Form 3160-3
(June 2015)

OCD – HOBBS
10/26/2020
RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: 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 606H [326533]

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

9. API Well No.: 30-025-47924

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: Wildcat [17980]

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: LOT C / 250 FNL / 1955 FWL / LAT 32.1224839 / LONG -103.4088224

At proposed prod. zone: LOT F / 2738 FSL / 1650 FWL / LAT 32.1016656 / LONG -103.4098197

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: 12710 feet / 20482 feet

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3338 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)	Cody Layton / Ph: (575)234-5959	07/16/2019

Title	Office
Assistant Field Manager Lands & Minerals	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: 07/16/2019

(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.:	606H – PITCHBLENDE FED 24-25
SURFACE HOLE FOOTAGE:	250'/N & 1955'/W
BOTTOM HOLE FOOTAGE	1419'/S & 1650'/W
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	[ ] 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 _ 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.

2. The minimum required fill of cement behind the **10-3/4** 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 cement calculates**

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 **7-5/8** inch 2nd 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.**

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. **Excess calculates to negative 1% - additional cement might be required.**

b. Second stage above DV tool:

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

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

- Cement should tie-back **200 feet** into the previous casing. 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.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 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 **10,000 (10M)** psi. **Variance is**

approved to use a 5000 (5M) Annular which shall be tested to 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.

NMK722019

AFMSS

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

Operator Certification Data Report

06/24/2020

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 N A St Bldgs A & B

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

Phone: (432)818-1732

Email address: jsorley@diamondbackenergy.com

APD ID: 10400036179 **Submission Date:** 11/15/2018

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 606H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400036179 **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:** 606H **Well API Number:**

Field/Pool or Exploratory? Exploratory **Field Name:** MALAGA **Pool Name:** WC-025 G-09 S243516D

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:** 606H

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 #6 **Number:** 6

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_20180530131723.pdf

Pitchblende_Fed_24_25__606H_Revised_5_7_19_20190508085511.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	250	FNL	1955	FWL	25S	35E	19	Lot C	32.1224839	-103.4088224	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 136223	3338	0	0	
KOP Leg #1	250	FNL	1955	FWL	25S	35E	19	Lot C	32.1224839	-103.4088224	LEA	NEW MEXICO	FIRST PRIN	F	NMNM 136223	-5892	9230	9230	

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 606H

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	FWL	25S	35E	19	Lot C	32.1228988	-103.4098075	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 136223	-9372	13050	12710	
EXIT Leg #1	2738	FSL	1650	FWL	25S	35E	30	Lot F	32.1016656	-103.4098197	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 136223	-9372	20482	12710	
BHL Leg #1	2738	FSL	1650	FWL	25S	35E	30	Lot F	32.1016656	-103.4098197	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 136223	-9372	20482	12710	

APD ID: 10400036179 **Submission Date:** 11/15/2018

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 606H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
340790	QUATERNARY	3329	0	0	SANDSTONE	NONE	N
340791	RUSTLER	2382	985	985	LIMESTONE, SANDSTONE, SHALE	NONE	N
340792	BASE OF SALT	-1788	5155	5155	ANHYDRITE	NONE	N
340793	BELL CANYON	-2083	5450	5450	LIMESTONE, SANDSTONE, SHALE	NONE	N
340794	CHERRY CANYON	-3063	6430	6430	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
340795	BRUSHY CANYON	-4748	8115	8115	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
340796	BONE SPRING	-5978	9345	9345	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
340797	AVALON SAND	-6013	9380	9380	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
340798	BONE SPRING 1ST	-6179	9546	9546	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
340799	BONE SPRING 2ND	-7298	10665	10665	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
340800	BONE SPRING 3RD	-8128	11495	11495	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
340801	WOLFCAMP	-9148	12515	12515	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M **Rating Depth:** 15000

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 and 2 strings. If running speed head with landing mandrel for the 10-3/4" and 7-5/8" 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 surface shoe. After 7-5/8" casing is set in the speed head, the BOP will then be lifted to install another casing head section for the production casing. Energen will nipple up the casing head and BOP and a minimum 10M BOPE system will be installed. Pressure tests will be made to 250 psi low and 8500 psi high. Energen requests a variance to have a 5M Annular on top of a 10M BOP and will be tested to 250 psi low and 3500 psi high. A diagram of the speed head and BOP 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 of 5M BOPE system will be installed. It will be 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 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 2 casing, a 10M system will be installed and tested to 250 psi low and 8500 psi high with the annular being tested to 250 psi low and 3500 psi high. The 13-3/8" 10M flange on the wellhead will also be tested to 8500 psi at this time.

Choke Diagram Attachment:

CHOKE_HOSE_M12395_20180504085600.pdf

3rd_Choke_Drawing_20180504071345.PDF

BOP Diagram Attachment:

BOP_drawing_20180504071415.pdf

ENERGEN_STACK_UP_4_string_20181114150700.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	1229	1010	J-55	61	BUTT	3.491	7.004	DRY	16.637	DRY	15.614
2	INTERMEDIATE	12.25	10.75	NEW	API	N	0	5300	0	5300	3329	-2026	5300	HCN-80	45.5	OTHER - SPCL BTC	1.13	1.949	DRY	4.549	DRY	4.313
3	PRODUCTION	6.75	5.5	NEW	API	N	0	12049	0	12037			12049	OTHER	23	OTHER - DQXHT	1.969	1.967	DRY	2.5	DRY	2.63
4	INTERMEDIATE	9.875	7.625	NEW	API	N	0	12149	0	12137	3329	-8671	12149	HCP-110	29.7	BUTT	1.18	1.665	DRY	2.66	DRY	2.661
5	PRODUCTION	6.75	4.5	NEW	API	N	12049	20482	12037	12710	3329	-8571	8433	OTHER	15.1	OTHER - DQXHT	1.839	1.849	DRY	2.668	DRY	2.668

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 606H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Pipe_Body_and_API_Connections_Performance_Data_13.3750_61.0000_0.4300__J..._20180504133807.pdf

Casing_1_20190509105146.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Pipe_Body_and_API_Connections_Performance_Data_10.7500_45.5000_0.4000__N..._20180504133910.pdf

10.75_Coupling_Spec_Sheet_20190330110416.pdf

Casing_1_20190509105218.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Technical_Data_Sheet_TMK_UP_DQXHT_5.5_x_23_P110_CY_20180511095501.PDF

Casing_1_20190509105227.pdf

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 606H

Casing Attachments

Casing ID: 4 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Technical_Data_Sheet_TMK_UP_DQXHT_5.5_x_23_P110_CY_20180504134716.PDF
Technical_Data_Sheet_TMK_UP_DQXHT_4.5_x_15.1_P110_CY_20180504134758.PDF

Casing Design Assumptions and Worksheet(s):

Technical_Data_Sheet_TMK_UP_DQXHT_4.5_x_15.1_P110_CY_20180511094634.PDF

Casing_1_20190509105236.pdf

Casing ID: 5 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Pipe_Body_and_API_Connections_Performance_Data_7.6250_29.7000_0.3750__P1..._20180504133954.pdf

Casing_1_20190509105244.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	518	1.34	14.8	694	150	100% Class C	2% CaCl2 + .75 Gal/100 sx CF-41L

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 606H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Lead		0	4100	748	2.47	11.8	1440	100	50% Class C + 50% Poz	10% Gel + .25# cello flake + 3#/sx kolseal + Salt + .75 Gal/100 sxs CR-41L
INTERMEDIATE	Tail		4100	5300	200	1.33	14.8	249	25	50% Class C + 50% Poz	.15% O-Tx20 + .75 gal/100-sxs Cf-41
INTERMEDIATE	Lead	5350	0	4350	385	2.92	11.3	1112	20	50% Class C + 50% Poz	10% gel + .6% SMS + .2% O-TX20 + .2 % C-40P + 5% Salt + .75 Gal/100-sx CF41L
INTERMEDIATE	Tail		4350	5350	210	1.33	14.8	278	20	100 % Class C	.15% O-TX20 + .75%-Gal/100-CR-41L
INTERMEDIATE	Lead	5350	5350	11000	655	2.98	11.3	1930	100	50% class H + 50% Poz	10% Gel + .6% SMS + .6% O-TX20 + .25 #/sx Cello Flake + 5 #/sx Kolseal + + 5% salt + .75-Gal/100 SX CF-41L
INTERMEDIATE	Tail		11000	12149	655	1.19	15.6	773	50	100% Class H	.5% FL-17 + .05% C-51 +.2% O-TX20 + .75 - Gal/100-SX CF-41L
PRODUCTION	Lead		8000	20482	1430	1.2	14.5	1720	15	50% Class H + 50% Poz	2% Gel + .5% FL-17 + .75 - Gal/100 sx CF-41L + .1 GPS C-20L

PRODUCTION	Lead		8000	20482	1430	1.33	14.5	1720	15	50% Class H + 50% Poz	2% Gel + .5% FL-17 + .75 - Gal/100 sx CF-41L + .1 GPS C-20L

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 606H

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 Spud	8.4	8.4			8				
1010	5300	OTHER : Brine	9.7	10			10				
12037	12710	OIL-BASED MUD	11.8	12							
5300	12037	OTHER : Fresh water & cut brine	9	9.3			10				

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:

CALIPER,CBL,DS,GR,MWD,MUDLOG

Coring operation description for the well:

NONE

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 606H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7931 **Anticipated Surface Pressure:** 5134.8

Anticipated Bottom Hole Temperature(F): 160

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_20180523065809.pdf
Hydrogen_Sulfide_Drilling_Operations_Plan_20180511084355.pdf
Contacts_20180511084412.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

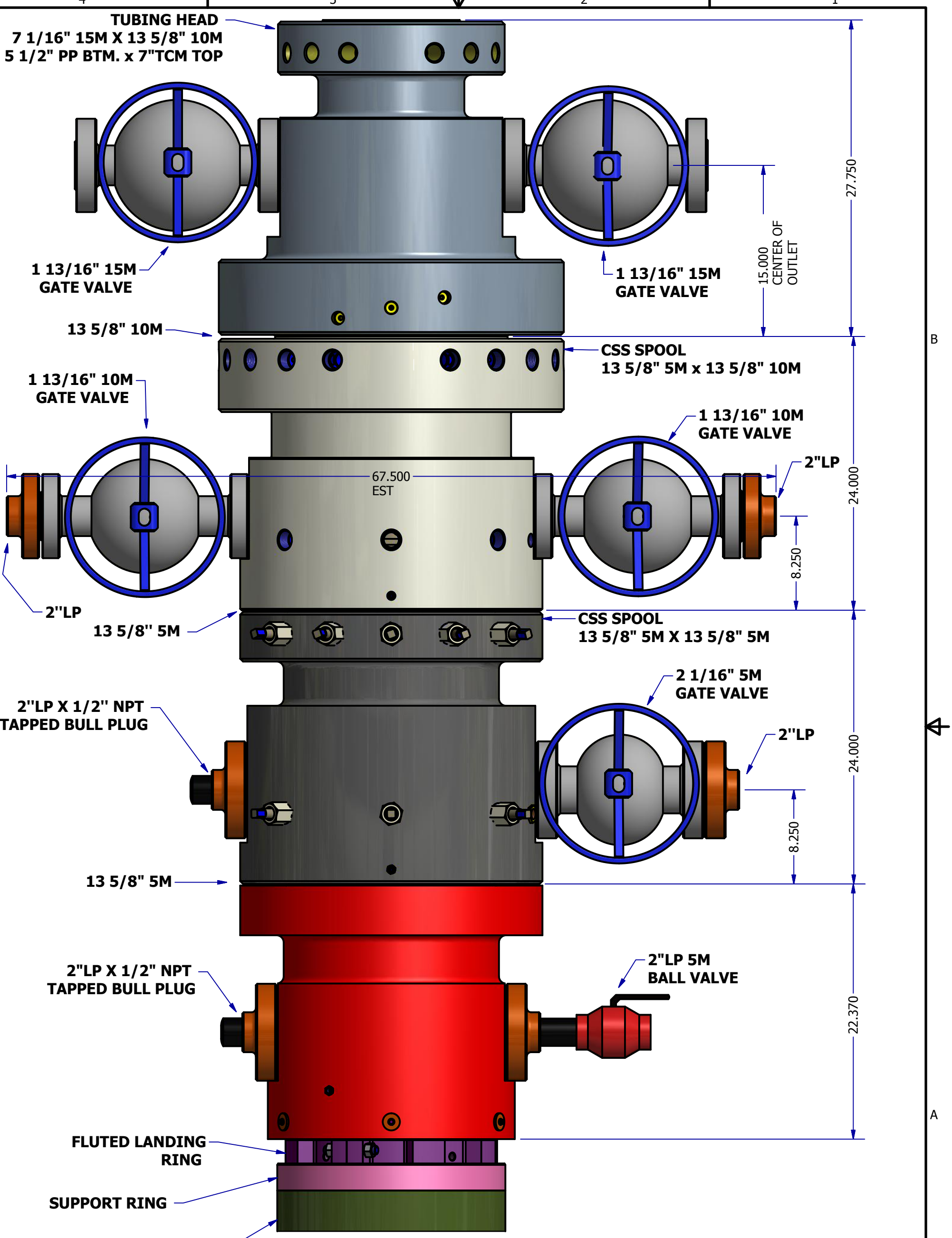
Pitchblende_Fed_19_30_606H_Lateral_Wall_p3_20190509105730.pdf
Pitchblende_Fed_19_30_606H_Lateral_Plan_Data_p3_20190509105747.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Gas_Capture_606H_20181115102147.pdf

Other Variance attachment:



DRAWN	J.PERKINS
CHECKED	J. PERKINS

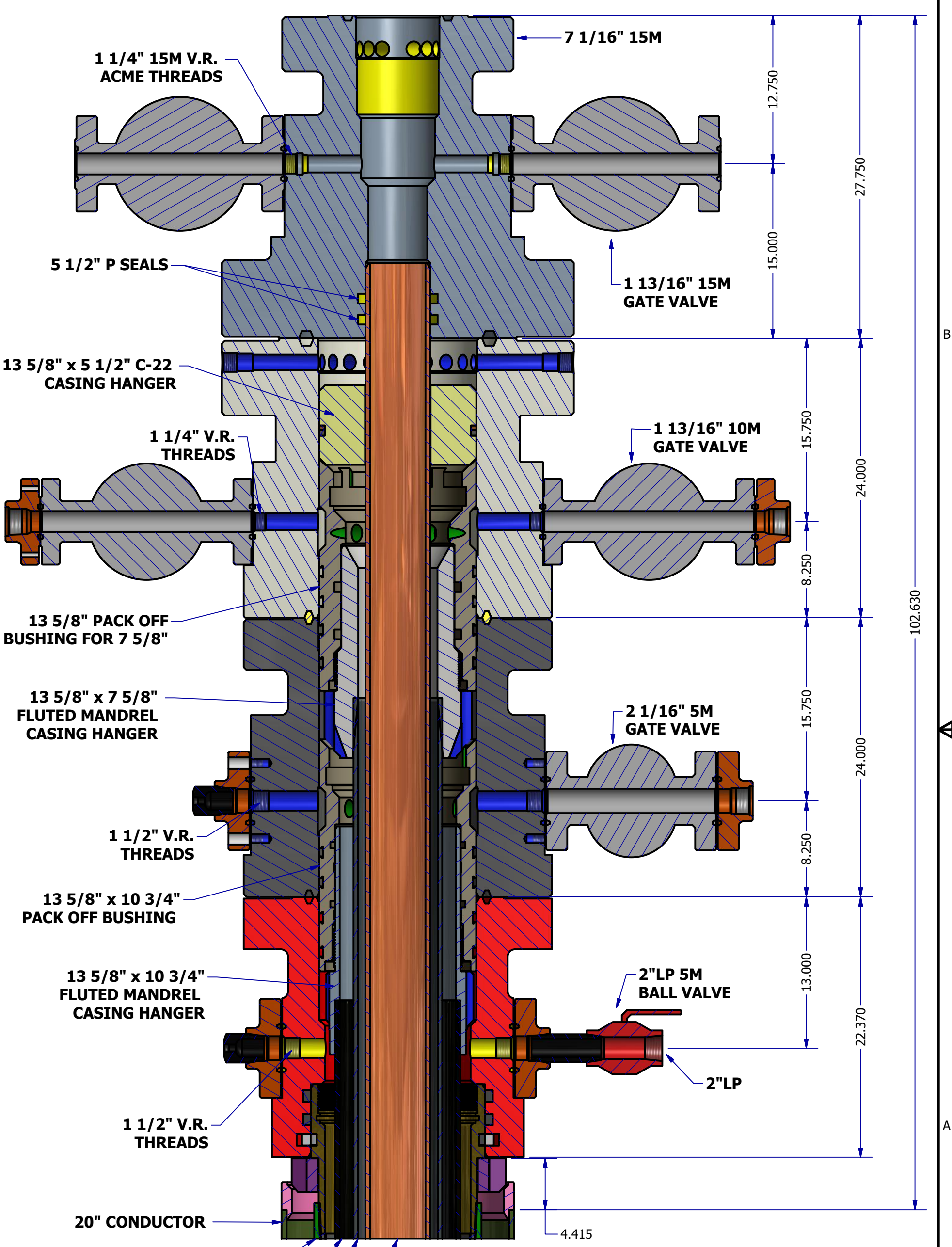
McClinton Energy Group

ENERGEN
13 3/8" 10 3/4"
7 5/8" 5 1/2"

B

SHEET 1 OF 2

ENERGEN STACK UP 02



DRAWN	J.PERKINS
CHECKED	J. PERKINS

McClinton Energy Group

ENERGEN
13 3/8" 10 3/4"
7 5/8" 5 1/2"

B

SHEET 2 OF 2

ENERGEN STACK UP 02

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®

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.

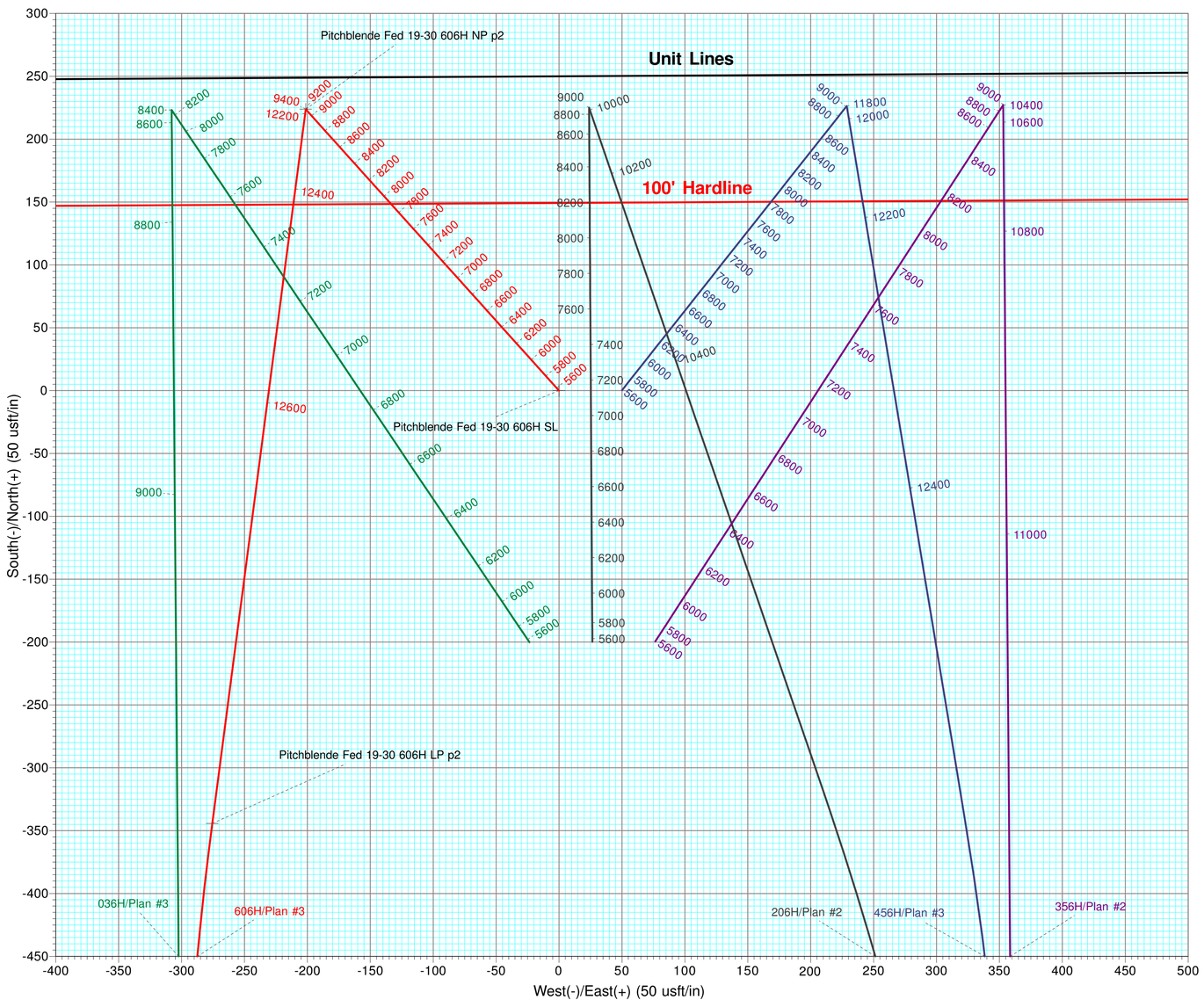
Key Personnel	Title	Office	Mobile
Richard Adams	Drilling Manager	432-818-1747	432-557-1864
Manny Heald	Drilling Supt.	432-688-3330	432-967-5016
Santos Moroles	Drilling Supt.	432-818-1722	432-238-0031
Andy Cobb	Dir EH&S	432-686-3599	432-557-3145
Callie Marsh	Sr. Cood E&S	432-688-3337	432-634-3752

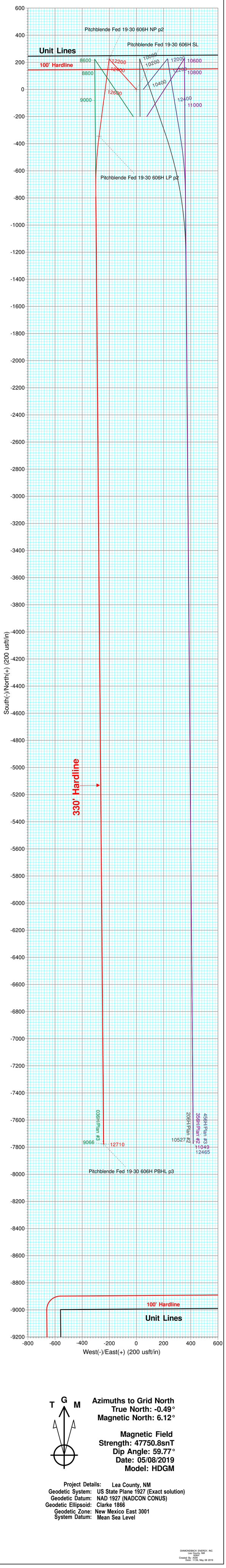
Lea County	Contact
Ambulance	911
Nor Lea General Hospital (Hobbs)	575-397-0560
State Police (Hobbs)	575-392-5580
City Police (Hobbs)	575-397-9625
Sheriff's Office (Lovington)	575-396-3611
Fire Marshall (Lovington)	575-391-2983
Volunteer Fire Dept. (Jal)	575-395-2221
Emergency Management (Lovington)	575-391-2983
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

DIAMONDBACK ENERGY, INC

Project: Lea County, NM
Site: Pitchblende Fed 19-30 036H,206H,356H,456H,606H
Well: 606H
Wellbore: Lateral
Design: Plan #3
Rig: XXXXXX
Job: M18XXX

DIAMONDBACK Energy





Target Centerline at 12695' KB TVD

SLOTS

Slot Name	+N/-S	+E/-W	Northing	Easting
036H	-200.11	-23.53	409265.43	786338.45
206H	-199.85	26.50	409265.69	786388.49
356H	-199.51	76.47	409266.03	786438.46
456H	0.33	50.07	409465.86	786412.06
606H	0.00	0.00	409465.54	786361.99

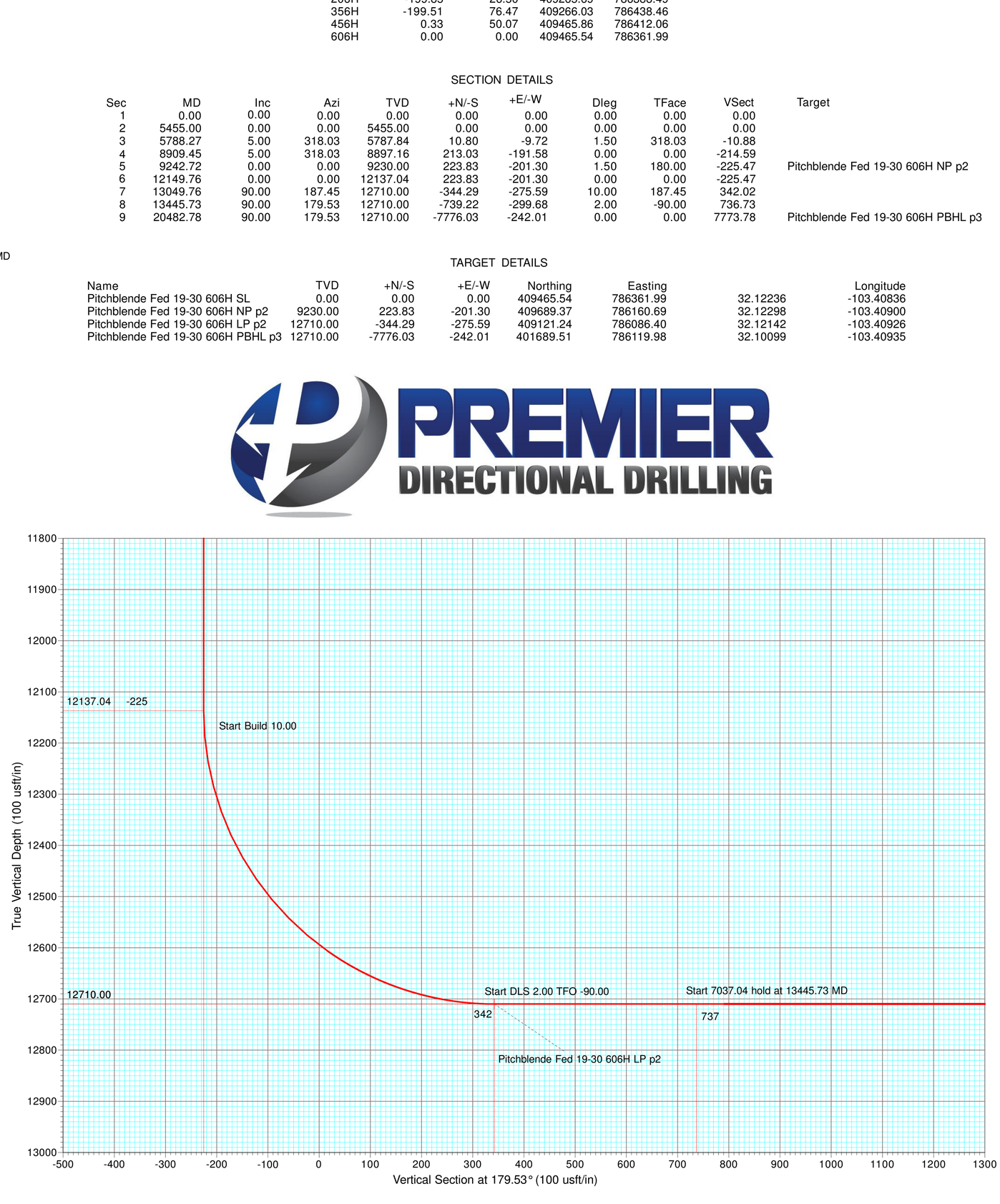
SECTION DETAILS

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	5455.00	0.00	0.00	5455.00	0.00	0.00	0.00	0.00	0.00	
3	5788.27	5.00	318.03	5787.84	10.80	-9.72	1.50	318.03	-10.88	
4	8909.45	5.00	318.03	8897.16	213.03	-191.58	0.00	0.00	-214.59	
5	9242.72	0.00	0.00	9230.00	223.83	-201.30	1.50	180.00	-225.47	Pitchblende Fed 19-30 606H NP p2
6	12149.76	0.00	0.00	12137.04	223.83	-201.30	0.00	0.00	-225.47	
7	13049.76	90.00	187.45	12710.00	-344.29	-275.59	10.00	187.45	342.02	
8	13445.73	90.00	179.53	12710.00	-739.22	-299.68	2.00	-90.00	736.73	
9	20482.78	90.00	179.53	12710.00	-7776.03	-242.01	0.00	0.00	7773.78	Pitchblende Fed 19-30 606H PBHL p3

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Pitchblende Fed 19-30 606H SL	0.00	0.00	0.00	409465.54	786361.99	32.12236	-103.40836
Pitchblende Fed 19-30 606H NP p2	9230.00	223.83	-201.30	409689.37	786160.69	32.12298	-103.40900
Pitchblende Fed 19-30 606H LP p2	12710.00	-344.29	-275.59	409121.24	786086.40	32.12142	-103.40926
Pitchblende Fed 19-30 606H PBHL p3	12710.00	-7776.03	-242.01	401689.51	786119.98	32.10099	-103.40935

PREMIER DIRECTIONAL DRILLING



Azimuths to Grid North
True North: -0.49°
Magnetic North: 6.12°

Magnetic Field
Strength: 47750.8snT
Dip Angle: 59.77°
Date: 05/08/2019
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

DIAMONDBACK ENERGY, INC
Lea County, NM
606H
Created By: ADW
Date: 11:56, May 08 2019

DIAMONDBACK ENERGY, INC

Lea County, NM
Pitchblende Fed 19-30 036H,206H,356H,456H,606H
606H - Slot 606H

Lateral

Plan: Plan #3

Standard Planning Report

08 May, 2019

Database:	EDM 5000.14 Multi User DB2	**Local Co-ordinate Reference:**	Well 606H - Slot 606H
Company:	DIAMONDBACK ENERGY, INC	**TVD Reference:**	3338+25 @ 3363.00usft (EST)
Project:	Lea County, NM	**MD Reference:**	3338+25 @ 3363.00usft (EST)
Site:	Pitchblende Fed 19-30 036H,206H,356H,456H,606H	**North Reference:**	Grid
Well:	606H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #3		

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 036H,206H,356H,456H,606H, centered 036H

Site Position:		**Northing:**	409,265.43 usft	**Latitude:**	32.12181
From:	Map	**Easting:**	786,338.45 usft	**Longitude:**	-103.40844
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.49 °

Well 606H - Slot 606H

Well Position	**+N/-S**	200.11 usft	**Northing:**	409,465.54 usft	**Latitude:**	32.12236
	+E/-W	23.53 usft	**Easting:**	786,361.99 usft	**Longitude:**	-103.40836
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,338.00 usft

Wellbore Lateral

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	05/08/19	6.62	59.77	47,751

Design Plan #3

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	179.53

Plan Survey Tool Program **Date** 05/08/19

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,482.78	Plan #3 (Lateral)	MWD+HRGM	
				OWSG MWD + HRGM	

Database:	EDM 5000.14 Multi User DB2	**Local Co-ordinate Reference:**	Well 606H - Slot 606H
Company:	DIAMONDBACK ENERGY, INC	**TVD Reference:**	3338+25 @ 3363.00usft (EST)
Project:	Lea County, NM	**MD Reference:**	3338+25 @ 3363.00usft (EST)
Site:	Pitchblende Fed 19-30 036H,206H,356H,456H,606H	**North Reference:**	Grid
Well:	606H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #3		

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	
5,455.00	0.00	0.00	5,455.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,788.27	5.00	318.03	5,787.84	10.80	-9.72	1.50	1.50	0.00	318.03	
8,909.45	5.00	318.03	8,897.16	213.03	-191.58	0.00	0.00	0.00	0.00	
9,242.72	0.00	0.00	9,230.00	223.83	-201.30	1.50	-1.50	0.00	180.00	Pitchblende Fed 19-3
12,149.76	0.00	0.00	12,137.04	223.83	-201.30	0.00	0.00	0.00	0.00	
13,049.76	90.00	187.45	12,710.00	-344.29	-275.59	10.00	10.00	0.00	187.45	
13,445.73	90.00	179.53	12,710.00	-739.22	-299.68	2.00	0.00	-2.00	-90.00	
20,482.78	90.00	179.53	12,710.00	-7,776.03	-242.01	0.00	0.00	0.00	0.00	Pitchblende Fed 19-3

Database:	EDM 5000.14 Multi User DB2	**Local Co-ordinate Reference:**	Well 606H - Slot 606H
Company:	DIAMONDBACK ENERGY, INC	**TVD Reference:**	3338+25 @ 3363.00usft (EST)
Project:	Lea County, NM	**MD Reference:**	3338+25 @ 3363.00usft (EST)
Site:	Pitchblende Fed 19-30 036H,206H,356H,456H,606H	**North Reference:**	Grid
Well:	606H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #3		

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 DB2	**Local Co-ordinate Reference:**	Well 606H - Slot 606H
Company:	DIAMONDBACK ENERGY, INC	**TVD Reference:**	3338+25 @ 3363.00usft (EST)
Project:	Lea County, NM	**MD Reference:**	3338+25 @ 3363.00usft (EST)
Site:	Pitchblende Fed 19-30 036H,206H,356H,456H,606H	**North Reference:**	Grid
Well:	606H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #3		

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
5,455.00	0.00	0.00	5,455.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.68	318.03	5,500.00	0.20	-0.18	-0.20	1.50	1.50	0.00
5,600.00	2.18	318.03	5,599.97	2.05	-1.84	-2.06	1.50	1.50	0.00
5,700.00	3.68	318.03	5,699.83	5.84	-5.25	-5.88	1.50	1.50	0.00
5,788.27	5.00	318.03	5,787.84	10.80	-9.72	-10.88	1.50	1.50	0.00
5,800.00	5.00	318.03	5,799.53	11.56	-10.40	-11.65	0.00	0.00	0.00
5,900.00	5.00	318.03	5,899.15	18.04	-16.23	-18.17	0.00	0.00	0.00
6,000.00	5.00	318.03	5,998.77	24.52	-22.05	-24.70	0.00	0.00	0.00
6,100.00	5.00	318.03	6,098.39	31.00	-27.88	-31.23	0.00	0.00	0.00
6,200.00	5.00	318.03	6,198.01	37.48	-33.71	-37.75	0.00	0.00	0.00
6,300.00	5.00	318.03	6,297.63	43.96	-39.53	-44.28	0.00	0.00	0.00
6,400.00	5.00	318.03	6,397.25	50.44	-45.36	-50.81	0.00	0.00	0.00
6,500.00	5.00	318.03	6,496.87	56.92	-51.19	-57.33	0.00	0.00	0.00
6,600.00	5.00	318.03	6,596.49	63.40	-57.01	-63.86	0.00	0.00	0.00
6,700.00	5.00	318.03	6,696.11	69.87	-62.84	-70.39	0.00	0.00	0.00
6,800.00	5.00	318.03	6,795.73	76.35	-68.67	-76.91	0.00	0.00	0.00
6,900.00	5.00	318.03	6,895.35	82.83	-74.50	-83.44	0.00	0.00	0.00
7,000.00	5.00	318.03	6,994.97	89.31	-80.32	-89.97	0.00	0.00	0.00
7,100.00	5.00	318.03	7,094.59	95.79	-86.15	-96.49	0.00	0.00	0.00
7,200.00	5.00	318.03	7,194.21	102.27	-91.98	-103.02	0.00	0.00	0.00
7,300.00	5.00	318.03	7,293.83	108.75	-97.80	-109.55	0.00	0.00	0.00
7,400.00	5.00	318.03	7,393.45	115.23	-103.63	-116.07	0.00	0.00	0.00
7,500.00	5.00	318.03	7,493.07	121.71	-109.46	-122.60	0.00	0.00	0.00
7,600.00	5.00	318.03	7,592.69	128.19	-115.28	-129.13	0.00	0.00	0.00
7,700.00	5.00	318.03	7,692.31	134.67	-121.11	-135.65	0.00	0.00	0.00
7,800.00	5.00	318.03	7,791.93	141.14	-126.94	-142.18	0.00	0.00	0.00
7,900.00	5.00	318.03	7,891.54	147.62	-132.76	-148.71	0.00	0.00	0.00
8,000.00	5.00	318.03	7,991.16	154.10	-138.59	-155.23	0.00	0.00	0.00
8,100.00	5.00	318.03	8,090.78	160.58	-144.42	-161.76	0.00	0.00	0.00
8,200.00	5.00	318.03	8,190.40	167.06	-150.25	-168.29	0.00	0.00	0.00
8,300.00	5.00	318.03	8,290.02	173.54	-156.07	-174.81	0.00	0.00	0.00
8,400.00	5.00	318.03	8,389.64	180.02	-161.90	-181.34	0.00	0.00	0.00
8,500.00	5.00	318.03	8,489.26	186.50	-167.73	-187.87	0.00	0.00	0.00
8,600.00	5.00	318.03	8,588.88	192.98	-173.55	-194.39	0.00	0.00	0.00
8,700.00	5.00	318.03	8,688.50	199.46	-179.38	-200.92	0.00	0.00	0.00
8,800.00	5.00	318.03	8,788.12	205.94	-185.21	-207.45	0.00	0.00	0.00
8,909.45	5.00	318.03	8,897.16	213.03	-191.58	-214.59	0.00	0.00	0.00
9,000.00	3.64	318.03	8,987.45	218.10	-196.15	-219.70	1.50	-1.50	0.00
9,100.00	2.14	318.03	9,087.32	221.85	-199.52	-223.48	1.50	-1.50	0.00
9,200.00	0.64	318.03	9,187.28	223.65	-201.14	-225.29	1.50	-1.50	0.00
9,242.72	0.00	0.00	9,230.00	223.83	-201.30	-225.47	1.50	-1.50	0.00
9,300.00	0.00	0.00	9,287.28	223.83	-201.30	-225.47	0.00	0.00	0.00
9,400.00	0.00	0.00	9,387.28	223.83	-201.30	-225.47	0.00	0.00	0.00
9,500.00	0.00	0.00	9,487.28	223.83	-201.30	-225.47	0.00	0.00	0.00
9,600.00	0.00	0.00	9,587.28	223.83	-201.30	-225.47	0.00	0.00	0.00
9,700.00	0.00	0.00	9,687.28	223.83	-201.30	-225.47	0.00	0.00	0.00
9,800.00	0.00	0.00	9,787.28	223.83	-201.30	-225.47	0.00	0.00	0.00
9,900.00	0.00	0.00	9,887.28	223.83	-201.30	-225.47	0.00	0.00	0.00
10,000.00	0.00	0.00	9,987.28	223.83	-201.30	-225.47	0.00	0.00	0.00
10,100.00	0.00	0.00	10,087.28	223.83	-201.30	-225.47	0.00	0.00	0.00
10,200.00	0.00	0.00	10,187.28	223.83	-201.30	-225.47	0.00	0.00	0.00

Database:	EDM 5000.14 Multi User DB2	**Local Co-ordinate Reference:**	Well 606H - Slot 606H
Company:	DIAMONDBACK ENERGY, INC	**TVD Reference:**	3338+25 @ 3363.00usft (EST)
Project:	Lea County, NM	**MD Reference:**	3338+25 @ 3363.00usft (EST)
Site:	Pitchblende Fed 19-30 036H,206H,356H,456H,606H	**North Reference:**	Grid
Well:	606H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #3		

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)
10,300.00	0.00	0.00	10,287.28	223.83	-201.30	-225.47	0.00	0.00	0.00
10,400.00	0.00	0.00	10,387.28	223.83	-201.30	-225.47	0.00	0.00	0.00
10,500.00	0.00	0.00	10,487.28	223.83	-201.30	-225.47	0.00	0.00	0.00
10,600.00	0.00	0.00	10,587.28	223.83	-201.30	-225.47	0.00	0.00	0.00
10,700.00	0.00	0.00	10,687.28	223.83	-201.30	-225.47	0.00	0.00	0.00
10,800.00	0.00	0.00	10,787.28	223.83	-201.30	-225.47	0.00	0.00	0.00
10,900.00	0.00	0.00	10,887.28	223.83	-201.30	-225.47	0.00	0.00	0.00
11,000.00	0.00	0.00	10,987.28	223.83	-201.30	-225.47	0.00	0.00	0.00
11,100.00	0.00	0.00	11,087.28	223.83	-201.30	-225.47	0.00	0.00	0.00
11,200.00	0.00	0.00	11,187.28	223.83	-201.30	-225.47	0.00	0.00	0.00
11,300.00	0.00	0.00	11,287.28	223.83	-201.30	-225.47	0.00	0.00	0.00
11,400.00	0.00	0.00	11,387.28	223.83	-201.30	-225.47	0.00	0.00	0.00
11,500.00	0.00	0.00	11,487.28	223.83	-201.30	-225.47	0.00	0.00	0.00
11,600.00	0.00	0.00	11,587.28	223.83	-201.30	-225.47	0.00	0.00	0.00
11,700.00	0.00	0.00	11,687.28	223.83	-201.30	-225.47	0.00	0.00	0.00
11,800.00	0.00	0.00	11,787.28	223.83	-201.30	-225.47	0.00	0.00	0.00
11,900.00	0.00	0.00	11,887.28	223.83	-201.30	-225.47	0.00	0.00	0.00
12,000.00	0.00	0.00	11,987.28	223.83	-201.30	-225.47	0.00	0.00	0.00
12,100.00	0.00	0.00	12,087.28	223.83	-201.30	-225.47	0.00	0.00	0.00
12,149.76	0.00	0.00	12,137.04	223.83	-201.30	-225.47	0.00	0.00	0.00
12,200.00	5.02	187.45	12,187.22	221.65	-201.59	-223.29	10.00	10.00	0.00
12,250.00	10.02	187.45	12,236.77	215.16	-202.43	-216.81	10.00	10.00	0.00
12,300.00	15.02	187.45	12,285.57	204.41	-203.84	-206.07	10.00	10.00	0.00
12,350.00	20.02	187.45	12,333.23	189.49	-205.79	-191.17	10.00	10.00	0.00
12,400.00	25.02	187.45	12,379.40	170.50	-208.27	-172.20	10.00	10.00	0.00
12,450.00	30.02	187.45	12,423.73	147.60	-211.27	-149.32	10.00	10.00	0.00
12,500.00	35.02	187.45	12,465.87	120.95	-214.75	-122.71	10.00	10.00	0.00
12,550.00	40.02	187.45	12,505.52	90.76	-218.70	-92.55	10.00	10.00	0.00
12,600.00	45.02	187.45	12,542.35	57.26	-223.08	-59.09	10.00	10.00	0.00
12,650.00	50.02	187.45	12,576.11	20.71	-227.86	-22.57	10.00	10.00	0.00
12,700.00	55.02	187.45	12,606.52	-18.63	-233.00	16.72	10.00	10.00	0.00
12,750.00	60.02	187.45	12,633.36	-60.44	-238.47	58.48	10.00	10.00	0.00
12,800.00	65.02	187.45	12,656.42	-104.41	-244.22	102.40	10.00	10.00	0.00
12,850.00	70.02	187.45	12,675.53	-150.21	-250.21	148.15	10.00	10.00	0.00
12,900.00	75.02	187.45	12,690.54	-197.48	-256.39	195.37	10.00	10.00	0.00
12,950.00	80.02	187.45	12,701.33	-245.88	-262.72	243.71	10.00	10.00	0.00
13,000.00	85.02	187.45	12,707.84	-295.02	-269.15	292.80	10.00	10.00	0.00
13,049.76	90.00	187.45	12,710.00	-344.29	-275.59	342.02	10.00	10.00	0.00
13,100.00	90.00	186.45	12,710.00	-394.16	-281.67	391.84	2.00	0.00	-2.00
13,200.00	90.00	184.45	12,710.00	-493.71	-291.16	491.30	2.00	0.00	-2.00
13,300.00	90.00	182.45	12,710.00	-593.52	-297.17	591.06	2.00	0.00	-2.00
13,400.00	90.00	180.45	12,710.00	-693.49	-299.69	691.00	2.00	0.00	-2.00
13,445.73	90.00	179.53	12,710.00	-739.22	-299.68	736.73	2.00	0.00	-2.00
13,500.00	90.00	179.53	12,710.00	-793.48	-299.23	791.00	0.00	0.00	0.00
13,600.00	90.00	179.53	12,710.00	-893.48	-298.41	891.00	0.00	0.00	0.00
13,700.00	90.00	179.53	12,710.00	-993.48	-297.59	991.00	0.00	0.00	0.00
13,800.00	90.00	179.53	12,710.00	-1,093.47	-296.77	1,091.00	0.00	0.00	0.00
13,900.00	90.00	179.53	12,710.00	-1,193.47	-295.95	1,191.00	0.00	0.00	0.00
14,000.00	90.00	179.53	12,710.00	-1,293.47	-295.13	1,291.00	0.00	0.00	0.00
14,100.00	90.00	179.53	12,710.00	-1,393.46	-294.32	1,391.00	0.00	0.00	0.00
14,200.00	90.00	179.53	12,710.00	-1,493.46	-293.50	1,491.00	0.00	0.00	0.00
14,300.00	90.00	179.53	12,710.00	-1,593.46	-292.68	1,591.00	0.00	0.00	0.00
14,400.00	90.00	179.53	12,710.00	-1,693.45	-291.86	1,691.00	0.00	0.00	0.00

Database:	EDM 5000.14 Multi User DB2	**Local Co-ordinate Reference:**	Well 606H - Slot 606H
Company:	DIAMONDBACK ENERGY, INC	**TVD Reference:**	3338+25 @ 3363.00usft (EST)
Project:	Lea County, NM	**MD Reference:**	3338+25 @ 3363.00usft (EST)
Site:	Pitchblende Fed 19-30 036H,206H,356H,456H,606H	**North Reference:**	Grid
Well:	606H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #3		

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	179.53	12,710.00	-1,793.45	-291.04	1,791.00	0.00	0.00	0.00
14,600.00	90.00	179.53	12,710.00	-1,893.45	-290.22	1,891.00	0.00	0.00	0.00
14,700.00	90.00	179.53	12,710.00	-1,993.44	-289.40	1,991.00	0.00	0.00	0.00
14,800.00	90.00	179.53	12,710.00	-2,093.44	-288.58	2,091.00	0.00	0.00	0.00
14,900.00	90.00	179.53	12,710.00	-2,193.44	-287.76	2,191.00	0.00	0.00	0.00
15,000.00	90.00	179.53	12,710.00	-2,293.43	-286.94	2,291.00	0.00	0.00	0.00
15,100.00	90.00	179.53	12,710.00	-2,393.43	-286.12	2,391.00	0.00	0.00	0.00
15,200.00	90.00	179.53	12,710.00	-2,493.43	-285.30	2,491.00	0.00	0.00	0.00
15,300.00	90.00	179.53	12,710.00	-2,593.42	-284.48	2,591.00	0.00	0.00	0.00
15,400.00	90.00	179.53	12,710.00	-2,693.42	-283.66	2,691.00	0.00	0.00	0.00
15,500.00	90.00	179.53	12,710.00	-2,793.42	-282.84	2,791.00	0.00	0.00	0.00
15,600.00	90.00	179.53	12,710.00	-2,893.41	-282.02	2,891.00	0.00	0.00	0.00
15,700.00	90.00	179.53	12,710.00	-2,993.41	-281.20	2,991.00	0.00	0.00	0.00
15,800.00	90.00	179.53	12,710.00	-3,093.41	-280.38	3,091.00	0.00	0.00	0.00
15,900.00	90.00	179.53	12,710.00	-3,193.40	-279.56	3,191.00	0.00	0.00	0.00
16,000.00	90.00	179.53	12,710.00	-3,293.40	-278.74	3,291.00	0.00	0.00	0.00
16,100.00	90.00	179.53	12,710.00	-3,393.40	-277.93	3,391.00	0.00	0.00	0.00
16,200.00	90.00	179.53	12,710.00	-3,493.39	-277.11	3,491.00	0.00	0.00	0.00
16,300.00	90.00	179.53	12,710.00	-3,593.39	-276.29	3,591.00	0.00	0.00	0.00
16,400.00	90.00	179.53	12,710.00	-3,693.39	-275.47	3,691.00	0.00	0.00	0.00
16,500.00	90.00	179.53	12,710.00	-3,793.38	-274.65	3,791.00	0.00	0.00	0.00
16,600.00	90.00	179.53	12,710.00	-3,893.38	-273.83	3,891.00	0.00	0.00	0.00
16,700.00	90.00	179.53	12,710.00	-3,993.38	-273.01	3,991.00	0.00	0.00	0.00
16,800.00	90.00	179.53	12,710.00	-4,093.37	-272.19	4,091.00	0.00	0.00	0.00
16,900.00	90.00	179.53	12,710.00	-4,193.37	-271.37	4,191.00	0.00	0.00	0.00
17,000.00	90.00	179.53	12,710.00	-4,293.37	-270.55	4,291.00	0.00	0.00	0.00
17,100.00	90.00	179.53	12,710.00	-4,393.36	-269.73	4,391.00	0.00	0.00	0.00
17,200.00	90.00	179.53	12,710.00	-4,493.36	-268.91	4,491.00	0.00	0.00	0.00
17,300.00	90.00	179.53	12,710.00	-4,593.36	-268.09	4,591.00	0.00	0.00	0.00
17,400.00	90.00	179.53	12,710.00	-4,693.35	-267.27	4,691.00	0.00	0.00	0.00
17,500.00	90.00	179.53	12,710.00	-4,793.35	-266.45	4,791.00	0.00	0.00	0.00
17,600.00	90.00	179.53	12,710.00	-4,893.35	-265.63	4,891.00	0.00	0.00	0.00
17,700.00	90.00	179.53	12,710.00	-4,993.34	-264.81	4,991.00	0.00	0.00	0.00
17,800.00	90.00	179.53	12,710.00	-5,093.34	-263.99	5,091.00	0.00	0.00	0.00
17,900.00	90.00	179.53	12,710.00	-5,193.34	-263.17	5,191.00	0.00	0.00	0.00
18,000.00	90.00	179.53	12,710.00	-5,293.33	-262.35	5,291.00	0.00	0.00	0.00
18,100.00	90.00	179.53	12,710.00	-5,393.33	-261.53	5,391.00	0.00	0.00	0.00
18,200.00	90.00	179.53	12,710.00	-5,493.33	-260.72	5,491.00	0.00	0.00	0.00
18,300.00	90.00	179.53	12,710.00	-5,593.32	-259.90	5,591.00	0.00	0.00	0.00
18,400.00	90.00	179.53	12,710.00	-5,693.32	-259.08	5,691.00	0.00	0.00	0.00
18,500.00	90.00	179.53	12,710.00	-5,793.32	-258.26	5,791.00	0.00	0.00	0.00
18,600.00	90.00	179.53	12,710.00	-5,893.31	-257.44	5,891.00	0.00	0.00	0.00
18,700.00	90.00	179.53	12,710.00	-5,993.31	-256.62	5,991.00	0.00	0.00	0.00
18,800.00	90.00	179.53	12,710.00	-6,093.31	-255.80	6,091.00	0.00	0.00	0.00
18,900.00	90.00	179.53	12,710.00	-6,193.30	-254.98	6,191.00	0.00	0.00	0.00
19,000.00	90.00	179.53	12,710.00	-6,293.30	-254.16	6,291.00	0.00	0.00	0.00
19,100.00	90.00	179.53	12,710.00	-6,393.30	-253.34	6,391.00	0.00	0.00	0.00
19,200.00	90.00	179.53	12,710.00	-6,493.29	-252.52	6,491.00	0.00	0.00	0.00
19,300.00	90.00	179.53	12,710.00	-6,593.29	-251.70	6,591.00	0.00	0.00	0.00
19,400.00	90.00	179.53	12,710.00	-6,693.29	-250.88	6,691.00	0.00	0.00	0.00
19,500.00	90.00	179.53	12,710.00	-6,793.28	-250.06	6,791.00	0.00	0.00	0.00
19,600.00	90.00	179.53	12,710.00	-6,893.28	-249.24	6,891.00	0.00	0.00	0.00
19,700.00	90.00	179.53	12,710.00	-6,993.28	-248.42	6,991.00	0.00	0.00	0.00

Database:	EDM 5000.14 Multi User DB2	**Local Co-ordinate Reference:**	Well 606H - Slot 606H
Company:	DIAMONDBACK ENERGY, INC	**TVD Reference:**	3338+25 @ 3363.00usft (EST)
Project:	Lea County, NM	**MD Reference:**	3338+25 @ 3363.00usft (EST)
Site:	Pitchblende Fed 19-30 036H,206H,356H,456H,606H	**North Reference:**	Grid
Well:	606H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #3		

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)
19,800.00	90.00	179.53	12,710.00	-7,093.27	-247.60	7,091.00	0.00	0.00	0.00
19,900.00	90.00	179.53	12,710.00	-7,193.27	-246.78	7,191.00	0.00	0.00	0.00
20,000.00	90.00	179.53	12,710.00	-7,293.27	-245.96	7,291.00	0.00	0.00	0.00
20,100.00	90.00	179.53	12,710.00	-7,393.26	-245.14	7,391.00	0.00	0.00	0.00
20,200.00	90.00	179.53	12,710.00	-7,493.26	-244.32	7,491.00	0.00	0.00	0.00
20,300.00	90.00	179.53	12,710.00	-7,593.26	-243.51	7,591.00	0.00	0.00	0.00
20,400.00	90.00	179.53	12,710.00	-7,693.25	-242.69	7,691.00	0.00	0.00	0.00
20,482.78	90.00	179.53	12,710.00	-7,776.03	-242.01	7,773.78	0.00	0.00	0.00

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 6 - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	409,465.54	786,361.99	32.12236	-103.40836
Pitchblende Fed 19-30 6 - plan hits target center - Point	0.00	0.00	9,230.00	223.83	-201.30	409,689.37	786,160.69	32.12298	-103.40900
Pitchblende Fed 19-30 6 - plan hits target center - Point	0.00	0.00	12,710.00	-7,776.03	-242.01	401,689.51	786,119.98	32.10099	-103.40936
Pitchblende Fed 19-30 6 - plan hits target center - Point	0.00	0.00	12,710.00	-344.29	-275.59	409,121.24	786,086.39	32.12142	-103.40926

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
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 page 3

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 24-25 #202H	30-025-	K, 24-25S-34E	2192 FSL 1980 FWL	1,900	As needed	*pad 2*
Pitchblended Fed 24-25 #352H	30-025-	K, 24-25S-34E	2192 FSL 2030 FWL	1,900	As needed	*pad 2*
Pitchblended Fed 24-25 #203H	30-025-	G, 24-25S-34E	1772 FNL 1980 FEL	2,200	As needed	*pad 3*
Pitchblended Fed 24-25 #353H	30-025-	G, 24-25S-34E	1772 FNL 1930 FEL	2,200	As needed	*pad 3*
Pitchblended Fed 24-25 #034H	30-025-	A, 24-25S-34E	450 FNL 710 FEL	2,500	As needed	*pad 4*
Pitchblended Fed 24-25 #204H	30-025-	A, 24-25S-34E	450 FNL 660 FEL	2,500	As needed	*pad 4*
Pitchblended Fed 24-25 #354H	30-025-	A, 24-25S-34E	450 FNL 610 FEL	2,500	As needed	*pad 4*
Pitchblended Fed 24-25 #454H	30-025-	A, 24-25S-34E	250 FNL 635 FEL	2,500	As needed	*pad 4*
Pitchblended Fed 24-25 #604H	30-025-	A, 24-25S-34E	250 FNL 685 FEL	2,500	As needed	*pad 4*
Pitchblended Fed 19-30 #035H	30-025-	D, 19-25S-35E	450 FNL 610 FWL	2,500	As needed	*pad 5*
Pitchblended Fed 19-30 #205H	30-025-	D, 19-25S-35E	450 FNL 660 FWL	2,500	As needed	*pad 5*
Pitchblended Fed 19-30 #355H	30-025-	D, 19-25S-35E	450 FNL 710 FWL	2,500	As needed	*pad 5*
Pitchblended Fed 19-30 #455H	30-025-	D, 19-25S-35E	250 FNL 685 FWL	2,500	As needed	*pad 5*
Pitchblended Fed 19-30 #605H	30-025-	D, 19-25S-35E	250 FNL 635 FWL	2,500	As needed	*pad 5*
Pitchblended Fed 19-30 #036H	30-025-	C, 19-25S-35E	450 FNL 1930 FWL	2,200	As needed	*pad 6*
Pitchblended Fed 19-30 #206H	30-025-	C, 19-25S-35E	450 FNL 1980 FWL	2,200	As needed	*pad 6*
Pitchblended Fed 19-30 #356H	30-025-	C, 19-25S-35E	450 FNL 2030 FWL	2,200	As needed	*pad 6*
Pitchblended Fed 19-30 #456H	30-025-	C, 19-25S-35E	250 FNL 2005 FWL	2,200	As needed	*pad 6*
Pitchblended Fed 19-30 #606H	30-025-	C, 19-25S-35E	250 FNL 1955 FWL	2,200	As needed	*pad 6*

APD ID: 10400036179 **Submission Date:** 11/15/2018

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 606H

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_20181029141831.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? NO

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

1_mile_radius_PAD_6_with_well_names_20181115102715.pdf

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 606H

Existing Wells description: New lease no wells drilled yet.

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:

Pressure_data_from_Darrell_20181029141936.pdf

PITCHBLENDE_ELECTRIC_LINE_SKETCH_REVISED_20181029141925.pdf

PltPln_Pitchblend_BATT_Layout2_20181029141918.pdf

PITCHBLENDE_PIPELINE_SKETCH_REVISED__003__20181029141931.pdf

PITCHBLENDE_UTILITY_SKETCH_REVISED_20181029141913.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

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 606H

Source transportation land ownership: PRIVATE

Water source volume (barrels): 25000 **Source volume (acre-feet):** 3.2223275

Source volume (gal): 1050000

Water source and transportation map:

Pitchblende_Water_Source_Map_20180517111633.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:

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 606H

Pitchblende_caliche_pit_20181029142002.jpg

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:** 606H

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Location_Drawing_Pad_6_20181115102751.pdf

PITCHBLENDE_PAD_6_BNDY_PLAT_20181115102812.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: PAD #6

Multiple Well Pad Number: 6

Recontouring attachment:

PAD_6___CUT_AND_FILL_VOLUMES_20181115102831.pdf

PITCHBLENDE_PAD_6_BNDY_PLAT_20181115102839.pdf

Drainage/Erosion control construction: Crowned and ditched.

Drainage/Erosion control reclamation: Harrowed on the contour.

Well pad proposed disturbance (acres): 8.058

Well pad interim reclamation (acres): 3.925

Well pad long term disturbance (acres): 4.133

Road proposed disturbance (acres): 0

Road interim reclamation (acres): 0

Road long term disturbance (acres): 0

Powerline proposed disturbance (acres): 0

Powerline interim reclamation (acres): 0

Powerline long term disturbance (acres): 0

Pipeline proposed disturbance (acres): 0

Pipeline interim reclamation (acres): 0

Pipeline long term disturbance (acres): 0

Other proposed disturbance (acres): 0

Other interim reclamation (acres): 0

Other long term disturbance (acres): 0

Total proposed disturbance: 8.058

Total interim reclamation: 3.925

Total long term disturbance: 4.133

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

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 606H

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:**

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: To BLM standards

Weed treatment plan attachment:

Monitoring plan description: To BLM standards.

Monitoring plan attachment:

Success standards: To 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:** 606H

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:** 606H

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:** 606H

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_20181029142029.pdf
Landowner_Letter_9_17_18_20181029142035.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: 10400036179 **Submission Date:** 11/15/2018

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30 **Well Number:** 606H

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:** 606H

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:** 606H

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:** 606H

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

06/24/2020

APD ID: 10400036179

Submission Date: 11/15/2018

Operator Name: ENERGEN RESOURCES CORPORATION

Well Name: PITCHBLENDE FED 19-30

Well Number: 606H

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:

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
811 South First, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

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
RECEIVED

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-47924	17980	WOLFCAMP DOGIE DRAW;WOLFCAMP

Property Code	Property Name	Well Number
326533	PITCHBLENDE FED 19-30	606H

OGRID No.	Operator Name	Elevation
162928	ENERGEN RESOURCES CORPORATION	3338'

Surface Location

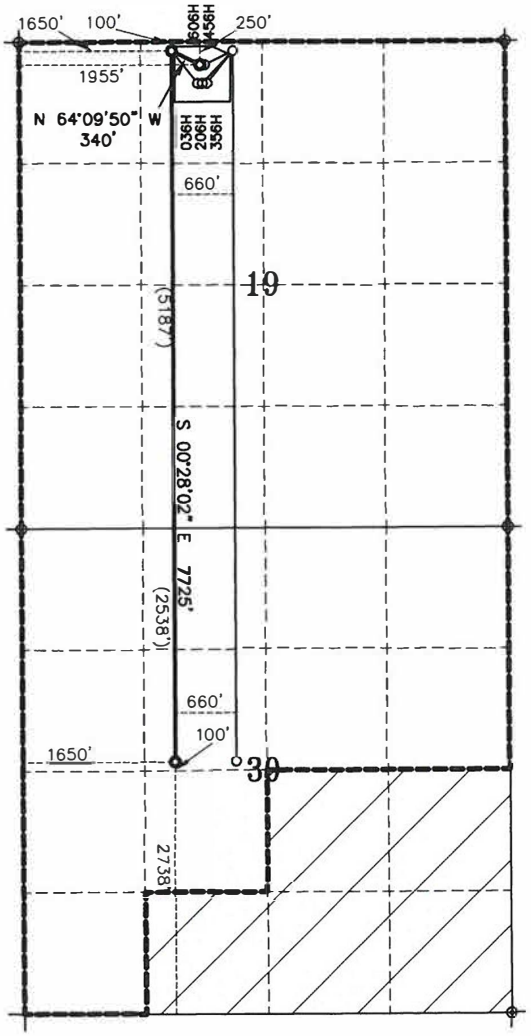
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	19	25-S	35-E	C	250	NORTH	1955	WEST	LEA

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
F	30	25-S	35-E	F	2738	SOUTH	1650	WEST	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: 250' FNL & 1955' FWL
NAD 27
N: 409465.54
E: 786361.99
LAT: 32.1224839
LON: 103.4088224
NAD 83
N: 409523.60
E: 827548.65
LAT: 32.1224839
LON: 103.4088224

1ST T/P: 100' FNL & 1650' FWL
NAD 27
N: 409613.83
E: 786055.73
LAT: 32.1228988
LON: 103.4098075
NAD 83
N: 409671.90
E: 827242.38
LAT: 32.1228988
LON: 103.4098075

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'
3. REVISED MAY 7, 2019 TO MOVE BHL.

LAST T/P & BHL: 2738' FSL & 1650' FWL
NAD 27
N: 401889.50
E: 786118.36
LAT: 32.1016656
LON: 103.4098197
NAD 83
N: 401947.36
E: 827305.36
LAT: 32.1016656
LON: 103.4098179

GRID

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.

Signature — Date: 5/8/19

Jennifer Sorley
Printed Name

5/8/19
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 No.3959 NEW MEXICO WILSON D. WATSON JR.

DECEMBER 6, 2017
Date Surveyed

Signature & Seal of Professional Surveyor

Signature Date: JULY 12, 2018
REVISED MAY 7, 2019

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

WO#17-1311-00, FILE: T:PROJECTS\NM\LEA\T24S R35E

WATSON PROFESSSIONAL GROUP INC

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

OCD – HOBBS
10/26/2020
RECEIVED

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
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 page 3

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 24-25 #202H	30-025-	K, 24-25S-34E	2192 FSL 1980 FWL	1,900	As needed	*pad 2*
Pitchblended Fed 24-25 #352H	30-025-	K, 24-25S-34E	2192 FSL 2030 FWL	1,900	As needed	*pad 2*
Pitchblended Fed 24-25 #203H	30-025-	G, 24-25S-34E	1772 FNL 1980 FEL	2,200	As needed	*pad 3*
Pitchblended Fed 24-25 #353H	30-025-	G, 24-25S-34E	1772 FNL 1930 FEL	2,200	As needed	*pad 3*
Pitchblended Fed 24-25 #034H	30-025-	A, 24-25S-34E	450 FNL 710 FEL	2,500	As needed	*pad 4*
Pitchblended Fed 24-25 #204H	30-025-	A, 24-25S-34E	450 FNL 660 FEL	2,500	As needed	*pad 4*
Pitchblended Fed 24-25 #354H	30-025-	A, 24-25S-34E	450 FNL 610 FEL	2,500	As needed	*pad 4*
Pitchblended Fed 24-25 #454H	30-025-	A, 24-25S-34E	250 FNL 635 FEL	2,500	As needed	*pad 4*
Pitchblended Fed 24-25 #604H	30-025-	A, 24-25S-34E	250 FNL 685 FEL	2,500	As needed	*pad 4*
Pitchblended Fed 19-30 #035H	30-025-	D, 19-25S-35E	450 FNL 610 FWL	2,500	As needed	*pad 5*
Pitchblended Fed 19-30 #205H	30-025-	D, 19-25S-35E	450 FNL 660 FWL	2,500	As needed	*pad 5*
Pitchblended Fed 19-30 #355H	30-025-	D, 19-25S-35E	450 FNL 710 FWL	2,500	As needed	*pad 5*
Pitchblended Fed 19-30 #455H	30-025-	D, 19-25S-35E	250 FNL 685 FWL	2,500	As needed	*pad 5*
Pitchblended Fed 19-30 #605H	30-025-	D, 19-25S-35E	250 FNL 635 FWL	2,500	As needed	*pad 5*
Pitchblended Fed 19-30 #036H	30-025-	C, 19-25S-35E	450 FNL 1930 FWL	2,200	As needed	*pad 6*
Pitchblended Fed 19-30 #206H	30-025-	C, 19-25S-35E	450 FNL 1980 FWL	2,200	As needed	*pad 6*
Pitchblended Fed 19-30 #356H	30-025-	C, 19-25S-35E	450 FNL 2030 FWL	2,200	As needed	*pad 6*
Pitchblended Fed 19-30 #456H	30-025-	C, 19-25S-35E	250 FNL 2005 FWL	2,200	As needed	*pad 6*
Pitchblended Fed 19-30 #606H	30-025-47924	C, 19-25S-35E	250 FNL 1955 FWL	2,200	As needed	*pad 6*