Form 3160-3
(June 2015)

OCD – HOBBS
10/26/2020
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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.
NMNM136223

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.
PITCHBLENDE FED 19-30
207H [326533]

2. Name of Operator
ENERGEN RESOURCES CORPORATION
COG OPERATING LLC [229137]
See BLM Form 3160-5

9. API Well No.
30-025-47921

3a. Address
3510 North A Street Bldg A & B Midland TX 79705

3b. Phone No. *(include area code)*
(432)687-1155

10. Field and Pool, or Exploratory **[96340]**
Wildcat

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface LOT B / 450 FNL / 1980 FEL / LAT 32.1219235 / LONG -103.4044864
At proposed prod. zone LOT G / 2539 FNL / 1650 FEL / LAT 32.1016583 / LONG -103.4034024

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 19 / T25S / R35E / NMP

14. Distance in miles and direction from nearest town or post office*
8.6 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
2160.08

17. Spacing Unit dedicated to this well
240

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

19. Proposed Depth
11045 feet / 17920 feet

20. BLM/BIA Bond No. in file
FED: NM2707

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3333 feet

22. Approximate date work will start*
01/01/2019

23. Estimated duration
60 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)	Jenifer Sorley / Ph: (432)315-0138	11/15/2018

Title
Regulatory Analyst

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Christopher Walls / Ph: (575)234-2234	07/11/2019

Title	Office
Petroleum Engineer	CARLSBAD

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 10/26/2020

SL

APPROVED WITH CONDITIONS

KZ 10/27/2020

Approval Date: 07/11/2019

(Continued on page 2)

*(Instructions on page 2)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	ENERGEN RESOURCES CORPORATION
LEASE NO.:	NMNM136223
WELL NAME & NO.:	207H – PITCHBLENDE FED 19-30
SURFACE HOLE FOOTAGE:	450'/N & 1980'/E
BOTTOM HOLE FOOTAGE	2539'/N & 1650'/E
LOCATION:	SECTION 19, T25S, R35E, NMPM
COUNTY:	LEA

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	[ ] Capitan Reef	[ ] WIPP
Other	[x] Fluid Filled	[ ] Cement Squeeze	[ ] Pilot Hole
Special Requirements	[ ] Water Disposal	[ ] COM	[ ] Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Wolfcamp** 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

Primary Casing Design:

1. The **13-3/8** inch surface casing shall be set at approximately **1010** 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 **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.

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

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

Option 1 (Single Stage):

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash. Excess calculates to 0% - additional cement might be required.**

Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.
  Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

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

Option 1 (Single Stage):

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification. **Excess calculates to 3% - additional cement might be required.**

Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

- Cement should tie-back at least **200 feet** into previous casing string. 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.

Option 1:

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

Option 2:

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

    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.

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 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.

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.

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: 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.

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.

NMK712019

AFMSS

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

Operator Certification Data Report

06/25/2020

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: Jenifer Sorley **Signed on:** 05/31/2018

Title: Regulatory Analyst

Street Address: 1101 17th Street, Suite 1800

City: Denver **State:** CO **Zip:** 80202

Phone: (432)315-0138

Email address: Jenifer.Sorley@cdevinc.com

Field Representative

Representative Name:

Street Address: 3510 North A Street Bldg A & B

City: Midland **State:** TX **Zip:** 79705

Phone: (432)818-1732

Email address: jenifer.sorley@energen.com

APD ID: 10400036319 **Submission Date:** 11/15/2018

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400036319 **Tie to previous NOS?** Y **Submission Date:** 11/15/2018

BLM Office: CARLSBAD **User:** Jenifer Sorley **Title:** Regulatory Analyst

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMNM136223 **Lease Acres:** 2160.08

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? NO

Permitting Agent? NO **APD Operator:** ENERGEN RESOURCES CORPORATION

Operator letter of designation:

Operator Info

Operator Organization Name: ENERGEN RESOURCES CORPORATION

Operator Address: 3510 North A Street Bldg A & B **Zip:** 79705

Operator PO Box:

Operator City: Midland **State:** TX

Operator Phone: (432)687-1155

Operator Internet Address: midlandrrc@energen.com

Section 2 - Well Information

Well in Master Development Plan? NO **Master Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H **Well API Number:**

Field/Pool or Exploratory? Exploratory **Field Name:** MALAGA **Pool Name:** DOGIE DRAW;DELAWARE

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** NO **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** PAD #7 **Number:** 7

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: EXPLORATORY (WILDCAT)

Describe sub-type:

Distance to town: 8.6 Miles **Distance to nearest well:** 50 FT **Distance to lease line:** 100 FT

Reservoir well spacing assigned acres Measurement: 240 Acres

Well plat: Google_Map_from_Jal_to_Pitchblende_location_entrance_20180531075625.pdf

7_PITCHBLENDE_FED_19_30_207H_REVISED_100ft_20181114075504.pdf

Well work start Date: 01/01/2019 **Duration:** 60 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: **Reference Datum:**

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	450	FNL	1980	FEL	25S	35E	19	Lot B	32.1219235	-103.4044864	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 136223	3333	0	0	
KOP Leg #1	450	FNL	1980	FEL	25S	35E	19	Lot B	32.1219235	-103.4044864	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 136223	-6995	10328	10328	

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
PPP Leg #1-1	100	FNL	1650	FEL	25S	35E	19	Lot B	32.1228829	-103.4034213	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 136223	-7712	11452	11045	
EXIT Leg #1	2539	FNL	1650	FEL	25S	35E	30	Lot G	32.1016583	-103.4034024	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 136223	-7712	17920	11045	
BHL Leg #1	2539	FNL	1650	FEL	25S	35E	30	Lot G	32.1016583	-103.4034024	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 136223	-7712	17920	11045	

APD ID: 10400036319 **Submission Date:** 11/15/2018

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

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Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
342190	QUATERNARY	3329	0	0	SANDSTONE	NONE	N
342191	RUSTLER	2354	975	975	LIMESTONE, SANDSTONE, SHALE	NONE	N
342192	BASE OF SALT	-1826	5155	5155	ANHYDRITE	NONE	N
342193	BELL CANYON	-2111	5440	5440	LIMESTONE, SANDSTONE, SHALE	NONE	N
342194	CHERRY CANYON	-3101	6430	6430	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
342195	BRUSHY CANYON	-4801	8130	8130	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 13000

Equipment: • A BOP consisting of 3 rams with 2 pipe rams, 1 blind ram and one annular preventer. The BOP will be utilized below surface casing to TD. Also present will be an accumulator that meets the requirements of Onshore Order #2 for the pressure rating on 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 Kelly cock 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.
Requesting Variance? YES

Variance request: Energen requests a variance to have the option of running a speed head for the setting of intermediate 1. If running a speed head with landing mandrel for the 9-5/8" casing, then a minimum 5M BOPE system will be installed after surface casing is set. BOP test pressures will be 250 psi low and 5000 psi high. Annular will be tested to 250 psi low and 3500 psi high before drilling below the intermediate shoe. A diagram of the speed head is attached. Energen requests a variance to drill this well using a co-flex line between the BOP and Choke manifold. Certification for the proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. If the specific hose is not available, then one of equal or higher rating will be used.
Testing Procedure: Pressure tests will be conducted before drilling out from under all casing strings. BOP will be inspected and operated as required by Onshore Order #2. Kelly cock 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. A third-party company will test the BOP's. After setting the surface casing, and before drilling the surface casing shoe, a minimum 5M BOPE system will be installed and tested to 250 psi low and 5000 psi high. Annular will be tested to 250 psi low and 3500 psi high. After setting intermediate 1 casing, a 5M system will installed and tested to 250 psi low and 5000 psi high with the annular being tested to 250 psi low and 3500 psi high. The 13-3/8" 5M flange on the wellhead will also be be tested to 5000 psi at this time.
Choke Diagram Attachment:

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

CHOKE_HOSE_M12395_20180508112518.pdf

3rd_Choke_Drawing_20180508111615.PDF

BOP Diagram Attachment:

BOP_drawing_20180508112533.pdf

ENERGEN_STACK_UP_3_string_20181114150051.pdf

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	13.375	NEW	API	N	0	1010	0	1010	3329	2319	1010	J-55	61	BUTT	3.491	7.004	DRY	16.637	DRY	15.614
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5300	0	5300	3329	-1971	5300	L-80	40	BUTT	1.156	2.151	DRY	4.467	DRY	4.321
3	PRODUCTION	8.75	5.5	NEW	API	N	0	18170	0	10545	3329	-5736	18170	OTHER	23	OTHER - DQXHT	3.013	3.011	DRY	2.857	DRY	3.006

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

9_Pipe_Body_and_API_Connections_Performance_Data_9.6250_40.0000_0.3950__L8..._20180508113046.pdf

Casing_1_20181115094201.pdf

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

5.5_Technical_Data_Sheet_TMK_UP_DQXHT_5.5_x_20_P110_CY_20180508113318.PDF

Casing_1_20181115094211.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

13_Pipe_Body_and_API_Connections_Performance_Data_13.3750_61.0000_0.4300__J..._20180508112854.pdf

Casing_1_20181115094218.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	610	605	1.75	13.5	1059	150	100% Class C	4% gel, + 2% CaCl2 + .25 #/sx cello flake + .75 Gal/100sxs CF-41L
SURFACE	Tail		610	1010	514	1.35	14.8	694	150	100% Class C	2% CaCl2 + .75 Gal/100 sx CF-41L
INTERMEDIATE	Lead		0	4100	585	2.47	11.8	1441	100	50% Class C + 50% Poz	10% Gel + .25# cello flake + 3#/sx kolseal + Salt + .75 Gal/100 sxs

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
											CR-41L
INTERMEDIATE	Tail		4100	5300	200	1.33	14.8	249	25	100% Class C	.15% O-Tx20 + .75 gal/100-sxs Cf-41
PRODUCTION	Lead		4000	8000	290	3.9	10.3	1124	150	100% TXI lite	10% Gel + .5% C-16A + .2% SMS + .2% C-49 + .3% Citric Acid + 10#/sx CSE-2 + 5#/sx Plexcrete STE + 5#/sxs Gilsonite C + .25 #/SX Plexfiber-A + .75 - Gal/100 sx CF-41L + .1 GPS C-20L
PRODUCTION	Tail		8000	18170	1931	1.33	13.2	2568	25	100% TXI Lite	.5% OTX47A + .75 - Gal/100 sx CF-41L + .1 GPS C-20L

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 (barite, bentonite, LCM) for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to hole conditions.

Describe the mud monitoring system utilized: An Electronic MD Totco mud monitoring 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
0	1010	OTHER : Fresh water	8.4	8.5			8.4				

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

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
1010	5300	OTHER : Brine	9.7	10			10				
5300	10545	OIL-BASED MUD	8.8	9							

Section 6 - Test, Logging, Coring

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

No production test will take place.

List of open and cased hole logs run in the well:

CBL,MWD,MUDLOG

Coring operation description for the well:

none

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4935 **Anticipated Surface Pressure:** 2505.1

Anticipated Bottom Hole Temperature(F): 145

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:

Location_Drawing_Pad_8_20180531080325.pdf
Contacts_20180511090014.pdf
Hydrogen_Sulfide_Drilling_Operations_Plan_20180511085957.pdf

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Energen___Pitchblende_Fed_19_30_207H_Lateral_Wall_p1_20181115094510.pdf

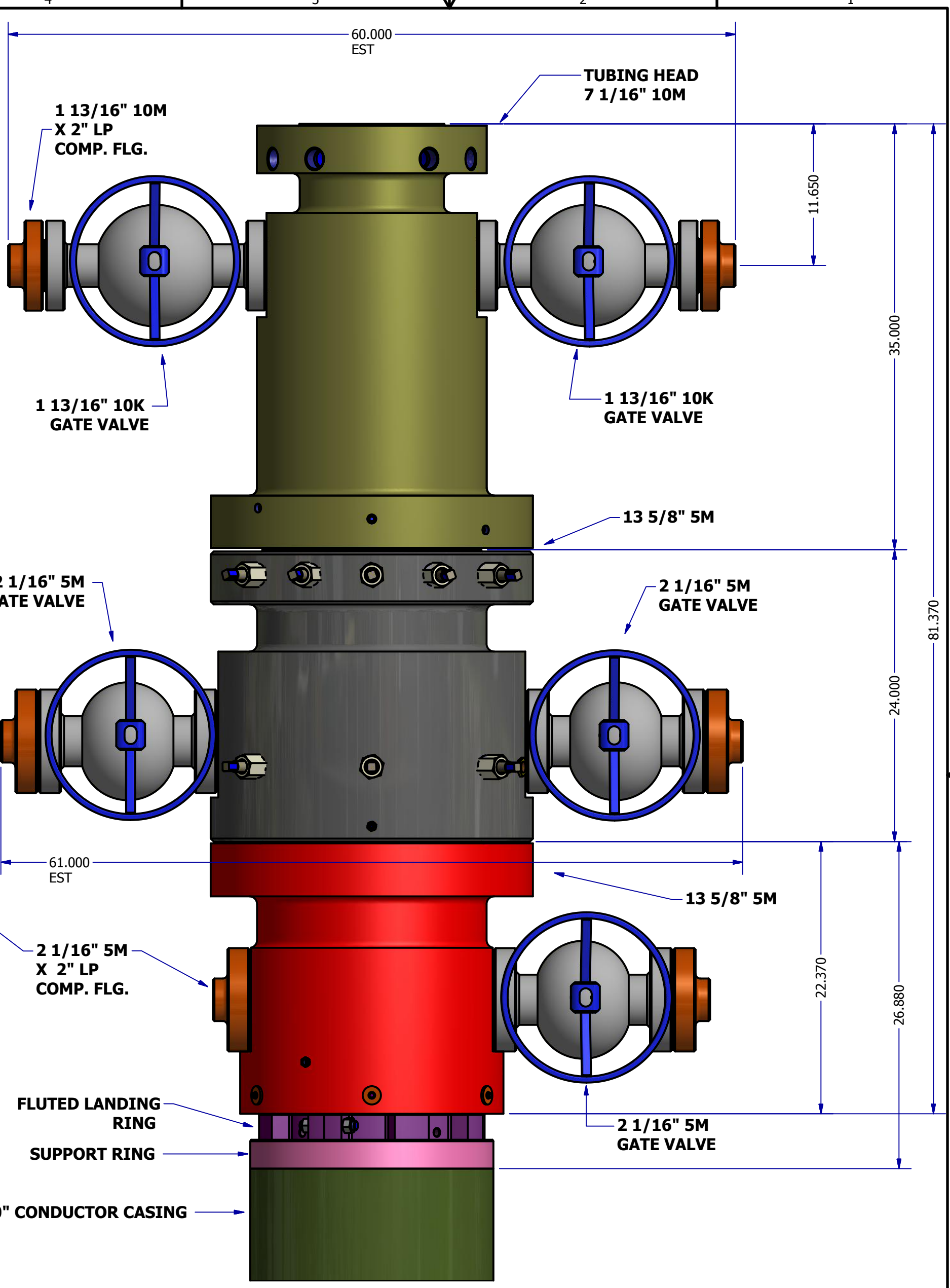
Energen___Pitchblende_Fed_19_30_207H_Lateral_Plan_Data_p1_20181115094517.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Gas_Capture_207H_20181115103651.pdf

Other Variance attachment:



DRAWN	J.PERKINS	
CHECKED	J. PERKINS	
QA		
MFG		
APPROVED		

McClinton Energy Group

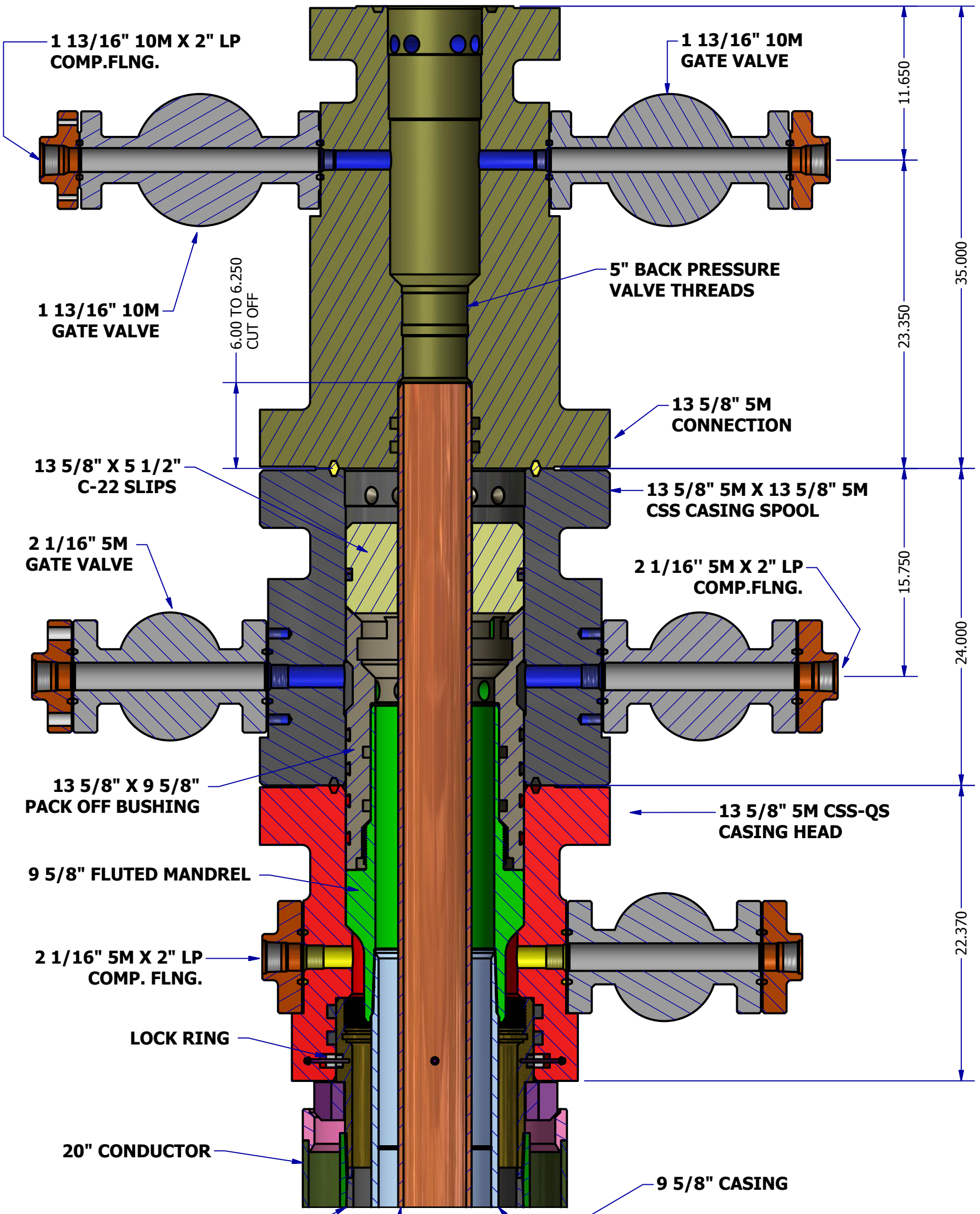
TITLE

ENERGEN
13 3/8" 9 5/8" 5 1/2"

SIZE	DWG NO	REV
B	ENERGEN STACK UP 01	

SCALE

SHEET 1 OF 2



DRAWN J.PERKINS		McClinton Energy Group	
CHECKED J. PERKINS		TITLE ENERGEN 13 3/8" 9 5/8" 5 1/2"	
QA			
MFG			
APPROVED		SIZE B	DWG NO ENERGEN STACK UP 01 REV
		SCALE	SHEET 2 OF 2

ENERGEN®

Contact Information

In at this time the supervising person determines the release of H2S cannot be contained to the site loction and the general public is in harm's way he will take the necessary steps to protect the workers and the public.

Key Personnel	Title	Office	Mobile
Richard Adams	Drilling Manager	432-818-1747	432-557-1864
Manny Heald	Drilling Supt.	432-688-3330	432-967-5016
Santos Moroles	Drilling Supt.	432-818-1722	432-238-0031
Andy Cobb	Dir EH&S	432-686-3599	432-557-3145
Callie Marsh	Sr. Cood E&S	432-688-3337	432-634-3752

Lea County	Contact
Ambulance	911
Nor Lea General Hospital (Hobbs)	575-397-0560
State Police (Hobbs)	575-392-5580
City Police (Hobbs)	575-397-9625
Sheriff's Office (Lovington)	575-396-3611
Fire Marshall (Lovington)	575-391-2983
Volunteer Fire Dept. (Jal)	575-395-2221
Emergency Management (Lovington)	575-391-2983
New Mexico Oil Conservation Division (Hobbls)	575-393-6161
BLM (Hobbs)	575-393-3612
Hobbs Animal Clinic	575-392-5563
Dal Paso Animal Hospital (Hobbs)	575-397-2286
Mountain States Equine (Hobbs)	575-392-7488
Carlsbad	
BLM	575-234-5972
Santa Fe	
New Mexico Emergency Response Commission	505-476-9600
New Mexico Emergency Response Commission (24 hrs)	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635
National	
National Emergency Response Center (Washington, D.C.)	800-424-8802
Medical	
Flight for Life - 4000 24th Lubbock, Tx	806-743-9911
Aerocare - R3, Box 49F; Lubbock, Tx	806-747-8923
Med Flight Air Amb - 2301 Yale Blvd SD, D3; Albuquerque, NM	505-842-4433
SB Air Med Service - 2505 Clark Carr Loop SE; Albuquerque, NM	505-842-4949
Other	
Boots & Coots IWC	800-256-9688
Cudd Pressure Control	432-699-0139
NM Dept. of Transportation (Roswell)	575-637-7200

Hydrogen Sulfide Drilling Operations Plan

1. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on a unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this will:

- The hazards and characteristics of hydrogen sulfide (H2S).
- The proper use and maintenance of personal protective equipment and life support systems.
- The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- The contents and requirements of the H2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500') and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

2. H2S Safety Equipment and systems

Note: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500' above, or three days prior to penetrating the first zone containing or reasonably expected to contain H2S. If H2S greater than 100 ppm is encountered in the gas stream, we will shut in the install H2S equipment.

- Well Control Equipment:
    - Flare Line.

    - Choke manifold with remotely operated choke.
    - Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
    - Auxiliary equipment to include: annular preventer, mud-gas, separator, rotating head.
- Protective equipment for essential personnel:
    - Mark II Surviveair 30 minute units located in the dog house and at briefing areas.
- H2S detection and monitoring equipment:
    - 2 portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.
- Visual warning systems:
    - Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate.
- Mud program:
    - The mud program has been designed to minimize the volume of H2S circulated to the surface.

Energen has conducted a review to determine if an H2S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal.

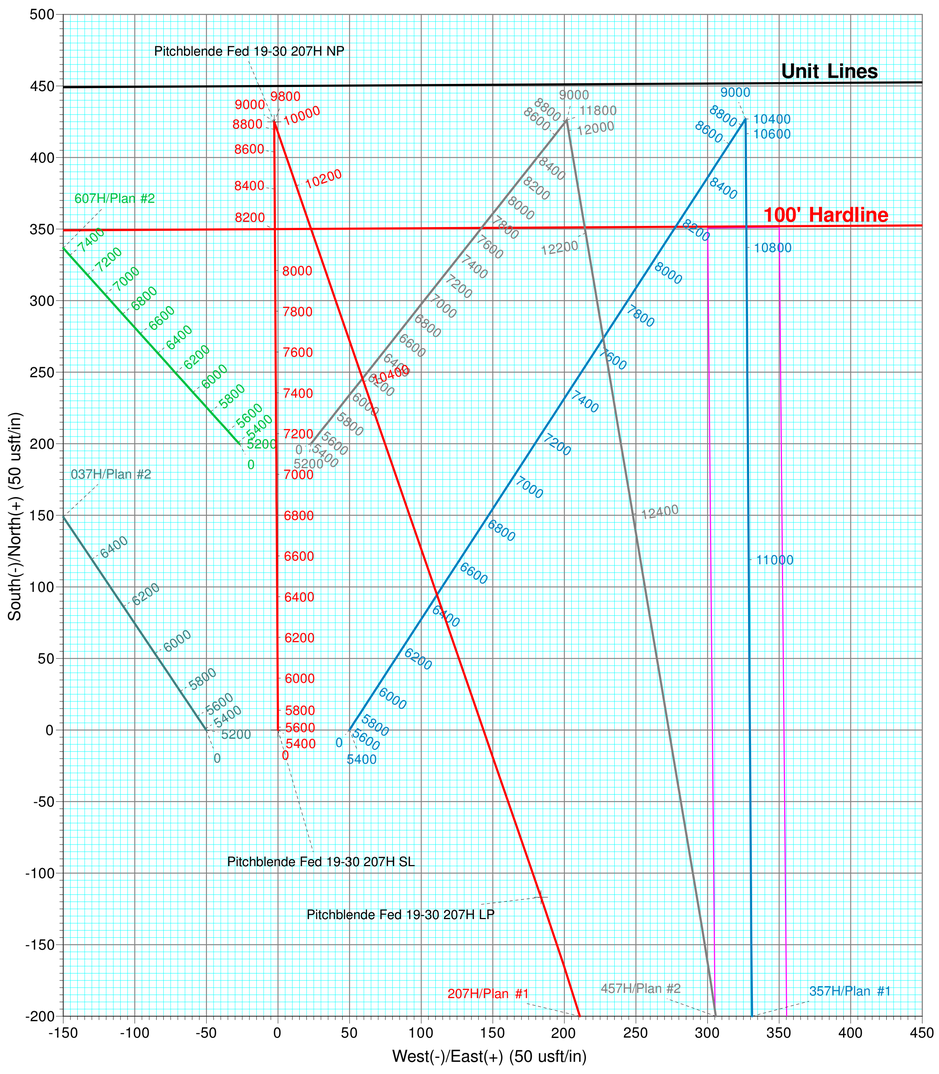
ENERGEN RESOURCES CORPORATION

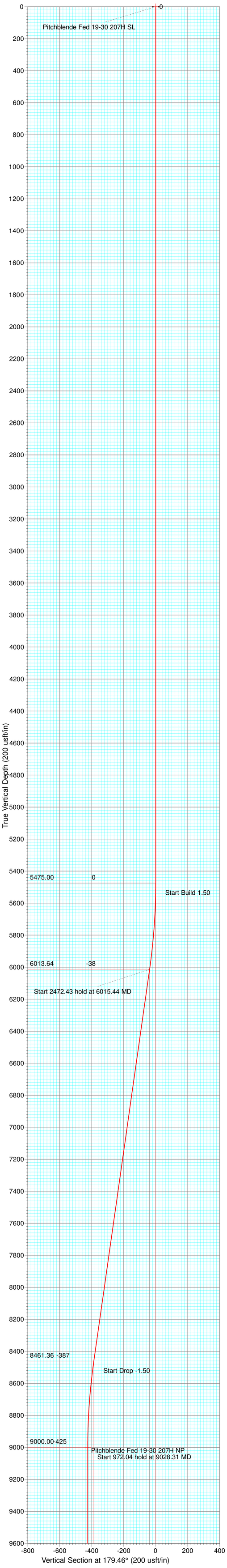
Project: Lea County, NM
Site: Pitchblende Fed 19-30 037H,207H,357H,457H,607H
Well: 207H
Wellbore: Lateral
Design: Plan #1
Rig: XXXXXX
Job: M18XXX

Azimuths to Grid North
True North: -0.49°
Magnetic North: 6.16°

Magnetic Field
Strength: 47806.1snT
Dip Angle: 59.78°
Date: 11/14/2018
Model: HDGM

Project Details: Lea County, NM
Geodetic System: US State Plane 1927 (Exact solution)
Geodetic Datum: NAD 1927 (NADCON CONUS)
Geodetic Ellipsoid: Clarke 1866
Geodetic Zone: New Mexico East 3001
System Datum: Mean Sea Level





BOUNDARY LINES LEGEND

- Lease/Unit Lines
- Hard Lines
- Drilling Window
- Azimuth Line

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	5475.00	0.00	0.00	5475.00	0.00	0.00	0.00	0.00	0.00	
3	6015.44	8.11	359.65	6013.64	38.17	-0.24	1.50	359.65	-38.17	
4	8487.87	8.11	359.65	8461.36	386.81	-2.39	0.00	0.00	-386.82	
5	9028.31	0.00	0.00	9000.00	424.98	-2.63	1.50	180.00	-424.99	Pitchblende Fed 19-30 207H NP
6	10000.35	0.00	0.00	9972.04	424.98	-2.63	0.00	0.00	-424.99	
7	10900.35	90.00	161.02	10545.00	-116.83	183.72	10.00	161.02	118.55	
8	11822.48	90.00	179.46	10545.00	-1021.70	339.34	2.00	90.00	1024.85	
9	18170.35	90.00	179.46	10545.00	-7369.29	398.87	0.00	0.00	7372.72	Pitchblende Fed 19-30 207H PBHL

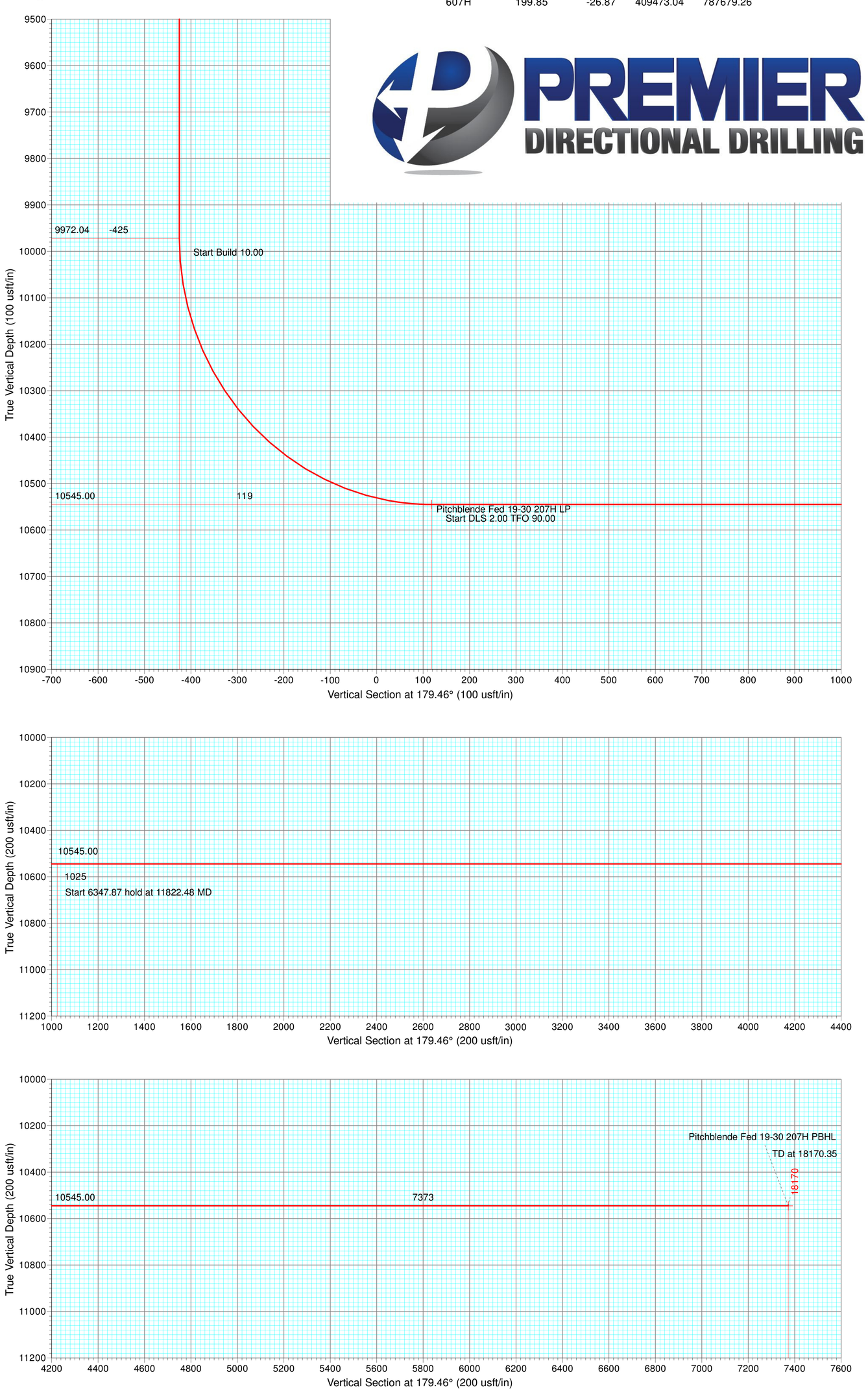
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Pitchblende Fed 19-30 207H SL	0.00	0.00	0.00	409273.19	787706.13	32° 7' 18.47 N	103° 24' 14.47 W
Pitchblende Fed 19-30 207H NP	9000.00	424.98	-2.63	409698.17	787703.50	32° 7' 22.68 N	103° 24' 14.46 W
Pitchblende Fed 19-30 207H LP	10545.00	-116.83	183.72	409156.36	787889.85	32° 7' 17.30 N	103° 24' 12.35 W
Pitchblende Fed 19-30 207H PBHL	10545.00	-7369.29	398.87	401903.90	788105.00	32° 6' 5.52 N	103° 24' 10.58 W

SLOTS

Slot Name	+N/-S	+E/-W	Northing	Easting
037H	-0.25	-49.95	409272.94	787656.18
207H	0.00	0.00	409273.19	787706.13
357H	0.28	50.04	409273.47	787756.17
457H	200.12	23.10	409473.31	787729.23
607H	199.85	-26.87	409473.04	787679.26

Target Centerline at 10545' KB TVD



ENERGEN RESOURCES CORPORATION

Lea County, NM
Pitchblende Fed 19-30 037H,207H,357H,457H,607H
207H - Slot 207H

Lateral

Plan: Plan #1

Standard Planning Report

15 November, 2018

Database:	EDM 5000.14 Multi User	**Local Co-ordinate Reference:**	Well 207H - Slot 207H
Company:	ENERGEN RESOURCES CORPORATION	**TVD Reference:**	3333+25 @ 3358.00usft (EST)
Project:	Lea County, NM	**MD Reference:**	3333+25 @ 3358.00usft (EST)
Site:	Pitchblende Fed 19-30 037H,207H,357H,457H,607H	**North Reference:**	Grid
Well:	207H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Project Lea County, NM

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site Pitchblende Fed 19-30 037H,207H,357H,457H,607H, centered on 037H

Site Position:		**Northing:**	409,272.93 usft	**Latitude:**	32° 7' 18.47 N
From:	Map	**Easting:**	787,656.18 usft	**Longitude:**	103° 24' 15.05 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.49 °

Well 207H - Slot 207H

Well Position	**+N/-S**	0.26 usft	**Northing:**	409,273.19 usft	**Latitude:**	32° 7' 18.47 N
	+E/-W	49.95 usft	**Easting:**	787,706.13 usft	**Longitude:**	103° 24' 14.47 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,333.00 usft

Wellbore Lateral

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	11/14/2018	6.65	59.78	47,806

Design Plan #1

Audit Notes:

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.46

Plan Survey Tool Program **Date** 11/15/2018

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,169.89	Plan #1 (Lateral)	MWD+HRGM	
				OWSG MWD + HRGM	

Database:	EDM 5000.14 Multi User	**Local Co-ordinate Reference:**	Well 207H - Slot 207H
Company:	ENERGEN RESOURCES CORPORATION	**TVD Reference:**	3333+25 @ 3358.00usft (EST)
Project:	Lea County, NM	**MD Reference:**	3333+25 @ 3358.00usft (EST)
Site:	Pitchblende Fed 19-30 037H,207H,357H,457H,607H	**North Reference:**	Grid
Well:	207H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,475.00	0.00	0.00	5,475.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,015.44	8.11	359.65	6,013.64	38.17	-0.24	1.50	1.50	0.00	359.65	
8,487.87	8.11	359.65	8,461.36	386.81	-2.39	0.00	0.00	0.00	0.00	
9,028.31	0.00	0.00	9,000.00	424.98	-2.63	1.50	-1.50	0.00	180.00	Pitchblende Fed 19-3
10,000.35	0.00	0.00	9,972.04	424.98	-2.63	0.00	0.00	0.00	0.00	
10,900.35	90.00	161.02	10,545.00	-116.83	183.72	10.00	10.00	0.00	161.02	
11,822.48	90.00	179.46	10,545.00	-1,021.70	339.34	2.00	0.00	2.00	90.00	
18,170.35	90.00	179.46	10,545.00	-7,369.29	398.87	0.00	0.00	0.00	0.00	Pitchblende Fed 19-3

Database:	EDM 5000.14 Multi User	**Local Co-ordinate Reference:**	Well 207H - Slot 207H
Company:	ENERGEN RESOURCES CORPORATION	**TVD Reference:**	3333+25 @ 3358.00usft (EST)
Project:	Lea County, NM	**MD Reference:**	3333+25 @ 3358.00usft (EST)
Site:	Pitchblende Fed 19-30 037H,207H,357H,457H,607H	**North Reference:**	Grid
Well:	207H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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

Database:	EDM 5000.14 Multi User	**Local Co-ordinate Reference:**	Well 207H - Slot 207H
Company:	ENERGEN RESOURCES CORPORATION	**TVD Reference:**	3333+25 @ 3358.00usft (EST)
Project:	Lea County, NM	**MD Reference:**	3333+25 @ 3358.00usft (EST)
Site:	Pitchblende Fed 19-30 037H,207H,357H,457H,607H	**North Reference:**	Grid
Well:	207H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,475.00	0.00	0.00	5,475.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.38	359.65	5,500.00	0.08	0.00	-0.08	1.50	1.50	0.00
5,600.00	1.88	359.65	5,599.98	2.05	-0.01	-2.05	1.50	1.50	0.00
5,700.00	3.38	359.65	5,699.87	6.62	-0.04	-6.62	1.50	1.50	0.00
5,800.00	4.88	359.65	5,799.61	13.82	-0.09	-13.82	1.50	1.50	0.00
5,900.00	6.38	359.65	5,899.12	23.62	-0.15	-23.62	1.50	1.50	0.00
6,000.00	7.88	359.65	5,998.35	36.02	-0.22	-36.02	1.50	1.50	0.00
6,015.44	8.11	359.65	6,013.64	38.17	-0.24	-38.17	1.50	1.50	0.00
6,100.00	8.11	359.65	6,097.35	50.09	-0.31	-50.09	0.00	0.00	0.00
6,200.00	8.11	359.65	6,196.35	64.19	-0.40	-64.19	0.00	0.00	0.00
6,300.00	8.11	359.65	6,295.36	78.29	-0.48	-78.30	0.00	0.00	0.00
6,400.00	8.11	359.65	6,394.36	92.40	-0.57	-92.40	0.00	0.00	0.00
6,500.00	8.11	359.65	6,493.36	106.50	-0.66	-106.50	0.00	0.00	0.00
6,600.00	8.11	359.65	6,592.36	120.60	-0.75	-120.60	0.00	0.00	0.00
6,700.00	8.11	359.65	6,691.36	134.70	-0.83	-134.70	0.00	0.00	0.00
6,800.00	8.11	359.65	6,790.36	148.80	-0.92	-148.80	0.00	0.00	0.00
6,900.00	8.11	359.65	6,889.36	162.90	-1.01	-162.90	0.00	0.00	0.00
7,000.00	8.11	359.65	6,988.36	177.00	-1.10	-177.01	0.00	0.00	0.00
7,100.00	8.11	359.65	7,087.36	191.10	-1.18	-191.11	0.00	0.00	0.00
7,200.00	8.11	359.65	7,186.36	205.21	-1.27	-205.21	0.00	0.00	0.00
7,300.00	8.11	359.65	7,285.36	219.31	-1.36	-219.31	0.00	0.00	0.00
7,400.00	8.11	359.65	7,384.36	233.41	-1.44	-233.41	0.00	0.00	0.00
7,500.00	8.11	359.65	7,483.36	247.51	-1.53	-247.51	0.00	0.00	0.00
7,600.00	8.11	359.65	7,582.36	261.61	-1.62	-261.61	0.00	0.00	0.00
7,700.00	8.11	359.65	7,681.37	275.71	-1.71	-275.72	0.00	0.00	0.00
7,800.00	8.11	359.65	7,780.37	289.81	-1.79	-289.82	0.00	0.00	0.00
7,900.00	8.11	359.65	7,879.37	303.91	-1.88	-303.92	0.00	0.00	0.00
8,000.00	8.11	359.65	7,978.37	318.02	-1.97	-318.02	0.00	0.00	0.00
8,100.00	8.11	359.65	8,077.37	332.12	-2.06	-332.12	0.00	0.00	0.00
8,200.00	8.11	359.65	8,176.37	346.22	-2.14	-346.22	0.00	0.00	0.00
8,300.00	8.11	359.65	8,275.37	360.32	-2.23	-360.32	0.00	0.00	0.00
8,400.00	8.11	359.65	8,374.37	374.42	-2.32	-374.43	0.00	0.00	0.00
8,487.87	8.11	359.65	8,461.36	386.81	-2.39	-386.82	0.00	0.00	0.00
8,500.00	7.92	359.65	8,473.37	388.50	-2.40	-388.51	1.50	-1.50	0.00
8,600.00	6.42	359.65	8,572.59	400.99	-2.48	-401.00	1.50	-1.50	0.00
8,700.00	4.92	359.65	8,672.10	410.88	-2.54	-410.89	1.50	-1.50	0.00
8,800.00	3.42	359.65	8,771.83	418.16	-2.59	-418.16	1.50	-1.50	0.00
8,900.00	1.92	359.65	8,871.72	422.83	-2.62	-422.83	1.50	-1.50	0.00
9,000.00	0.42	359.65	8,971.69	424.88	-2.63	-424.88	1.50	-1.50	0.00
9,028.31	0.00	0.00	9,000.00	424.98	-2.63	-424.99	1.50	-1.50	0.00
9,100.00	0.00	0.00	9,071.69	424.98	-2.63	-424.99	0.00	0.00	0.00
9,200.00	0.00	0.00	9,171.69	424.98	-2.63	-424.99	0.00	0.00	0.00
9,300.00	0.00	0.00	9,271.69	424.98	-2.63	-424.99	0.00	0.00	0.00
9,400.00	0.00	0.00	9,371.69	424.98	-2.63	-424.99	0.00	0.00	0.00
9,500.00	0.00	0.00	9,471.69	424.98	-2.63	-424.99	0.00	0.00	0.00
9,600.00	0.00	0.00	9,571.69	424.98	-2.63	-424.99	0.00	0.00	0.00
9,700.00	0.00	0.00	9,671.69	424.98	-2.63	-424.99	0.00	0.00	0.00
9,800.00	0.00	0.00	9,771.69	424.98	-2.63	-424.99	0.00	0.00	0.00
9,900.00	0.00	0.00	9,871.69	424.98	-2.63	-424.99	0.00	0.00	0.00
10,000.35	0.00	0.00	9,972.04	424.98	-2.63	-424.99	0.00	0.00	0.00
10,050.00	4.97	161.02	10,021.63	422.95	-1.93	-422.95	10.00	10.00	0.00

Database:	EDM 5000.14 Multi User	**Local Co-ordinate Reference:**	Well 207H - Slot 207H
Company:	ENERGEN RESOURCES CORPORATION	**TVD Reference:**	3333+25 @ 3358.00usft (EST)
Project:	Lea County, NM	**MD Reference:**	3333+25 @ 3358.00usft (EST)
Site:	Pitchblende Fed 19-30 037H,207H,357H,457H,607H	**North Reference:**	Grid
Well:	207H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,100.00	9.97	161.02	10,071.19	416.81	0.18	-416.79	10.00	10.00	0.00
10,150.00	14.97	161.02	10,120.00	406.60	3.69	-406.55	10.00	10.00	0.00
10,200.00	19.97	161.02	10,167.68	392.42	8.57	-392.32	10.00	10.00	0.00
10,250.00	24.97	161.02	10,213.87	374.36	14.78	-374.20	10.00	10.00	0.00
10,300.00	29.97	161.02	10,258.22	352.56	22.28	-352.33	10.00	10.00	0.00
10,350.00	34.97	161.02	10,300.39	327.18	31.01	-326.88	10.00	10.00	0.00
10,400.00	39.97	161.02	10,340.06	298.43	40.89	-298.03	10.00	10.00	0.00
10,450.00	44.97	161.02	10,376.94	266.52	51.87	-266.02	10.00	10.00	0.00
10,500.00	49.97	161.02	10,410.73	231.69	63.85	-231.08	10.00	10.00	0.00
10,550.00	54.97	161.02	10,441.18	194.21	76.74	-193.48	10.00	10.00	0.00
10,600.00	59.97	161.02	10,468.06	154.36	90.45	-153.50	10.00	10.00	0.00
10,650.00	64.97	161.02	10,491.17	112.45	104.86	-111.46	10.00	10.00	0.00
10,700.00	69.97	161.02	10,510.32	68.79	119.88	-67.66	10.00	10.00	0.00
10,750.00	74.97	161.02	10,525.38	23.72	135.38	-22.44	10.00	10.00	0.00
10,800.00	79.97	161.02	10,536.23	-22.42	151.25	23.84	10.00	10.00	0.00
10,850.00	84.97	161.02	10,542.79	-69.28	167.36	70.85	10.00	10.00	0.00
10,900.35	90.00	161.02	10,545.00	-116.83	183.72	118.55	10.00	10.00	0.00
11,000.00	90.00	163.01	10,545.00	-211.61	214.48	213.62	2.00	0.00	2.00
11,100.00	90.00	165.01	10,545.00	-307.73	242.02	310.00	2.00	0.00	2.00
11,200.00	90.00	167.01	10,545.00	-404.76	266.19	407.25	2.00	0.00	2.00
11,300.00	90.00	169.01	10,545.00	-502.58	286.96	505.26	2.00	0.00	2.00
11,400.00	90.00	171.01	10,545.00	-601.06	304.30	603.90	2.00	0.00	2.00
11,500.00	90.00	173.01	10,545.00	-700.08	318.20	703.05	2.00	0.00	2.00
11,600.00	90.00	175.01	10,545.00	-799.53	328.63	802.59	2.00	0.00	2.00
11,700.00	90.00	177.01	10,545.00	-899.29	335.58	902.41	2.00	0.00	2.00
11,800.00	90.00	179.01	10,545.00	-999.22	339.04	1,002.37	2.00	0.00	2.00
11,822.48	90.00	179.46	10,545.00	-1,021.70	339.34	1,024.85	2.00	0.00	2.00
11,900.00	90.00	179.46	10,545.00	-1,099.21	340.07	1,102.37	0.00	0.00	0.00
12,000.00	90.00	179.46	10,545.00	-1,199.21	341.01	1,202.37	0.00	0.00	0.00
12,100.00	90.00	179.46	10,545.00	-1,299.21	341.95	1,302.37	0.00	0.00	0.00
12,200.00	90.00	179.46	10,545.00	-1,399.20	342.88	1,402.37	0.00	0.00	0.00
12,300.00	90.00	179.46	10,545.00	-1,499.20	343.82	1,502.37	0.00	0.00	0.00
12,400.00	90.00	179.46	10,545.00	-1,599.19	344.76	1,602.37	0.00	0.00	0.00
12,500.00	90.00	179.46	10,545.00	-1,699.19	345.70	1,702.37	0.00	0.00	0.00
12,600.00	90.00	179.46	10,545.00	-1,799.18	346.63	1,802.37	0.00	0.00	0.00
12,700.00	90.00	179.46	10,545.00	-1,899.18	347.57	1,902.37	0.00	0.00	0.00
12,800.00	90.00	179.46	10,545.00	-1,999.18	348.51	2,002.37	0.00	0.00	0.00
12,900.00	90.00	179.46	10,545.00	-2,099.17	349.45	2,102.37	0.00	0.00	0.00
13,000.00	90.00	179.46	10,545.00	-2,199.17	350.39	2,202.37	0.00	0.00	0.00
13,100.00	90.00	179.46	10,545.00	-2,299.16	351.32	2,302.37	0.00	0.00	0.00
13,200.00	90.00	179.46	10,545.00	-2,399.16	352.26	2,402.37	0.00	0.00	0.00
13,300.00	90.00	179.46	10,545.00	-2,499.15	353.20	2,502.37	0.00	0.00	0.00
13,400.00	90.00	179.46	10,545.00	-2,599.15	354.14	2,602.37	0.00	0.00	0.00
13,500.00	90.00	179.46	10,545.00	-2,699.14	355.07	2,702.37	0.00	0.00	0.00
13,600.00	90.00	179.46	10,545.00	-2,799.14	356.01	2,802.37	0.00	0.00	0.00
13,700.00	90.00	179.46	10,545.00	-2,899.14	356.95	2,902.37	0.00	0.00	0.00
13,800.00	90.00	179.46	10,545.00	-2,999.13	357.89	3,002.37	0.00	0.00	0.00
13,900.00	90.00	179.46	10,545.00	-3,099.13	358.83	3,102.37	0.00	0.00	0.00
14,000.00	90.00	179.46	10,545.00	-3,199.12	359.76	3,202.37	0.00	0.00	0.00
14,100.00	90.00	179.46	10,545.00	-3,299.12	360.70	3,302.37	0.00	0.00	0.00
14,200.00	90.00	179.46	10,545.00	-3,399.11	361.64	3,402.37	0.00	0.00	0.00
14,300.00	90.00	179.46	10,545.00	-3,499.11	362.58	3,502.37	0.00	0.00	0.00
14,400.00	90.00	179.46	10,545.00	-3,599.11	363.51	3,602.37	0.00	0.00	0.00

Database:	EDM 5000.14 Multi User	**Local Co-ordinate Reference:**	Well 207H - Slot 207H
Company:	ENERGEN RESOURCES CORPORATION	**TVD Reference:**	3333+25 @ 3358.00usft (EST)
Project:	Lea County, NM	**MD Reference:**	3333+25 @ 3358.00usft (EST)
Site:	Pitchblende Fed 19-30 037H,207H,357H,457H,607H	**North Reference:**	Grid
Well:	207H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
14,500.00	90.00	179.46	10,545.00	-3,699.10	364.45	3,702.37	0.00	0.00	0.00
14,600.00	90.00	179.46	10,545.00	-3,799.10	365.39	3,802.37	0.00	0.00	0.00
14,700.00	90.00	179.46	10,545.00	-3,899.09	366.33	3,902.37	0.00	0.00	0.00
14,800.00	90.00	179.46	10,545.00	-3,999.09	367.26	4,002.37	0.00	0.00	0.00
14,900.00	90.00	179.46	10,545.00	-4,099.08	368.20	4,102.37	0.00	0.00	0.00
15,000.00	90.00	179.46	10,545.00	-4,199.08	369.14	4,202.37	0.00	0.00	0.00
15,100.00	90.00	179.46	10,545.00	-4,299.07	370.08	4,302.37	0.00	0.00	0.00
15,200.00	90.00	179.46	10,545.00	-4,399.07	371.02	4,402.37	0.00	0.00	0.00
15,300.00	90.00	179.46	10,545.00	-4,499.07	371.95	4,502.37	0.00	0.00	0.00
15,400.00	90.00	179.46	10,545.00	-4,599.06	372.89	4,602.37	0.00	0.00	0.00
15,500.00	90.00	179.46	10,545.00	-4,699.06	373.83	4,702.37	0.00	0.00	0.00
15,600.00	90.00	179.46	10,545.00	-4,799.05	374.77	4,802.37	0.00	0.00	0.00
15,700.00	90.00	179.46	10,545.00	-4,899.05	375.70	4,902.37	0.00	0.00	0.00
15,800.00	90.00	179.46	10,545.00	-4,999.04	376.64	5,002.37	0.00	0.00	0.00
15,900.00	90.00	179.46	10,545.00	-5,099.04	377.58	5,102.37	0.00	0.00	0.00
16,000.00	90.00	179.46	10,545.00	-5,199.03	378.52	5,202.37	0.00	0.00	0.00
16,100.00	90.00	179.46	10,545.00	-5,299.03	379.46	5,302.37	0.00	0.00	0.00
16,200.00	90.00	179.46	10,545.00	-5,399.03	380.39	5,402.37	0.00	0.00	0.00
16,300.00	90.00	179.46	10,545.00	-5,499.02	381.33	5,502.37	0.00	0.00	0.00
16,400.00	90.00	179.46	10,545.00	-5,599.02	382.27	5,602.37	0.00	0.00	0.00
16,500.00	90.00	179.46	10,545.00	-5,699.01	383.21	5,702.37	0.00	0.00	0.00
16,600.00	90.00	179.46	10,545.00	-5,799.01	384.14	5,802.37	0.00	0.00	0.00
16,700.00	90.00	179.46	10,545.00	-5,899.00	385.08	5,902.37	0.00	0.00	0.00
16,800.00	90.00	179.46	10,545.00	-5,999.00	386.02	6,002.37	0.00	0.00	0.00
16,900.00	90.00	179.46	10,545.00	-6,099.00	386.96	6,102.37	0.00	0.00	0.00
17,000.00	90.00	179.46	10,545.00	-6,198.99	387.90	6,202.37	0.00	0.00	0.00
17,100.00	90.00	179.46	10,545.00	-6,298.99	388.83	6,302.37	0.00	0.00	0.00
17,200.00	90.00	179.46	10,545.00	-6,398.98	389.77	6,402.37	0.00	0.00	0.00
17,300.00	90.00	179.46	10,545.00	-6,498.98	390.71	6,502.37	0.00	0.00	0.00
17,400.00	90.00	179.46	10,545.00	-6,598.97	391.65	6,602.37	0.00	0.00	0.00
17,500.00	90.00	179.46	10,545.00	-6,698.97	392.58	6,702.37	0.00	0.00	0.00
17,600.00	90.00	179.46	10,545.00	-6,798.96	393.52	6,802.37	0.00	0.00	0.00
17,700.00	90.00	179.46	10,545.00	-6,898.96	394.46	6,902.37	0.00	0.00	0.00
17,800.00	90.00	179.46	10,545.00	-6,998.96	395.40	7,002.37	0.00	0.00	0.00
17,900.00	90.00	179.46	10,545.00	-7,098.95	396.33	7,102.37	0.00	0.00	0.00
18,000.00	90.00	179.46	10,545.00	-7,198.95	397.27	7,202.37	0.00	0.00	0.00
18,100.00	90.00	179.46	10,545.00	-7,298.94	398.21	7,302.37	0.00	0.00	0.00
18,170.35	90.00	179.46	10,545.00	-7,369.29	398.87	7,372.72	0.00	0.00	0.00

Database:	EDM 5000.14 Multi User	**Local Co-ordinate Reference:**	Well 207H - Slot 207H
Company:	ENERGEN RESOURCES CORPORATION	**TVD Reference:**	3333+25 @ 3358.00usft (EST)
Project:	Lea County, NM	**MD Reference:**	3333+25 @ 3358.00usft (EST)
Site:	Pitchblende Fed 19-30 037H,207H,357H,457H,607H	**North Reference:**	Grid
Well:	207H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Pitchblende Fed 19-30 2 - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	409,273.19	787,706.13	32° 7' 18.47 N	103° 24' 14.47 W
Pitchblende Fed 19-30 2 - plan hits target center - Point	0.00	0.00	9,000.00	424.98	-2.63	409,698.17	787,703.50	32° 7' 22.68 N	103° 24' 14.46 W
Pitchblende Fed 19-30 2 - plan hits target center - Point	0.00	0.00	10,545.00	-7,369.29	398.87	401,903.90	788,105.00	32° 6' 5.52 N	103° 24' 10.58 W
Pitchblende Fed 19-30 2 - plan hits target center - Point	0.00	0.00	10,545.00	-116.83	183.72	409,156.36	787,889.85	32° 7' 17.30 N	103° 24' 12.35 W

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

Submit Original to Appropriate District Office

GAS CAPTURE PLAN

Date: 10/30/18

☒ Original
☐ Amended - Reason for Amendment:

Operator & OGRID No.: **Energen Resources Corporation 162928**

Brenda F. Rathjen Energen Regulatory Analyst 432-688-3323 brathjen@energen.com

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 – Central Tank Battery on Pad #3 of the Pitchblende Fed lease

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

Well Name	API	Well Location	Footages	Expected MCF/D	Flared or Vented	Comments
SEE ATTACHED FOR WELLS ON LEASE						

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to **Lucid Energy Delaware, LLC** and will be connected to **Lucid Energy Delaware, LLC** low/high pressure gathering system located in **Lea County**, New Mexico. It will require **~12,290'** of pipeline to connect the facility to low/high pressure gathering system. **Energen Resources Corporation** provides (periodically) to **Lucid Energy Delaware, LLC** (Gas Transporter) a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, **Energen Resources Corporation** (Operator) and **Lucid Energy Delaware, LLC** (Gas Transporter) have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at **Lucid's Red Hills Processing Plant** located in **Sec.13, Twn. 24S, Rng.33E, Lea County, New Mexico**. 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 Gas Transporter system at that time. Based on current information, it is Operator's belief the system 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

District I
1625 N. French Dr., Hobbs, NM 88240
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State of New Mexico
Energy, Minerals and Natural Resources Department

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

Submit Original to Appropriate District Office

GAS CAPTURE PLAN page 4

Energen Resources Corporation 162928

Well(s)/Production Facility – Pitchblende Fed CTB facility on Pad #3, Lea County NM

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or vented	Comments
Pitchblended Fed 19-30 #207H	30-025-	B, 19-25S-35E	450 FNL 1980 FEL	1,900	As needed	*pad 7*
Pitchblended Fed 19-30 #357H	30-025-	B, 19-25S-35E	450 FNL 1930 FEL	1,900	As needed	*pad 7*

APD ID: 10400036319 **Submission Date:** 11/15/2018

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

PITCHBLENDE_ROAD_SKETCH_EXISTING_REVISED_20181029135712.pdf

Existing Road Purpose: ACCESS **Row(s) Exist?** NO

ROW ID(s)

ID:

Do the existing roads need to be improved? YES

Existing Road Improvement Description: Existing road will be improved/re-routed in certain areas per BLM specifications as outlined during onsite conducted on 3/29/18.

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

PITCHBLENDE_ROAD_SKETCH_TOTAL_REVISED_20181029135730.pdf
PITCHBLENDE_ROAD_SKETCH_STAKED_REVISED_20181029135722.pdf

New road type: LOCAL

Length: 866.77 Feet **Width (ft.):** 25

Max slope (%): 2 **Max grade (%):** 4

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Roads will be constructed with compacted caliche to prevent erosion.

New road access plan or profile prepared? NO

New road access plan attachment:

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Access road engineering design? NO

Access road engineering design attachment:

Turnout? N

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Compacted Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: Topsoil will be staged on the east and west sides of the drilling pad and it will be used for reclamation purposes. This material shall not be used for burms.

Access other construction information:

Access miscellaneous information:

Number of access turnouts: **Access turnout map:**

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: The compacted caliche access road will have a 3' ditch on each side of it. No turnouts will be constructed on the proposed road. No cattleguards will be installed on the access road. No culverts will be constructed for the access road. No low water crossings will be constructed for the access road. No bridges will be constructed for the access road. Since the road is on level ground, no lead-off ditches will be constructed for the proposed access road.

Road Drainage Control Structures (DCS) description: Road construction will include ditching , draining, crowning, capping, and sloping of the roadbed as necessary to provide a well constructed safe road.

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

1_mile_radius_PAD_7_with_well_names_20181115103714.pdf

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Each well will have a 6' x 15' test separator for the measurement of Natural Gas, Produced Water, and Crude Oil. All Crude Oil, Produced Water, and Natural Gas will be transported in 2 - 12" SDR 7 poly pipelines to the Pitchblende Facility which is located on Pad 3. The attached plot plan identifies specific equipment that will be installed on pad 3. Note: If hydrogen sulfide occurs and the Natural Gas needs to be treated, an amine skid will be installed

as shown. All equipment will be painted Shale Green in accordance to current BLM standards. Each pad will also have a 4" steel high pressure gas line and a 4" SDR 7 instrument airline running to it from the facility. The high pressure gas line is for future gas lift services. The instrument air line is for operating all control valves on each pad in an environmentally friendly manner. The 12" SDR 7 and 4" pipelines will follow the roadways to the facility as shown on the attached map. Pipelines will be buried with a minimum of 36" of cover in the Right of Way. Electric power will be brought to pad 3 from the East as shown on the attached Map.

Production Facilities map:

PITCHBLENDE_UTILITY_SKETCH_REVISED_20181029135817.pdf

Pressure_data_from_Darrell_20181029135840.pdf

PITCHBLENDE_ELECTRIC_LINE_SKETCH_REVISED_20181029135828.pdf

PltPln_Pitchblend_BATT_Layout2_20181029135822.pdf

PITCHBLENDE_PIPELINE_SKETCH_REVISED__003__20181029135834.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: GW WELL

Water source use type: SURFACE CASING

STIMULATION

DUST CONTROL

CAMP USE

INTERMEDIATE/PRODUCTION CASING

Source latitude:

Source longitude:

Source datum:

Water source permit type: PRIVATE CONTRACT

Water source transport method: PIPELINE

TRUCKING

Source land ownership: PRIVATE

Source transportation land ownership: PRIVATE

Water source volume (barrels): 25000

Source volume (acre-feet): 3.2223275

Source volume (gal): 1050000

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Water source and transportation map:

Pitchblende_Water_Source_Map_20180517111633_20180531081017.pdf

Water source comments: Water will be utilized pursuant to a private contract with a local landowner. The attached map indicates the frac pond we intend to use.
New water well? NO

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: Caliche will be used from an existing approved mineral pit or by flipping the well location. A mineral permit will be obtained from the BLM prior to excavation any caliche on Federal Lands. Amounts will vary for each pad. The procedure for "flipping" a well location is as follows: An adequate amount of topsoil (usually 6") will be stripped from the location and stockpiled beside each location as shown. An area will be used within the proposed well site to excavate caliche. The subsoil will then be removed and stockpiled within the footages of the well location. Once caliche/surfacing material is found, the material will be excavated and stock piled within the entire well pad/road. The subsoil will then be placed back in the excavated hole. The caliche material will then be placed over the entire pad/road to be compacted. In the event that no caliche is found onsite, or if additional caliche is required, caliche will be hauled from Dinwiddie Cattle Company LLC's pit per the attached map.
Construction Materials source location attachment:

Pitchblende_caliche_pit_20181029135912.jpg

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Cuttings, mud, salts, and other chemicals.

Amount of waste: 3000 barrels

Waste disposal frequency : Daily

Safe containment description: Steel tanks

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** PRIVATE

Disposal type description:

Disposal location description: R360's (NM-01-0006) disposal site at Halfway, NM. Sun Dance Services, 42 Sundance Lane (5 miles east of Eunice, NM) Eunice, NM 88231

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? NO

Description of cuttings location

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

PITCHBLENDE_PAD_7_BNDY_PLAT_20181115103737.pdf

Location_Drawing_Pad_7_20181115103744.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: PAD #7

Multiple Well Pad Number: 7

Recontouring attachment:

PITCHBLENDE_PAD_7_BNDY_PLAT_20181115103806.pdf

Pad_7_Cut_and_Fill_volumes_20181115103836.pdf

Drainage/Erosion control construction: Crowned and ditched.

Drainage/Erosion control reclamation: Harrowed on the contour.

Well pad proposed disturbance (acres): 8.264

Road proposed disturbance (acres): 0.5

Powerline proposed disturbance (acres): 0

Pipeline proposed disturbance (acres): 0

Other proposed disturbance (acres): 0

Total proposed disturbance: 8.764

Well pad interim reclamation (acres): 4.131

Road interim reclamation (acres): 0.22

Powerline interim reclamation (acres): 0

Pipeline interim reclamation (acres): 0

Other interim reclamation (acres): 0

Total interim reclamation: 4.351

Well pad long term disturbance (acres): 4.133

Road long term disturbance (acres): 0.28

Powerline long term disturbance (acres): 0

Pipeline long term disturbance (acres): 0

Other long term disturbance (acres): 0

Total long term disturbance: 4.413

Disturbance Comments:

Reconstruction method: Interim reclamation will be completed within 6 months of completing the last well on the pad. Interim reclamation will consist of shrinking the pad by 100' on the North, West and East and 50' on the South. On the South end of pad there will be 5 Test Skids (one for each well) measuring 8' wide X 20' long. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with BLM requirements.

Topsoil redistribution: Enough stockpiled topsoil will be retained to cover the remainder of the pad when the last well is plugged. Once the last well is plugged, then the rest of the pad will be similarly reclaimed within 6 months of plugging.

Noxious weeds will be controlled

Soil treatment: None

Existing Vegetation at the well pad:

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road:

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline:

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances:

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: **Last Name:**

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Phone: **Email:**

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: BLM standards

Weed treatment plan attachment:

Monitoring plan description: BLM standards

Monitoring plan attachment:

Success standards: BLM satisfaction

Pit closure description: No pit

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT,PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Fee Owner: Rubert F. Madera **Fee Owner Address:**

Phone: (575)631-4444 **Email:**

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: Mr. Madera owns lands we need to cross in order to access our drillsite location. We are currently negotiating a road ROW agreement with him.

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Fee Owner: Pitchfork Cattle Company, LLC **Fee Owner Address:**

Phone: (575)631-4444 **Email:**

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: Pitchfork Cattle Company owns lands we need to cross in order to access our drillsite location. We are currently negotiating a road ROW agreement with them.

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Disturbance type: PIPELINE

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Section 12 - Other Information

Right of Way needed? YES **Use APD as ROW?** YES

ROW Type(s): 281001 ROW - ROADS

ROW Applications

SUPO Additional Information:

Use a previously conducted onsite? YES

Previous Onsite information: Onsite inspection was held with Aaron Chastain on 3/29/18. Arc participation in PA.

Other SUPO Attachment

PITCHBLENDE_ROAD_SKETCH_TOTAL_REVISED_20181029135926.pdf
Landowner_Letter_9_17_18_20181029135933.pdf

ENERGEN

September 17, 2018

ATTN: Cody Layton – Assistant Field Manager
Bureau of Land Management
Carlsbad Field Office
620 E. Greene St.
Carlsbad, NM 88220

Re: Energen Resources Pitchblende Federal Wells, Lea County NM

Dear Mr. Layton,

This letter is in response to the deficiency letter received by Energen Resources dated September 5, 2018. Energen has been, and remains in, good-faith negotiations with the surface owner of the private tract located in Section 24, Township 25 South, Range 34 East.

In addition to owning this private tract, the same surface owner is the lessee of BLM owned surface also located in Section 24, Township 25 South, Range 34 East and all of Section 19, Township 25 South, Range 35 East. The agreement is quite lengthy and contains numerous development provisions that we are working through with the landowner. It's our anticipation this will be resolved well in advance of the permits being approved.

An email from the surface owner is included supporting our good-faith negotiations. Please let us know if you have any questions.

Sincerely,

Tyler Humphries
Land - Permian Development
Energen Resources Corporation
3510 North "A" Street, Bldg. B
Midland,TX 79705
Office: 432.818.1731
Email: tyler.humphries@energen.com

Tyler Humphries

From: Tommy Dinwiddie <jtdinwiddie@gmail.com>
Sent: Monday, September 17, 2018 11:05 AM
To: Tyler Humphries
Subject: [EXTERNAL] Re: Energen/Pitchblende SUA

Yes
We are in negotiations at this time.
TD

On Sep 17, 2018, at 10:03 AM, Tyler Humphries <Tyler.Humphries@energen.com> wrote:

Mr. Dinwiddie,

As part of our permitting process with the BLM, they have requested a status update on the surface use agreement regarding the wells that will be drilled on your private land. I am going to let them know we have been in good-faith negotiations with you and are working towards a finalized agreement by the time the permits will be approved.

Would you mind replying and confirming such so that I can include this email with my letter?

Best,
Tyler

Thanks,
Tyler Humphries
Land - Permian Development
Energen Resources Corporation
3510 North "A" Street, Bldg. B
Midland,TX 79705
Office: 432.818.1731
Cell: 432.557.4245
Email: tyler.humphries@energen.com

APD ID: 10400036319 **Submission Date:** 11/15/2018

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Well Type: OIL WELL **Well Work Type:** Drill

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 207H

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

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

Bond Info Data Report

06/25/2020

APD ID: 10400036319

Submission Date: 11/15/2018

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30

Well Number: 207H

Well Type: OIL WELL

Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Bond Information

Federal/Indian APD: FED

BLM Bond number: NM2707

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

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DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011

Submit one copy to Appropriate District Office

OCD - HOBBS
10/26/2020
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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-47921	96340	1ST BONE SPRING SAND

~~FAIRVIEW MILLS;BONE SPRING~~

Property Code	Property Name	Well Number
326533	PITCHBLENDE FED 19-30	207H

OGRID No.	Operator Name	Elevation
162928	ENERGEN RESOURCES CORPORATION	3333'

Surface Location

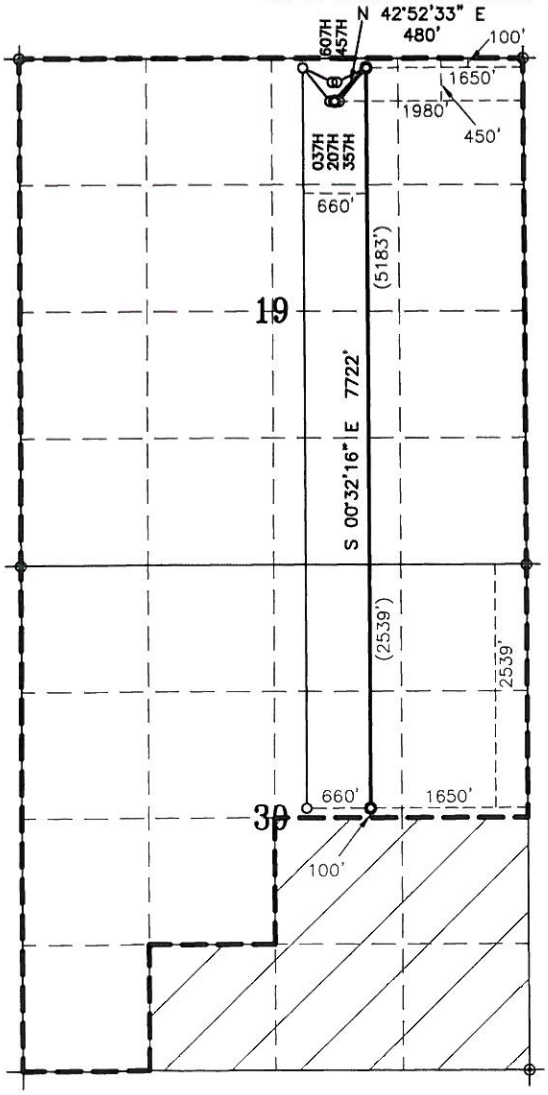
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	19	25-S	35-E	B	450	NORTH	1980	EAST	LEA

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
G	30	25-S	35-E	G	2539	NORTH	1650	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
240			

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



SHL: 450' FNL & 1980' FEL
NAD 27
N: 409273.19
E: 787706.13
LAT: 32.1219235
LON: 103.4044864
NAD 83
N: 409331.27
E: 828892.82
LAT: 32.1219235
LON: 103.4044864

1ST T/P: 100' FNL & 1650' FEL
NAD 27
N: 409525.07
E: 788032.85
LAT: 32.1228829
LON: 103.4034213
NAD 83
N: 409683.15
E: 829219.54
LAT: 32.1228829
LON: 103.4034213

GRID

NOTES:
1. COORDINATES AND BEARINGS ARE BASED ON LAMBERT CONICAL PROJECTION OF THE STATE PLANE COORDINATE SYSTEM NAD 83, CORS 96, NEW MEXICO EAST ZONE WITH A CONVERGENCE ANGLE OF 0.53778259 AND DISTANCES ARE OF GRID VALUE WITH A CENTRAL COMBINED SCALE FACTOR OF 0.99985905. THE POSITIONAL TOLERANCE OF THIS SURVEY EXCEEDS THE REQUIREMENTS FOR A CONSTRUCTION SURVEY.
2. SCALE 1" = 2000'

LAST T/P & BHL: 2539' FNL & 1650' FEL
NAD 27
N: 401903.90
E: 788105.00
LAT: 32.1016583
LON: 103.4034024
NAD 83
N: 401961.77
E: 829292.03
LAT: 32.1016583
LON: 103.4034024

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 compulsory pooling order heretofore entered by the division.

Brenda F. Rathjen 8/28/18

Signature Date

Brenda F. Rathjen

Printed Name

August 28, 2018

Date

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.

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR STATE OF NEW MEXICO No. 3959 WILSON D. WATSON, JR.

DECEMBER 8, 2017

Date Surveyed

Signature & Seal of Professional Surveyor

JULY 12, 2018

Signature Date

Certificate No. WILSON D. WATSON JR. P.L.S. #3959

WO#17-1317-00, FILE: T:\PROJECTS\NM\LEA\T24S R35E

WATSON PROFESSSIONAL GROUP INC

District I
1625 N. French Dr., Hobbs, NM 88240
District II
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State of New Mexico
Energy, Minerals and Natural Resources Department

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

Submit Original to Appropriate District Office

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10/26/2020
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GAS CAPTURE PLAN

Date: 10/30/18

☒ Original
☐ Amended - Reason for Amendment:

Operator & OGRID No.: **Energen Resources Corporation 162928**

Brenda F. Rathjen Energen Regulatory Analyst 432-688-3323 brathjen@energen.com

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 – Central Tank Battery on Pad #3 of the Pitchblende Fed lease

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

Well Name	API	Well Location	Footages	Expected MCF/D	Flared or Vented	Comments
SEE ATTACHED FOR WELLS ON LEASE						

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to **Lucid Energy Delaware, LLC** and will be connected to **Lucid Energy Delaware, LLC** low/high pressure gathering system located in **Lea County**, New Mexico. It will require **~12,290'** of pipeline to connect the facility to low/high pressure gathering system. **Energen Resources Corporation** provides (periodically) to **Lucid Energy Delaware, LLC** (Gas Transporter) a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, **Energen Resources Corporation** (Operator) and **Lucid Energy Delaware, LLC** (Gas Transporter) have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at **Lucid's Red Hills Processing Plant** located in **Sec.13, Twn. 24S, Rng.33E, Lea County, New Mexico**. 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 Gas Transporter system at that time. Based on current information, it is Operator's belief the system 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

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GAS CAPTURE PLAN **page 4**

Energen Resources Corporation 162928

Well(s)/Production Facility – Pitchblende Fed CTB facility on Pad #3, Lea County NM

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or vented	Comments
Pitchblended Fed 19-30 #207H	30-025-47921	B, 19-25S-35E	450 FNL 1980 FEL	1,900	As needed	*pad 7*
Pitchblended Fed 19-30 #357H	30-025-	B, 19-25S-35E	450 FNL 1930 FEL	1,900	As needed	*pad 7*