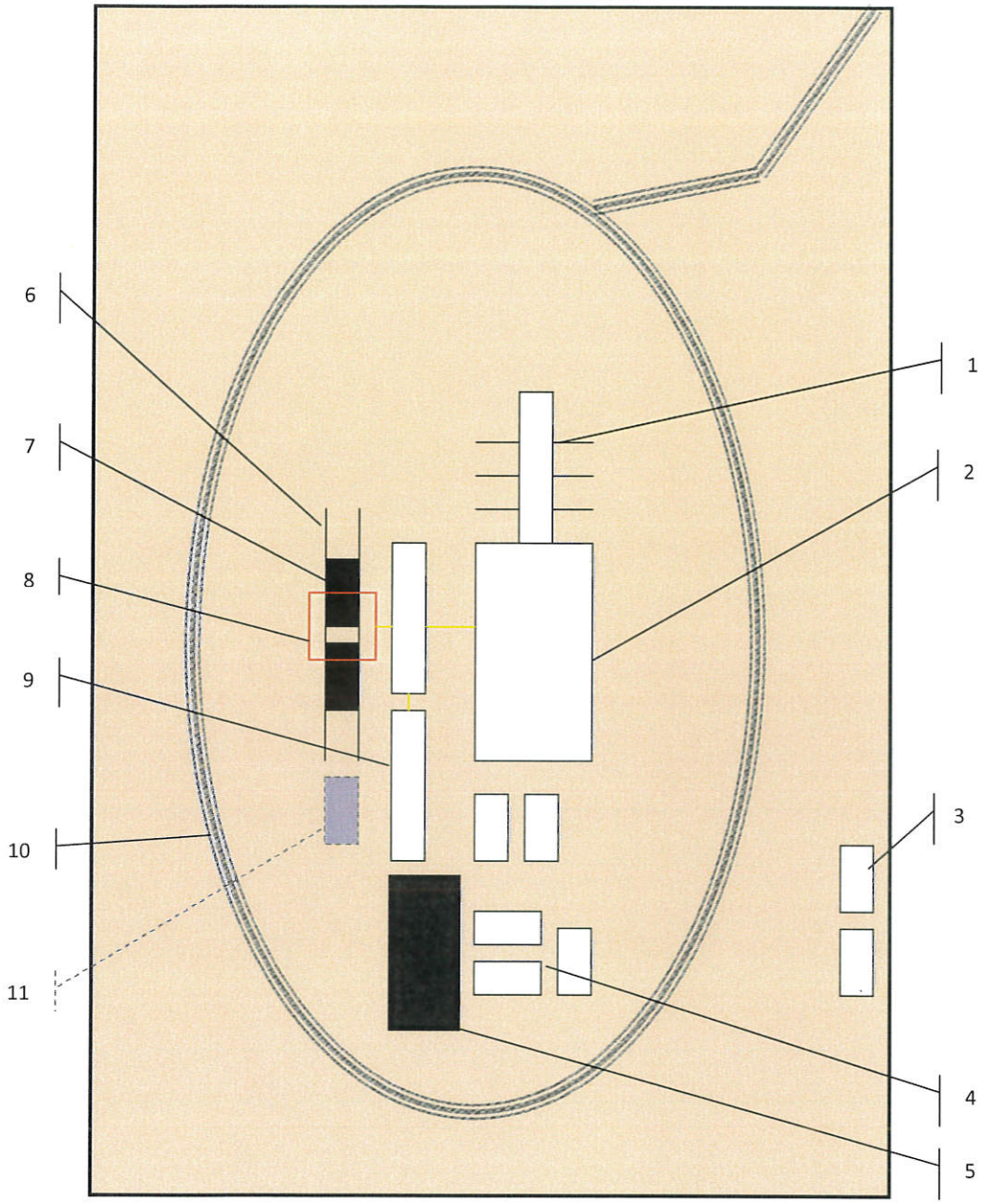
NAD 1983 New Mexico State Plane East
FIPS 3001 Feet

PERMITS WEST

Prepared by Permits West, Inc., March 24, 2020
for Ascent Energy LLC







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)

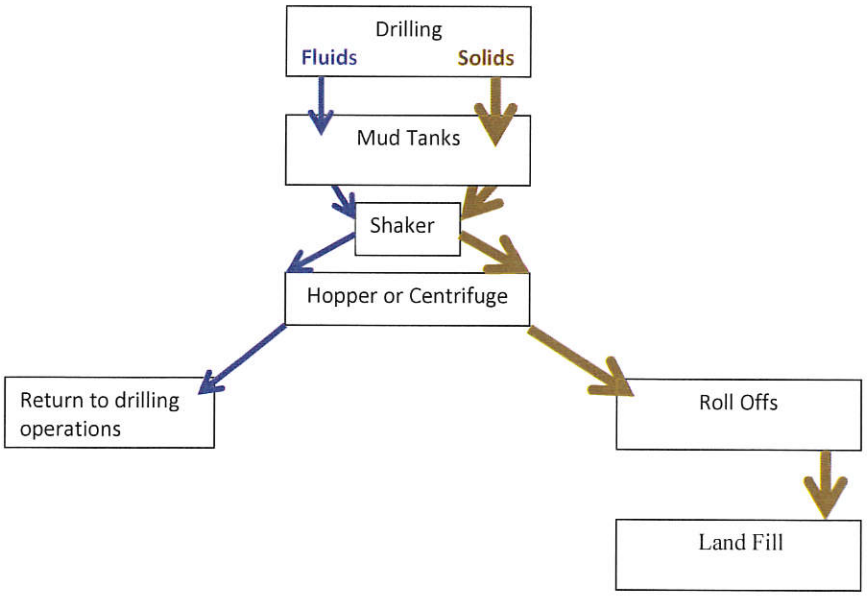
*Not drawn to scale: Closed loop system requires at least 30 feet beyond mud tanks. Ideally 60 feet would be available

Above: Centrifugal Closed Loop System

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120

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)

Flow Chart for Drilling Fluids and Solids



Photos Courtesy of Gandy Corporation Oil Field Service

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120

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

OCD – HOBBS
09/14/2020
RECEIVED

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-025 30-025-47758	97895	WC-025 G-08 S213304D; BONE SPRING

4 Property Code	5 Property Name	6 Well Number
328893	BIG BULL FED COM	305H

7 OGRID No.	8 Operator Name	9 Elevation
325830	ASCENT ENERGY, LLC.	3,777'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	12	21 S	32 E		100	NORTH	2,080	WEST	LEA

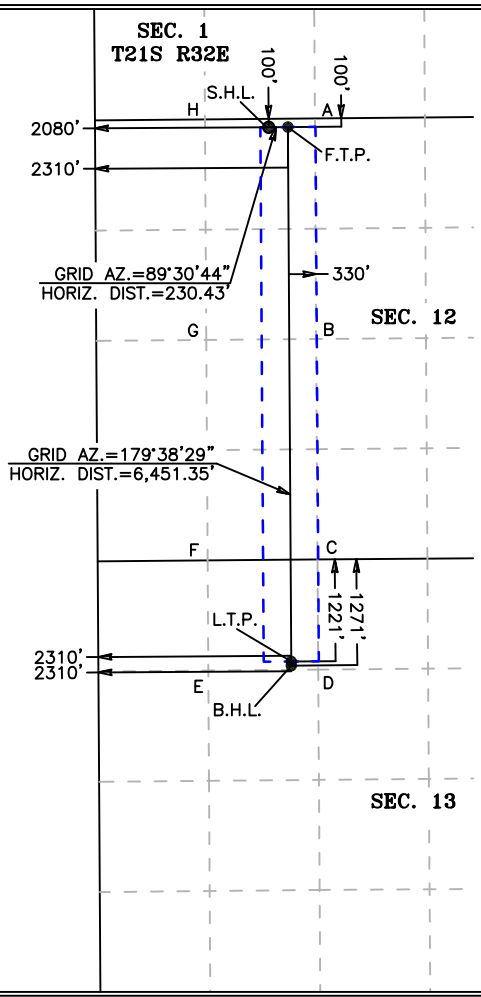
11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	13	21 S	32 E		1,271	NORTH	2,310	WEST	LEA

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 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.

16



SHL (NAD83 NME)		LTP (NAD83 NME)	
Y =	546,493.0	Y =	540,093.7
X =	758,121.3	X =	758,391.8
LAT. =	32.500405 °N	LAT. =	32.482811 °N
LONG. =	103.630165 °W	LONG. =	103.629425 °W
FTP (NAD83 NME)		**BHL (NAD83 NME)**	
Y =	546,494.9	Y =	540,043.7
X =	758,351.8	X =	758,392.1
LAT. =	32.500406 °N	LAT. =	32.482674 °N
LONG. =	103.629418 °W	LONG. =	103.629425 °W

CORNER COORDINATES (NAD83 NME)

A - Y =	546,597.8 N ,	X =	758,674.7 E
B - Y =	543,956.2 N ,	X =	758,690.6 E
C - Y =	541,317.0 N ,	X =	758,706.4 E
D - Y =	539,996.6 N ,	X =	758,714.8 E
E - Y =	539,984.9 N ,	X =	757,398.7 E
F - Y =	541,305.4 N ,	X =	757,390.3 E
G - Y =	543,945.2 N ,	X =	757,374.0 E
H - Y =	546,586.2 N ,	X =	757,358.0 E

SHL (NAD27 NME)		LTP (NAD27 NME)	
Y =	546,432.2	Y =	540,033.0
X =	716,940.1	X =	717,210.3
LAT. =	32.500285 °N	LAT. =	32.482691 °N
LONG. =	103.629675 °W	LONG. =	103.628935 °W
FTP (NAD27 NME)		**BHL (NAD27 NME)**	
Y =	546,434.1	Y =	539,983.0
X =	717,170.5	X =	717,210.6
LAT. =	32.500286 °N	LAT. =	32.482553 °N
LONG. =	103.628927 °W	LONG. =	103.628935 °W

CORNER COORDINATES (NAD27 NME)

A - Y =	546,537.0 N ,	X =	717,493.4 E
B - Y =	543,895.4 N ,	X =	717,509.2 E
C - Y =	541,256.3 N ,	X =	717,524.9 E
D - Y =	539,935.9 N ,	X =	717,533.3 E
E - Y =	539,924.2 N ,	X =	716,217.2 E
F - Y =	541,244.7 N ,	X =	716,208.8 E
G - Y =	543,884.5 N ,	X =	716,192.7 E
H - Y =	546,525.3 N ,	X =	716,176.7 E

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Cory Walk — 3-26-20
Signature — Date

Cory Walk
Printed Name

cory@permitswest.com
E-mail Address

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

02-06-2020
Date of Survey

Signatue and Seal of Professional Surveyor:

MARK DILLON HARP NEW MEXICO 23786 PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786
Certificate Number — RR — 2020010121

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

OCD – HOBBS
09/14/2020
RECEIVED

Submit Original
to Appropriate
District Office

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.

Well Name	API	SHL (ULSTR)	SHL Footages	Expected MCF/D	Flared or Vented	Comments
Big Bull Fed Com 305H	30-025-**30-025-47758**	C-12-21s-32e	100' FNL & 2080' FWL	200	≈30 days	flare until well clean, then connect
Big Bull Fed Com 306H	30-025-	C-12-21s-32e	100' FNL & 2005' FWL	200	≈30 days	flare until well clean, then connect
Big Bull Fed Com 403H	30-025-	C-12-21s-32e	100' FNL & 2055' FWL	200	≈30 days	flare until well clean, then connect
Big Bull Fed Com 504H	30-025-	N-1-21s-32e	100' FSL & 2054' FWL	200	≈30 days	flare until well clean, then connect
Big Bull Fed Com 602H	30-025-	N-1-21s-32e	100' FSL & 2029' FWL	200	≈30 days	flare until well clean, then connect
Big Bull Fed Com 705H	30-025-	N-1-21s-32e	100' FSL & 2079' FWL	200	≈30 days	flare until well clean, then connect
Big Bull Fed Com 706H	30-025-	C-12-21s-32e	100' FNL & 2030' FWL	200	≈30 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 Ascent Energy, LLC's 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