PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**CHISHOLM ENERGY OPERATING**
LEASE NO.:	**NMNM004314**
WELL NAME & NO.:	**MESCALERO 6 FED COM 2BS 8H**
SURFACE HOLE FOOTAGE:	**275/S & 1365/E**
BOTTOM HOLE FOOTAGE	**330'/N & 420/E**
LOCATION:	**SECTION 6, T19S, R34E, NMPM**
COUNTY:	**LEA, NEW MEXICO**

COA

H2S	(•) Yes	( ) No	
Potash	(•) None	( ) Secretary	( ) R-111-P
Cave/Karst Potential	(•) Low	( ) Medium	( ) High
Variance	( ) None	(•) Flex Hose	( ) Other
Wellhead	( ) Conventional	(•) Multibowl	( ) Both
Other	[ ] 4 String Area	[x] Capitan Reef	[ ] WIPP

A. Hydrogen Sulfide

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware** 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 **1614** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** 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.

Operator shall filled 1/3rd casing with fluid while running intermediate casing to maintain collapse safety factor.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is set at **5450 ft**:
   - 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.

- **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 **5-1/2** inch production casing is:
   - Cement should tie-back at least **5170** feet above the **Capitan Reef (50ft above the Captian Reef which is 5220 ft)** . Operator shall provide method of verification.

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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

GENERAL REQUIREMENTS

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

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

☒ Chaves and Roosevelt Counties
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
During office hours call (575) 627-0272.
After office hours call (575)

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

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

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

3. The record of the drilling rate along with the GR/N well log (one log per well pad is acceptable) 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. 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.

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

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

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes. This test shall be performed prior to the test at full stack pressure.

g. 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.

Waste Minimization Plan (WMP)

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

ZS 093018

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CHISHOLM ENERGY OPERATING
LEASE NO.:	NMNM004314
WELL NAME & NO.:	MESCALERO 6 FED COM 2BS 8H
SURFACE HOLE FOOTAGE:	275/S & 1365/E
BOTTOM HOLE FOOTAGE	330'/N & 420/E
LOCATION:	SECTION 6, T19S, R34E, NMPM
COUNTY:	LEA

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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.

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)

Watershed
Surface disturbance will not be allowed (within x feet of drainage; or describe pad restriction).
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 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.

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.

Timing Limitation Exceptions:
The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

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.

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)

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 twenty-five (25) 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.

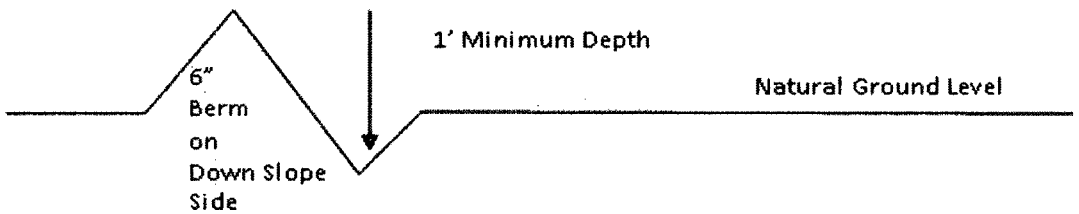
Ditching
Ditching shall be required on both sides of the road.

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
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:

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

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.

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

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

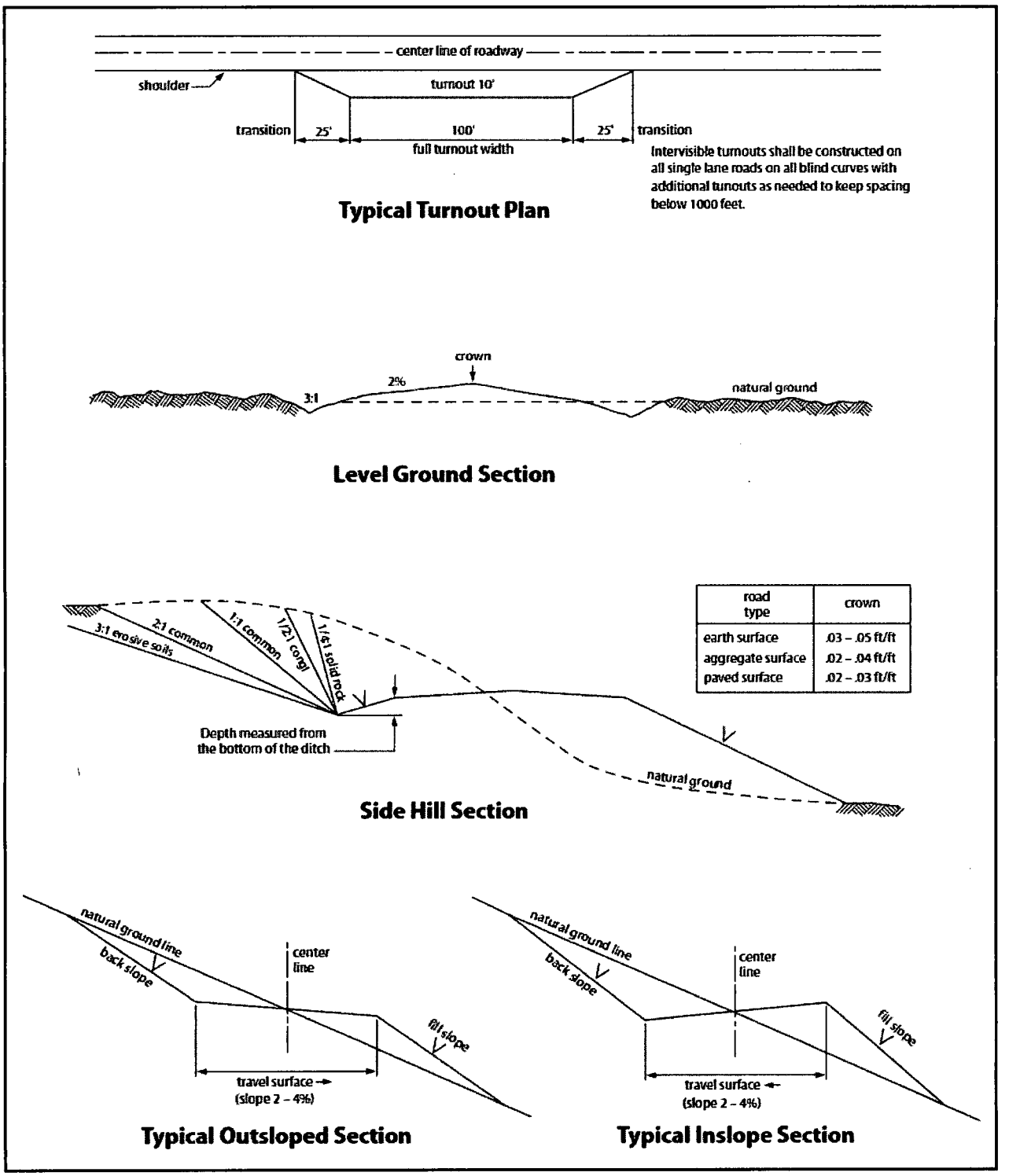


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

without specific written approval granted by the Authorized Officer.

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
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, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

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 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.

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 no 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	5lbs/A
Sand Bluestem	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

AFMSS

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

Operator Certification Data Report

10/15/2018

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Jennifer Elrod **Signed on:** 02/06/2018

Title: Senior Regulatory Technician

Street Address: 801 CHERRY STREET, SUITE 1200-UNIT 20

City: Fort Worth **State:** TX **Zip:** 76102

Phone: (817)953-3728

Email address: jelrod@chisholmenergy.com

Field Representative

Representative Name:

Street Address:

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

Phone:

Email address:

Chisholm Energy Operating, LLC

801 Cherry St., Suite 1200-Unit 20

Fort Worth, TX 76102

H2S Contingency Plan

Lea County, NM

Casing Program: **Minis (13 3/8" x 9 5/8" x 5 1/2")**

Open Hole Size (Inches)	Casing Depth; From (ft)	Casing Setting Depth (ft) MD	Casing Setting Depth (ft) TVD	Casing Size (inches)	Casing Weight (lb/ft)	Casing Grade	Thread	Condition	Anticipated Mud Weight (ppg)	Burst (psi)	Burst SF (1.125)	Collapse (psi)	Collapse SF (1.125)	Tension Joint (klbs)	Air Weight (lbs)	Tension Joint SF (1.8)	Tension Body (klbs)	Air Weight (lbs)	Tension Body SF (1.8)
Surface																			
17.5"	0'	1,500'	1,500'	13 3/8"	54.5	J-55	BTC	New	8.4	2730	4.17	1130	1.72	909,000	81,750	11.12	853,000	81,750	10.43
Intermediate																			
12.25"	0'	5,300'	5,300'	9 5/8"	40	J-55	LTC	New	10.2	3950	1.41	2570	1.37	520,000	212,000	2.45	630,000	212,000	2.97
Production																			
8.75"	0'	15,300'	10,040'	5 1/2"	17	P110	BTC	New	9.5	10640	2.15	7480	1.51	568,000	170,680	3.33	546,000	170,680	3.20

Casing Design Criteria and Casing Loading Assumptions:

Surface

Tension A 1.8 design factor with effects of buoyancy with a fluid equal to a mud weight of: 8.4 ppg

Collapse A 1.125 design factor with full internal evacuation and collapse force equal to a mud gradient of: 8.4 ppg

Burst A 1.125 design factor with full external evacuation and burst force equal to a mud gradient of: 8.4 ppg

Intermediate

Tension A 1.8 design factor with effects of buoyancy with a fluid equal to a mud weight of: 10.2 ppg

Collapse A 1.125 design factor with 1/3 TVD internal evacuation and collapse force equal to a mud gradient of: 10.2 ppg

Burst A 1.125 design factor with full external evacuation and burst force equal to a mud gradient of: 10.2 ppg

Production

Tension A 1.8 design factor with effects of buoyancy with a fluid equal to a mud weight of: 9.5 ppg

Collapse A 1.125 design factor with full internal evacuation and collapse force equal to a mud gradient of: 9.5 ppg

Burst A 1.125 design factor with full external evacuation and burst force equal to a mud gradient of: 9.5 ppg

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crew should then block entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are NO homes or buildings in or near the ROE.

Assumed 100 ppm ROE = 3000'
100 ppm H2S concentration shall trigger activation of this plan

Emergency Procedures

In the event of a release of gas containing H2S, the first responder(s) must:

« Isolate the area and prevent entry by other persons into the 100 ppm ROE.
« Evacuate any public places encompassed by the 100 ppm ROE.
« Be equipped with H2S monitors and air packs in order to control the release.
« Use the "buddy system" to ensure no injuries occur during the response.
« Take precautions to avoid personal injury during this operation.
« Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
« Have received training
in the: Detection of
H2S, and
Measures for protection against the gas,
Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (S02). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H2S and SO,

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H2S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO2	2.21 Air=1	2 ppm	N/A	1000 ppm

Contacting Authorities

Chisholm Energy Operating personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to sit e. The following call list of essential and potential responders has been prepared for use during a release. Chisholm Energy Operating, LLC response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMERP).

Hydrogen Sulfide Drilling Operations Plan

1. All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
   A. Characteristics of H2S
   B. Physical effects and hazards
   C. Principal and operation of H2S detectors, warning system and briefing areas.
   D. Evacuation procedure, routes and first aid.
   E. Proper use of safety equipment & life support systems
   F. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30-minute pressure demand air packs.
2. H2S Detection and Alarm Systems:
   a. H2S sensors/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may play placed as deemed necessary.
   b. An audio alarm system will be installed on the derrick floor and in the top doghouse.
3. Windsock and/or wind streamers:
   a. Windsock at mudpit area should be high enough to be visible.
   b. Windsock on the rig floor and/ or top doghouse should be high enough to be visible.
4. Condition Flags and Signs
   a. Warning sign on access road to location.
   b. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H2S present in dangerous concentration). Only H2S trained and certified personnel

admitted to location.

5. Well control equipment:
   a. See exhibit BOP and Choke Diagrams

6. Communication:
   a. While working under masks chalkboards will be used for communication.
   b. Hand signals will be used where chalk board is inappropriate.
   c. Two-way radio will be used to communicate off location in case of emergency help is required. In most cases, cellular telephones will be available at most drilling foreman's trailer or living quarters.

7. Drill stem Testing:
   No DSTs are planned at this time.

8. Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment.
9. If H25 is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary.

Emergency Assistance Telephone List

Chisholm Energy Holdings, LLC

Chisholm Energy Operating, LLC	Office:	(817)953-6063
Vice President of Operations-Brad Grandstaff	Office:	(817)953-3150
	Cell:	(972)977-9221
Drilling Superintendent-Russell Simons	Cell:	(830)285-7501
Production Superintendent-Paul Martinez	Cell:	(325)206-1722

Public Safety:			**911 or**
Lea County Sheriff's Department		Number:	(575)396-3611
Lea County Emergency Management-Lorenzo Velasquez		Number:	(575)391-2983
Lea County Fire Marshal			
Lorenzo Velasquez, Director		Number:	(575)391-2983
Jeff Broom, Deputy Fire Marshal		Number:	(575)391-2988
Fire Department:			
Knowles Fire Department		Number:	(505)392-2810
City of Hobbs Fire Department		Number:	(505)397-9308
Jal Volunteer Fire Department		Number:	(505)395-2221
Lovington Fire Department		Number:	(575)396-2359
Maljamar Fire Department		Number:	(505)676-4100
Tatum Volunteer Fire Department		Number:	(505)398-3473
Eunice Fire Department		Number:	(575)394-3258
Hospital: Lea Regional Medical Center		Number:	(575)492-5000
AirMed: Medevac		Number:	(888)303-9112
Dept. of Public Safety		Number:	(505)827-9000
New Mexico OCD-Dist. 1-Hobbs-	Office	Number:	(575)393-6161
	Emergency	Number:	(575)370-3186
Lea County Road Department		Number:	(575)391-2940
NMDOT		Number:	(505)827-5100

Chisholm Energy Holdings, LLC

Lea County, NM (NAD83)
Sec 07-T19S-R34E
Mescalero 6 Fed Com 2BS 8H

Wellbore #1

Plan: Plan #1

Standard Planning Report

12 January, 2018

INTEGRITY
DIRECTIONAL

Database:	EDM 5000.1	**Local Co-ordinate Reference:**	Well Mescalero 6 Fed Com 2BS 8H
Company:	Chisholm Energy Holdings, LLC	**TVD Reference:**	KB=26 @ 3815.30ft (Latshaw 17)
Project:	Lea County, NM (NAD83)	**MD Reference:**	KB=26 @ 3815.30ft (Latshaw 17)
Site:	Sec 07-T19S-R34E	**North Reference:**	Grid
Well:	Mescalero 6 Fed Com 2BS 8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Project Lea County, NM (NAD83)

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

Site Sec 07-T19S-R34E

Site Position:		**Northing:**	607,303.0600 usft	**Latitude:**	32.667426
From:	Map	**Easting:**	764,529.7600 usft	**Longitude:**	-103.608036
Position Uncertainty:	0.00 ft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.39 °

Well Mescalero 6 Fed Com 2BS 8H

Well Position	**+N/-S**	5,594.60 ft	**Northing:**	612,897.6500 usft	**Latitude:**	32.682730
	+E/-W	3,821.98 ft	**Easting:**	768,351.7300 usft	**Longitude:**	-103.595490
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	0.00 ft	**Ground Level:**	3,789.30 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	1/12/2018	6.72	60.68	48,310

Design Plan #1

Audit Notes:

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

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	359.75

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,419.76	0.00	0.00	9,419.76	0.00	0.00	0.00	0.00	0.00	0.00	
10,044.76	75.00	90.00	9,880.96	0.00	353.89	12.00	12.00	0.00	90.00	
10,179.76	75.00	90.00	9,915.90	0.00	484.29	0.00	0.00	0.00	0.00	
10,931.78	90.00	359.75	10,040.00	479.48	945.34	12.00	1.99	-12.00	-90.06	
15,300.49	90.00	359.75	10,040.00	4,848.15	926.30	0.00	0.00	0.00	0.00	PBHL Mescalero 6 Fe

Database:	EDM 5000.1	**Local Co-ordinate Reference:**	Well Mescalero 6 Fed Com 2BS 8H
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Project:	Lea County, NM (NAD83)	**MD Reference:**	KB=26 @ 3815.30ft (Latshaw 17)
Site:	Sec 07-T19S-R34E	**North Reference:**	Grid
Well:	Mescalero 6 Fed Com 2BS 8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00

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Site:	Sec 07-T19S-R34E	**North Reference:**	Grid
Well:	Mescalero 6 Fed Com 2BS 8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9,419.76	0.00	0.00	9,419.76	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 12.00									
9,425.00	0.63	90.00	9,425.00	0.00	0.03	0.00	12.00	12.00	0.00
9,450.00	3.63	90.00	9,449.98	0.00	0.96	0.00	12.00	12.00	0.00
9,475.00	6.63	90.00	9,474.88	0.00	3.19	-0.01	12.00	12.00	0.00
9,500.00	9.63	90.00	9,499.62	0.00	6.73	-0.03	12.00	12.00	0.00
9,525.00	12.63	90.00	9,524.15	0.00	11.55	-0.05	12.00	12.00	0.00
9,550.00	15.63	90.00	9,548.39	0.00	17.65	-0.08	12.00	12.00	0.00
9,575.00	18.63	90.00	9,572.28	0.00	25.02	-0.11	12.00	12.00	0.00
9,600.00	21.63	90.00	9,595.75	0.00	33.62	-0.15	12.00	12.00	0.00
9,625.00	24.63	90.00	9,618.74	0.00	43.44	-0.19	12.00	12.00	0.00
9,650.00	27.63	90.00	9,641.18	0.00	54.44	-0.24	12.00	12.00	0.00

Database:	EDM 5000.1	**Local Co-ordinate Reference:**	Well Mescalero 6 Fed Com 2BS 8H
Company:	Chisholm Energy Holdings, LLC	**TVD Reference:**	KB=26 @ 3815.30ft (Latshaw 17)
Project:	Lea County, NM (NAD83)	**MD Reference:**	KB=26 @ 3815.30ft (Latshaw 17)
Site:	Sec 07-T19S-R34E	**North Reference:**	Grid
Well:	Mescalero 6 Fed Com 2BS 8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,675.00	30.63	90.00	9,663.02	0.00	66.61	-0.29	12.00	12.00	0.00
9,700.00	33.63	90.00	9,684.19	0.00	79.91	-0.35	12.00	12.00	0.00
9,725.00	36.63	90.00	9,704.63	0.00	94.29	-0.41	12.00	12.00	0.00
9,750.00	39.63	90.00	9,724.29	0.00	109.72	-0.48	12.00	12.00	0.00
9,775.00	42.63	90.00	9,743.12	0.00	126.17	-0.55	12.00	12.00	0.00
9,800.00	45.63	90.00	9,761.06	0.00	143.57	-0.63	12.00	12.00	0.00
9,825.00	48.63	90.00	9,778.07	0.00	161.89	-0.71	12.00	12.00	0.00
9,850.00	51.63	90.00	9,794.10	0.00	181.08	-0.79	12.00	12.00	0.00
9,875.00	54.63	90.00	9,809.09	0.00	201.07	-0.88	12.00	12.00	0.00
9,900.00	57.63	90.00	9,823.03	0.00	221.83	-0.97	12.00	12.00	0.00
9,925.00	60.63	90.00	9,835.85	0.00	243.28	-1.06	12.00	12.00	0.00
9,950.00	63.63	90.00	9,847.54	0.00	265.38	-1.16	12.00	12.00	0.00
9,975.00	66.63	90.00	9,858.05	0.00	288.06	-1.26	12.00	12.00	0.00
10,000.00	69.63	90.00	9,867.36	0.00	311.26	-1.36	12.00	12.00	0.00
10,025.00	72.63	90.00	9,875.45	0.00	334.91	-1.46	12.00	12.00	0.00
10,044.76	75.00	90.00	9,880.96	0.00	353.89	-1.54	12.00	12.00	0.00
Start 135.00 hold at 10044.76 MD									
10,100.00	75.00	90.00	9,895.25	0.00	407.25	-1.78	0.00	0.00	0.00
10,179.76	75.00	90.00	9,915.90	0.00	484.29	-2.11	0.00	0.00	0.00
Start DLS 12.00 TFO -90.06									
10,200.00	75.01	87.49	9,921.13	0.43	503.83	-1.77	12.00	0.05	-12.42
10,225.00	75.06	84.38	9,927.59	2.14	527.92	-0.16	12.00	0.21	-12.42
10,250.00	75.16	81.28	9,934.02	5.16	551.89	2.75	12.00	0.37	-12.41
10,275.00	75.29	78.18	9,940.39	9.47	575.67	6.96	12.00	0.54	-12.40
10,300.00	75.47	75.08	9,946.71	15.06	599.20	12.45	12.00	0.70	-12.38
10,325.00	75.68	71.99	9,952.93	21.92	622.42	19.20	12.00	0.87	-12.36
10,350.00	75.94	68.91	9,959.06	30.03	645.26	27.21	12.00	1.03	-12.33
10,375.00	76.24	65.84	9,965.08	39.36	667.65	36.45	12.00	1.18	-12.30
10,400.00	76.57	62.77	9,970.95	49.90	689.54	46.89	12.00	1.33	-12.27
10,425.00	76.94	59.71	9,976.68	61.61	710.87	58.51	12.00	1.48	-12.23
10,450.00	77.35	56.66	9,982.25	74.46	731.58	71.26	12.00	1.63	-12.20
10,475.00	77.79	53.62	9,987.63	88.41	751.61	85.13	12.00	1.76	-12.15
10,500.00	78.26	50.59	9,992.82	103.43	770.91	100.06	12.00	1.90	-12.11
10,525.00	78.77	47.58	9,997.80	119.47	789.42	116.03	12.00	2.02	-12.07
10,550.00	79.30	44.57	10,002.55	136.50	807.10	132.97	12.00	2.14	-12.03
10,575.00	79.87	41.57	10,007.07	154.46	823.88	150.86	12.00	2.26	-11.98
10,600.00	80.46	38.59	10,011.34	173.30	839.74	169.64	12.00	2.37	-11.94
10,625.00	81.08	35.61	10,015.35	192.98	854.63	189.25	12.00	2.47	-11.90
10,650.00	81.72	32.65	10,019.09	213.44	868.49	209.65	12.00	2.56	-11.86
10,675.00	82.38	29.70	10,022.55	234.62	881.31	230.77	12.00	2.65	-11.82
10,700.00	83.06	26.75	10,025.72	256.47	893.03	252.57	12.00	2.73	-11.78
10,725.00	83.76	23.81	10,028.59	278.92	903.64	274.98	12.00	2.80	-11.75
10,750.00	84.48	20.89	10,031.15	301.92	913.09	297.93	12.00	2.87	-11.71
10,775.00	85.21	17.96	10,033.39	325.40	921.37	321.38	12.00	2.92	-11.69
10,800.00	85.96	15.05	10,035.32	349.29	928.46	345.24	12.00	2.97	-11.66
10,825.00	86.71	12.14	10,036.92	373.54	934.32	369.46	12.00	3.02	-11.64
10,850.00	87.47	9.23	10,038.19	398.07	938.95	393.97	12.00	3.05	-11.62
10,875.00	88.24	6.33	10,039.12	422.82	942.33	418.71	12.00	3.08	-11.61
10,900.00	89.01	3.43	10,039.72	447.72	944.46	443.60	12.00	3.09	-11.60
10,925.00	89.79	0.54	10,039.98	472.70	945.32	468.57	12.00	3.10	-11.59
10,931.78	90.00	359.75	10,040.00	479.48	945.34	475.35	12.00	3.11	-11.59
Start 4368.71 hold at 10931.78 MD									
11,000.00	90.00	359.75	10,040.00	547.70	945.04	543.57	0.00	0.00	0.00

Database:	EDM 5000.1	**Local Co-ordinate Reference:**	Well Mescalero 6 Fed Com 2BS 8H
Company:	Chisholm Energy Holdings, LLC	**TVD Reference:**	KB=26 @ 3815.30ft (Latshaw 17)
Project:	Lea County, NM (NAD83)	**MD Reference:**	KB=26 @ 3815.30ft (Latshaw 17)
Site:	Sec 07-T19S-R34E	**North Reference:**	Grid
Well:	Mescalero 6 Fed Com 2BS 8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,100.00	90.00	359.75	10,040.00	647.70	944.61	643.57	0.00	0.00	0.00
11,200.00	90.00	359.75	10,040.00	747.70	944.17	743.57	0.00	0.00	0.00
11,300.00	90.00	359.75	10,040.00	847.70	943.73	843.57	0.00	0.00	0.00
11,400.00	90.00	359.75	10,040.00	947.70	943.30	943.57	0.00	0.00	0.00
11,500.00	90.00	359.75	10,040.00	1,047.70	942.86	1,043.57	0.00	0.00	0.00
11,600.00	90.00	359.75	10,040.00	1,147.70	942.43	1,143.57	0.00	0.00	0.00
11,700.00	90.00	359.75	10,040.00	1,247.70	941.99	1,243.57	0.00	0.00	0.00
11,800.00	90.00	359.75	10,040.00	1,347.69	941.55	1,343.57	0.00	0.00	0.00
11,900.00	90.00	359.75	10,040.00	1,447.69	941.12	1,443.57	0.00	0.00	0.00
12,000.00	90.00	359.75	10,040.00	1,547.69	940.68	1,543.57	0.00	0.00	0.00
12,100.00	90.00	359.75	10,040.00	1,647.69	940.24	1,643.57	0.00	0.00	0.00
12,200.00	90.00	359.75	10,040.00	1,747.69	939.81	1,743.57	0.00	0.00	0.00
12,300.00	90.00	359.75	10,040.00	1,847.69	939.37	1,843.57	0.00	0.00	0.00
12,400.00	90.00	359.75	10,040.00	1,947.69	938.93	1,943.57	0.00	0.00	0.00
12,500.00	90.00	359.75	10,040.00	2,047.69	938.50	2,043.57	0.00	0.00	0.00
12,600.00	90.00	359.75	10,040.00	2,147.69	938.06	2,143.57	0.00	0.00	0.00
12,700.00	90.00	359.75	10,040.00	2,247.69	937.63	2,243.57	0.00	0.00	0.00
12,800.00	90.00	359.75	10,040.00	2,347.69	937.19	2,343.57	0.00	0.00	0.00
12,900.00	90.00	359.75	10,040.00	2,447.68	936.75	2,443.57	0.00	0.00	0.00
13,000.00	90.00	359.75	10,040.00	2,547.68	936.32	2,543.57	0.00	0.00	0.00
13,100.00	90.00	359.75	10,040.00	2,647.68	935.88	2,643.57	0.00	0.00	0.00
13,200.00	90.00	359.75	10,040.00	2,747.68	935.44	2,743.57	0.00	0.00	0.00
13,300.00	90.00	359.75	10,040.00	2,847.68	935.01	2,843.57	0.00	0.00	0.00
13,400.00	90.00	359.75	10,040.00	2,947.68	934.57	2,943.57	0.00	0.00	0.00
13,500.00	90.00	359.75	10,040.00	3,047.68	934.13	3,043.57	0.00	0.00	0.00
13,600.00	90.00	359.75	10,040.00	3,147.68	933.70	3,143.57	0.00	0.00	0.00
13,700.00	90.00	359.75	10,040.00	3,247.68	933.26	3,243.57	0.00	0.00	0.00
13,800.00	90.00	359.75	10,040.00	3,347.68	932.83	3,343.57	0.00	0.00	0.00
13,900.00	90.00	359.75	10,040.00	3,447.67	932.39	3,443.57	0.00	0.00	0.00
14,000.00	90.00	359.75	10,040.00	3,547.67	931.95	3,543.57	0.00	0.00	0.00
14,100.00	90.00	359.75	10,040.00	3,647.67	931.52	3,643.57	0.00	0.00	0.00
14,200.00	90.00	359.75	10,040.00	3,747.67	931.08	3,743.57	0.00	0.00	0.00
14,300.00	90.00	359.75	10,040.00	3,847.67	930.64	3,843.57	0.00	0.00	0.00
14,400.00	90.00	359.75	10,040.00	3,947.67	930.21	3,943.57	0.00	0.00	0.00
14,500.00	90.00	359.75	10,040.00	4,047.67	929.77	4,043.57	0.00	0.00	0.00
14,600.00	90.00	359.75	10,040.00	4,147.67	929.34	4,143.57	0.00	0.00	0.00
14,700.00	90.00	359.75	10,040.00	4,247.67	928.90	4,243.57	0.00	0.00	0.00
14,800.00	90.00	359.75	10,040.00	4,347.67	928.46	4,343.57	0.00	0.00	0.00
14,900.00	90.00	359.75	10,040.00	4,447.67	928.03	4,443.57	0.00	0.00	0.00
15,000.00	90.00	359.75	10,040.00	4,547.66	927.59	4,543.57	0.00	0.00	0.00
15,100.00	90.00	359.75	10,040.00	4,647.66	927.15	4,643.57	0.00	0.00	0.00
15,200.00	90.00	359.75	10,040.00	4,747.66	926.72	4,743.57	0.00	0.00	0.00
15,300.49	90.00	359.75	10,040.00	4,848.15	926.30	4,844.06	0.00	0.00	0.00

TD at 15300.49 - PBHL Mescalero 6 Fed Com 2BS 8H

Database:	EDM 5000.1	**Local Co-ordinate Reference:**	Well Mescalero 6 Fed Com 2BS 8H
Company:	Chisholm Energy Holdings, LLC	**TVD Reference:**	KB=26 @ 3815.30ft (Latshaw 17)
Project:	Lea County, NM (NAD83)	**MD Reference:**	KB=26 @ 3815.30ft (Latshaw 17)
Site:	Sec 07-T19S-R34E	**North Reference:**	Grid
Well:	Mescalero 6 Fed Com 2BS 8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL Mescalero 6 Fed (- plan hits target center - Point	0.00	0.00	10,040.00	4,848.15	926.30	617,745.7900	769,278.0300	32.696037	-103.592370

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
9,419.76	9,419.76	0.00	0.00	Start Build 12.00
10,044.76	9,880.96	0.00	353.89	Start 135.00 hold at 10044.76 MD
10,179.76	9,915.90	0.00	484.29	Start DLS 12.00 TFO -90.06
10,931.78	10,040.00	479.48	945.34	Start 4368.71 hold at 10931.78 MD
15,300.49	10,040.00	4,848.15	926.30	TD at 15300.49

CHISHOLM ENERGY

Chisholm Energy Holdings, LLC
Project: Lea County, NM (NAD83)
Site: Sec 07-T19S-R34E
Well: Mescalero 6 Fed Com 2BS 8H
Wellbore: Wellbore #1
Plan: Plan #1 (Mescalero 6 Fed Com 2BS 8H/Wellbore #1)
Latshaw 17

INTEGRITY DIRECTIONAL

WELL DETAILS: Mescalero 6 Fed Com 2BS 8H

Ground Elevation:: 3789.30
RKB Elevation: KB=26 @ 3815.30ft (Latshaw 17)
Rig Name: Latshaw 17

Northing	Easting	Latittude	Longitude
612897.6500	768351.7300	32.682730	-103.595490

T G M

Azimuths to Grid North
True North: -0.40°
Magnetic North: 6.32°

Magnetic Field
Strength: 48309.7snT
Dip Angle: 60.68°
Date: 1/12/2018
Model: HDGM

Planned Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	9419.76	0.00	0.00	9419.76	0.00	0.00	0.00	0.00	0.00
3	10044.76	75.00	90.00	9880.96	0.00	353.89	12.00	90.00	-1.54
4	10179.76	75.00	90.00	9915.90	0.00	484.29	0.00	0.00	-2.11
5	10931.78	90.00	359.75	10040.00	479.48	945.34	12.00	-90.06	475.35
6	15300.49	90.00	359.75	10040.00	4848.15	926.30	0.00	0.00	4844.06