14-430

Form 3160-3
(March 2012)

OCD Hobbs

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HOBBS OCD
SEP 17 2014

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

1a. Type of Work: ☑ DRILL ☐ REENTER	5. Lease Serial No. SHL: Fee, BHL: NMNM0160973
	6. If Indian, Allotee or Tribe Name ---
	7. If Unit or CA Agreement, Name and No. N/A
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	8. Lease Name and Well No. 313714 8115 JV-P Mesa B Com #2H
2. Name of Operator BTA OIL PRODUCERS, LLC 260297	9. API Well No. 30-025- 42125
3a. Address 104 S Pecos Midland, TX 79701	3b. Phone No. *(include area code)* 432-682-3753
	10. Field and Pool, or Exploratory WC-025 G-06 S253329D; UPPER BS 97884
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface 190' FSL & 1050' FEL Unit Letter P (SESE) SHL Sec 7-T26S-R33E; At proposed prod. Zone 330' FNL & 380' FEL Unit Letter A (NENE) BHL Sec 7-T26S-R33E	11. Sec., T.R.M. or Blk and Survey or Area Section 7 - T26S - R33E
14. Distance in miles and direction from nearest town or post office* Approximately 23 miles from Jal	12. County or Parish Lea County; 13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. Unit line, if any) 190'	16. No. of acres in lease SHL: Fee BHL: 1238.72
	17. Spacing Unit dedicated to this well 160
18. Distance from location* to nearest well, drilling, completed, applied for, on this lease, ft. SHL: 1130' (Mesa B #3H) BHL: 969'	19. Proposed Depth TVD: 9675' MD: 14316' PH: 12250'
	20. BLM/BIA Bond No. on file NM1195 & NMB000849
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3241.7' GL	22. Approximate date work will start* ASAP
	23. Estimated duration 30 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

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 shall 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 required by the authorized officer.

25. Signature	Name *(Printed/Typed)*	Date
Pam Inskeep	Pam Inskeep	1/10/2014

Title: Regulatory Administrator

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
Steve Caffey		SEP 11 2014
Title: **FIELD MANAGER**	Office: **CARLSBAD FIELD OFFICE**	

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

APPROVAL FOR TWO YEARS

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.

(Continued on page 2)

*(Instructions on page 2)

09/18/14 PM.

Carlsbad Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

SEP 18 2014

OPERATOR CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access road proposed herein; that I am familiar with the conditions that presently 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 BTA Oil Producers, LLC, 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. Executed this 10th day of January, 2014.

Signed: Pam Inskeep

Printed Name: Pam Inskeep
Position: Regulatory Administrator
Address: 104 S Pecos, Midland, TX 79701
Telephone: (432) 682-3753
Field Representative Nick Eaton, Drilling Manager
E-mail: pinskeep@btaoil.com

HOBBS OCD

SEP 17 2014

RECEIVED

BTA Oil Producers, LLC
DRILLING AND OPERATIONS PROGRAM
8115 JV-P Mesa B 2H
SHL: 190' FSL & 1050' FEL
BHL: 330' FNL & 380' FEL
Section 7 T26S R33E
Lea County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill subject well, BTA Oil Producers, LLC submits the following eleven items of pertinent information in accordance with BLM requirements.

1. Geological surface formation: Permian
2. The estimated tops of geologic markers & estimated depths at which anticipated water, oil or gas formations are expected to be encountered are as follows:

Fresh Water	~ 157'	
Rustler	802'	
Top of Salt	1,866'	
Fletcher Anhydrite	4,553'	
Delaware	4,721'	Oil
Bone Spring	8,942'	Oil
Wolfcamp	12,011'	
PHTD	12,250'	
TD TVD	9,675'	
TD MD	14,316'	

No other formations are expected to give up oil, gas or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 13-3/8" casing at 860' ~~830'~~ and circulating cement back to surface. All intervals will be isolated by setting 5 ½" casing to total depth and tying back cement to a minimum of 500' into 9-5/8" csg shoe.

3. Proposed Casing Program: All casing is new and API approved

Hole Size	Depths See COA	Section	OD Casing	New/ Used	Wt	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17 ½"	0' - ~~830'~~ 860'	Surface	13 3/8"	New	54.5#	STC	J-55	2.05	2.18	8.67
12 ¼"	0' – 4300'	Intrmd	9 5/8"	New	40#	LTC	J-55	1.149	1.91	3.57
12 ¼"	4300' – 4750'	Intrmd	9 5/8"	New	40#	LTC	N-80	1.15	2.79	4.14
7 7/8"	0' – 14,316'	Production Curve & Lateral	5 ½"	New	17#	LTC	P-110	1.49	1.33	2.9

- While running all casing strings, the pipe will be kept a minimum of 1/3 full at all times to avoid approaching the collapse pressure of casing.

4. Proposed Cement Program

a. 13-3/8" Surface

Lead: 325 sx Class C + 4% Gel + 2% $CaCl_2$
(13.5 ppg, 1.75 cuft/sx, 9.2 gal/sx)
Cmt: 250 sx Class C + 2% $CaCl_2$
(14.8 ppg, 1.35 cuft/sx, 6.3 gal/sx)
**Calculated w/50% excess on OH volumes

b. 9 5/8" Intermediate:

Lead: 900 sx HLC Blend
(12.8 ppg, 1.89 cuft/sx, 10.3 gal/sx)
Tail: 250 sx Class C
(14.8 ppg, 1.35 cuft/sx, 6.3 gal/sx)
**Calculated w/35% excess on OH volumes

d. 5 ½" Production

Stage 1:
Lead: 300 sx 35:65:6 H Blend
(12.7 ppg, 1.89 cuft/sx, 10.5 gal/sx)
Tail: 950 sx 50:50:2 H +Salt+GasStop +HR601 +CFR-3
(14.4 ppg,1.25 cuft/sx, 5.5 gal/sx)
DVT Set at 6,900'
Stage 2:
Lead: 150 sx 50:50:10 C Blend
(11.9 ppg, 2.5 cuft/sk, 13.8 gal/sk)
Tail: 250 sx Class C neat
(14.8 ppg, 1.34 cuft/sk, 6.4 gal/sk)
**Calculated w/35% excess on OH volumes

- The above cement volumes could be revised pending the caliper measurements.
- The 13-3/8" surface cement is designed to circulate to surface.
- The 9-5/8" intermediate cement is designed to circulate to surface.
- The production TOC will tie back a minimum 500' into previous shoe.
- Pilot hole will be plugged back with the following cmt plugs:
  - PHTD – 11,150' with 375 sx Class H @ 17.2 ppg/0.98 yield
  - 11,150' – 10,050' with 375 sx Class H @ 17.2 ppg/0.98 yield
  - 10,050' – 8,950' with 375 sx Class H @ 17.2 ppg/0.98 yield

5. Minimum Specifications for Pressure Control:

A 13 5/8" 2000 psi Hydril type annular preventer with mud cross, choke manifold, chokes, kill line, Kelly cock, safety valve and subs to fit all drill strings in use as provided for in Onshore Order #2 will be nippled up on the 13 3/8" x 2000 psi SOW X 13 5/8" x 2000 psi casing head (see attached BOPE drawings). This unit will be hydraulically operated and will be tested by independent tester using test plug to 250 psig/300 psig low and 1000 psig high. Choke line valve, chokes, upper Kelly cock valve , safety valve shall also be tested to 250 psig/300 psig low and 2000 psig high by independent tester.

After setting the 9 5/8" intermediate casing the following BOPE as provided for in Onshore Order #2 will be rigged up on the 9 5/8" intermediate casing spool (13 5/8" 2000 psi x 13 5/8" 5000 psi): 13 5/8" X 5000 psi annular, 13 5/8" X 5000 psi double ram type preventer with blind rams on top and 4 1/2" drill pipe rams on the bottom, choke, mud cross, choke manifold, 4" diameter choke line, 2" kill line, kelly cock, safety valve

with proper subs for all drill string connections in use (see attached BOPE drawings). The BOPE including auxiliary equipment (chokes, choke manifold etc.) will be tested by independent tester.

Test plug will be used and all BOPE tested to 250 psig/ 300 psig low pressure and 5000 psig high pressure for 10 minutes. Annular preventer will be tested to 2500 psig. BOP stack will be used continuously until total depth is reached. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Any time a component of the BOP stack or choke manifold is changed or installed BOPE will be re-tested as required.

All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string depth or 1500 psig, whichever is greater, but not to exceed 70 percent of casing's minimum internal yield. If pressure declines more than 10 percent in 30 minutes, corrective action will be taken.

A remotely operated choke will be installed before drilling out intermediate shoe. If H2S is monitored with 100 ppm in the gas stream while drilling intermediate, we will shut in and install a remote operated choke.

6. **Estimated BHP & BHT:**
   Lateral TD = 4528 psi
   Lateral TD = 152°F
   PHTD = 5733 psi
   PHTD = 175°F

7. **Mud Program:** The applicable depths and properties of this system are as follows:

Depth	Type System	Mud Weight	Viscosity (sec)	Waterloss (cc)
0' – ~~830~~ 860	Fresh Water	8.4 – 8.6	29	N.C.
~~830~~' – 4750'	Brine	9.9 – 10.1	29	N.C.
4750' – 12,250' (PHTD)	Cut Brine	8.9 – 9.2	29	N.C.
4750' – 14,316' (Lateral)	Cut Brine	8.9 – 9.2	29	N.C.

- The necessary mud products for weight addition and fluid loss control will be on location at all times.
- A visual and electronic mud monitoring system will be rigged up prior to spud to detect changes in the volume of mud system. The electronic system consists of a pit volume totalizer, stroke counter and flow sensor at flow line.
- If weight and/or viscosity are introduced to the mud system a daily mud check will be performed by mud contractor, along with tourly check by rig personnel.
- After setting intermediate casing, a third party gas unit detection system will be installed at the flow line.

8. **Auxiliary Well Control and Monitoring Equipment:**
   a. A Kelly cock will be in the drill string at all times.
   b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.

c. Hydrogen Sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe until the 5 ½" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

9. Testing, Logging and Coring Program:

a. Drill stem tests will be based on geological sample shows.
b. If open hole electrical logging is preformed, the program will be:
   i. Total Depth to Intermediate Casing: Dual Laterolog-Micro Laterolog and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
   ii. Total Depth to Surface: Compensated Neutron with Gamma Ray
   iii. No coring program is planned
   iv. Additional testing will be initiated subsequent to setting the 5 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

10. Potential Hazards:

a. No abnormal pressures or temperatures are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. No H2S is anticipated to be encountered.

11. Anticipated starting date and Duration of Operations:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 30 days.

BTA Oil Producers, LLC

Lea County, NM
8115 JV-P Mesa B Com
2H

OH

Plan: Design #1

Standard Planning Report

17 December, 2013

Nexus Directional Solutions, LP

Planning Report

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 2H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	WELL @ 3259.7usft (Original Well Elev)
Project:	Lea County, NM	**MD Reference:**	WELL @ 3259.7usft (Original Well Elev)
Site:	8115 JV-P Mesa B COM	**North Reference:**	Grid
Well:	2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

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

Site 8115 JV-P Mesa B

Site Position:		**Northing:**	0.00 usft	**Latitude:**	30° 59' 24.512 N
From:	Map	**Easting:**	0.00 usft	**Longitude:**	105° 55' 44.137 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	-0.82 °

Well 2H

Well Position	**+N/-S**	383,105.7 usft	**Northing:**	383,105.70 usft	**Latitude:**	32° 3' 4.264 N
	+E/-W	725,421.7 usft	**Easting:**	725,421.70 usft	**Longitude:**	103° 36' 20.730 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,241.7 usft

Wellbore OH

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	11/26/2013	7.29	59.96	48,265

Design Design #1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	7.59	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
9,237.5	0.00	0.00	9,237.5	0.0	0.0	0.00	0.00	0.00	0.00	
9,992.0	90.53	7.59	9,715.0	477.7	63.6	12.00	12.00	0.00	7.59	
14,315.2	90.53	7.59	9,675.0	4,762.8	634.6	0.00	0.00	0.00	0.00	8115 JV-P Mesa B #2

Nexus Directional Solutions, LP

Planning Report

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 2H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	WELL @ 3259.7usft (Original Well Elev)
Project:	Lea County, NM	**MD Reference:**	WELL @ 3259.7usft (Original Well Elev)
Site:	8115 JV-P Mesa B COM	**North Reference:**	Grid
Well:	2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 2H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	WELL @ 3259.7usft (Original Well Elev)
Project:	Lea County, NM	**MD Reference:**	WELL @ 3259.7usft (Original Well Elev)
Site:	8115 JV-P Mesa B Com	**North Reference:**	Grid
Well:	2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00
9,000.0	0.00	0.00	9,000.0	0.0	0.0	0.0	0.00	0.00	0.00
9,100.0	0.00	0.00	9,100.0	0.0	0.0	0.0	0.00	0.00	0.00
9,200.0	0.00	0.00	9,200.0	0.0	0.0	0.0	0.00	0.00	0.00
9,237.5	0.00	0.00	9,237.5	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 12.00									
9,250.0	1.49	7.59	9,250.0	0.2	0.0	0.2	12.00	12.00	0.00
9,275.0	4.49	7.59	9,275.0	1.5	0.2	1.5	12.00	12.00	0.00
9,300.0	7.49	7.59	9,299.8	4.0	0.5	4.1	12.00	12.00	0.00
9,325.0	10.49	7.59	9,324.5	7.9	1.1	8.0	12.00	12.00	0.00
9,350.0	13.49	7.59	9,349.0	13.1	1.7	13.2	12.00	12.00	0.00
9,375.0	16.49	7.59	9,373.1	19.5	2.6	19.6	12.00	12.00	0.00
9,400.0	19.49	7.59	9,396.9	27.1	3.6	27.4	12.00	12.00	0.00
9,425.0	22.49	7.59	9,420.2	36.0	4.8	36.3	12.00	12.00	0.00
9,450.0	25.49	7.59	9,443.1	46.1	6.1	46.5	12.00	12.00	0.00
9,475.0	28.49	7.59	9,465.3	57.3	7.6	57.8	12.00	12.00	0.00
9,500.0	31.49	7.59	9,487.0	69.7	9.3	70.3	12.00	12.00	0.00
9,525.0	34.49	7.59	9,507.9	83.2	11.1	83.9	12.00	12.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 2H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	WELL @ 3259.7usft (Original Well Elev)
Project:	Lea County, NM	**MD Reference:**	WELL @ 3259.7usft (Original Well Elev)
Site:	8115 JV-P Mesa B	**North Reference:**	Grid
Well:	2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,550.0	37.49	7.59	9,528.2	97.8	13.0	98.6	12.00	12.00	0.00
9,575.0	40.49	7.59	9,547.6	113.4	15.1	114.4	12.00	12.00	0.00
9,600.0	43.49	7.59	9,566.2	129.9	17.3	131.1	12.00	12.00	0.00
9,625.0	46.49	7.59	9,583.9	147.5	19.6	148.8	12.00	12.00	0.00
9,650.0	49.49	7.59	9,600.6	165.9	22.1	167.3	12.00	12.00	0.00
9,675.0	52.49	7.59	9,616.3	185.1	24.7	186.8	12.00	12.00	0.00
9,700.0	55.49	7.59	9,631.0	205.2	27.3	207.0	12.00	12.00	0.00
9,725.0	58.49	7.59	9,644.6	226.0	30.1	228.0	12.00	12.00	0.00
9,750.0	61.49	7.59	9,657.1	247.4	33.0	249.6	12.00	12.00	0.00
9,775.0	64.49	7.59	9,668.5	269.5	35.9	271.9	12.00	12.00	0.00
9,800.0	67.49	7.59	9,678.6	292.1	38.9	294.7	12.00	12.00	0.00
9,825.0	70.49	7.59	9,687.6	315.3	42.0	318.0	12.00	12.00	0.00
9,850.0	73.49	7.59	9,695.3	338.8	45.1	341.8	12.00	12.00	0.00
9,875.0	76.49	7.59	9,701.8	362.8	48.3	366.0	12.00	12.00	0.00
9,900.0	79.49	7.59	9,707.0	387.0	51.6	390.4	12.00	12.00	0.00
9,925.0	82.49	7.59	9,710.9	411.5	54.8	415.1	12.00	12.00	0.00
9,950.0	85.49	7.59	9,713.5	436.1	58.1	440.0	12.00	12.00	0.00
9,975.0	88.49	7.59	9,714.8	460.8	61.4	464.9	12.00	12.00	0.00
9,992.0	90.53	7.59	9,715.0	477.7	63.6	481.9	12.00	12.00	0.00
Start 4323.2 hold at 9992.0 MD									
10,000.0	90.53	7.59	9,714.9	485.6	64.7	489.9	0.00	0.00	0.00
10,100.0	90.53	7.59	9,714.0	584.7	77.9	589.9	0.00	0.00	0.00
10,200.0	90.53	7.59	9,713.1	683.9	91.1	689.9	0.00	0.00	0.00
10,300.0	90.53	7.59	9,712.1	783.0	104.3	789.9	0.00	0.00	0.00
10,400.0	90.53	7.59	9,711.2	882.1	117.5	889.9	0.00	0.00	0.00
10,500.0	90.53	7.59	9,710.3	981.2	130.7	989.9	0.00	0.00	0.00
10,600.0	90.53	7.59	9,709.4	1,080.3	143.9	1,089.9	0.00	0.00	0.00
10,700.0	90.53	7.59	9,708.4	1,179.5	157.2	1,189.9	0.00	0.00	0.00
10,800.0	90.53	7.59	9,707.5	1,278.6	170.4	1,289.9	0.00	0.00	0.00
10,900.0	90.53	7.59	9,706.6	1,377.7	183.6	1,389.9	0.00	0.00	0.00
11,000.0	90.53	7.59	9,705.7	1,476.8	196.8	1,489.9	0.00	0.00	0.00
11,100.0	90.53	7.59	9,704.7	1,575.9	210.0	1,589.9	0.00	0.00	0.00
11,200.0	90.53	7.59	9,703.8	1,675.1	223.2	1,689.9	0.00	0.00	0.00
11,300.0	90.53	7.59	9,702.9	1,774.2	236.4	1,789.9	0.00	0.00	0.00
11,400.0	90.53	7.59	9,702.0	1,873.3	249.6	1,889.9	0.00	0.00	0.00
11,500.0	90.53	7.59	9,701.0	1,972.4	262.8	1,989.9	0.00	0.00	0.00
11,600.0	90.53	7.59	9,700.1	2,071.5	276.0	2,089.9	0.00	0.00	0.00
11,700.0	90.53	7.59	9,699.2	2,170.7	289.2	2,189.8	0.00	0.00	0.00
11,800.0	90.53	7.59	9,698.3	2,269.8	302.4	2,289.8	0.00	0.00	0.00
11,900.0	90.53	7.59	9,697.3	2,368.9	315.6	2,389.8	0.00	0.00	0.00
12,000.0	90.53	7.59	9,696.4	2,468.0	328.8	2,489.8	0.00	0.00	0.00
12,100.0	90.53	7.59	9,695.5	2,567.1	342.0	2,589.8	0.00	0.00	0.00
12,200.0	90.53	7.59	9,694.6	2,666.3	355.3	2,689.8	0.00	0.00	0.00
12,300.0	90.53	7.59	9,693.6	2,765.4	368.5	2,789.8	0.00	0.00	0.00
12,400.0	90.53	7.59	9,692.7	2,864.5	381.7	2,889.8	0.00	0.00	0.00
12,500.0	90.53	7.59	9,691.8	2,963.6	394.9	2,989.8	0.00	0.00	0.00
12,600.0	90.53	7.59	9,690.9	3,062.7	408.1	3,089.8	0.00	0.00	0.00
12,700.0	90.53	7.59	9,689.9	3,161.9	421.3	3,189.8	0.00	0.00	0.00
12,800.0	90.53	7.59	9,689.0	3,261.0	434.5	3,289.8	0.00	0.00	0.00
12,900.0	90.53	7.59	9,688.1	3,360.1	447.7	3,389.8	0.00	0.00	0.00
13,000.0	90.53	7.59	9,687.2	3,459.2	460.9	3,489.8	0.00	0.00	0.00
13,100.0	90.53	7.59	9,686.2	3,558.3	474.1	3,589.8	0.00	0.00	0.00
13,200.0	90.53	7.59	9,685.3	3,657.5	487.3	3,689.8	0.00	0.00	0.00
13,300.0	90.53	7.59	9,684.4	3,756.6	500.5	3,789.8	0.00	0.00	0.00

Nexus Directional Solutions, LP

Planning Report

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 2H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	WELL @ 3259.7usft (Original Well Elev)
Project:	Lea County, NM	**MD Reference:**	WELL @ 3259.7usft (Original Well Elev)
Site:	8115 JV-P Mesa B COM	**North Reference:**	Grid
Well:	2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,400.0	90.53	7.59	9,683.5	3,855.7	513.7	3,889.8	0.00	0.00	0.00
13,500.0	90.53	7.59	9,682.5	3,954.8	526.9	3,989.8	0.00	0.00	0.00
13,600.0	90.53	7.59	9,681.6	4,053.9	540.2	4,089.8	0.00	0.00	0.00
13,700.0	90.53	7.59	9,680.7	4,153.1	553.4	4,189.8	0.00	0.00	0.00
13,800.0	90.53	7.59	9,679.8	4,252.2	566.6	4,289.8	0.00	0.00	0.00
13,900.0	90.53	7.59	9,678.8	4,351.3	579.8	4,389.8	0.00	0.00	0.00
14,000.0	90.53	7.59	9,677.9	4,450.4	593.0	4,489.7	0.00	0.00	0.00
14,100.0	90.53	7.59	9,677.0	4,549.5	606.2	4,589.7	0.00	0.00	0.00
14,200.0	90.53	7.59	9,676.1	4,648.7	619.4	4,689.7	0.00	0.00	0.00
14,300.0	90.53	7.59	9,675.1	4,747.8	632.6	4,789.7	0.00	0.00	0.00
14,315.2	90.53	7.59	9,675.0	4,762.8	634.6	4,804.9	0.00	0.00	0.00
TD at 14315.2 - 8115 JV-P Mesa B #2H PBHL									

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
8115 JV-P Mesa B #2H I - plan hits target center - Point	0.00	0.01	9,675.0	4,762.8	634.6	387,868.50	726,056.30	32° 3' 51.354 N	103° 36' 12.982 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
9,237.5	9,237.5	0.0	0.0	Start Build 12.00
9,992.0	9,715.0	477.7	63.6	Start 4323.2 hold at 9992.0 MD
14,315.2	9,675.0	4,762.8	634.6	TD at 14315.2

NEXUS DIRECTIONAL SOLUTIONS, L.P.

8115 JV-P Mesa B Com 2H
Lea County, NM
Northing: (Y) 383105.70
Easting: (X) 725421.70
Design #1

WELL DETAILS:

WELL @ 3259.7usft (Original Well Elev)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	383105.70	725421.70	32° 3' 4.264 N	103° 36' 20.730 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
9237.5	0.00	0.00	9237.5	0.0	0.0	0.00	0.00	0.0	
9992.0	90.53	7.59	9715.0	477.7	63.6	12.00	7.59	481.9	
14315.2	90.53	7.59	9675.0	4762.8	634.6	0.00	0.00	4804.9	8115 JV-P Mesa B #2H PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
8115 JV-P Mesa B #2H PBHL	9675.0	4762.8	634.6	387868.50	726056.30

LEGEND

Design #1

Matt Shipp
11:00, December 17 2013

Nexus Directional Solutions
3925 CR 1285
Odessa TX 79765

Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.90°

Magnetic Field
Strength: 48264.7snT
Dip Angle: 59.96°
Date: 11/26/2013
Model: IGRF2010

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001

Local Origin: Well 2H, Grid North

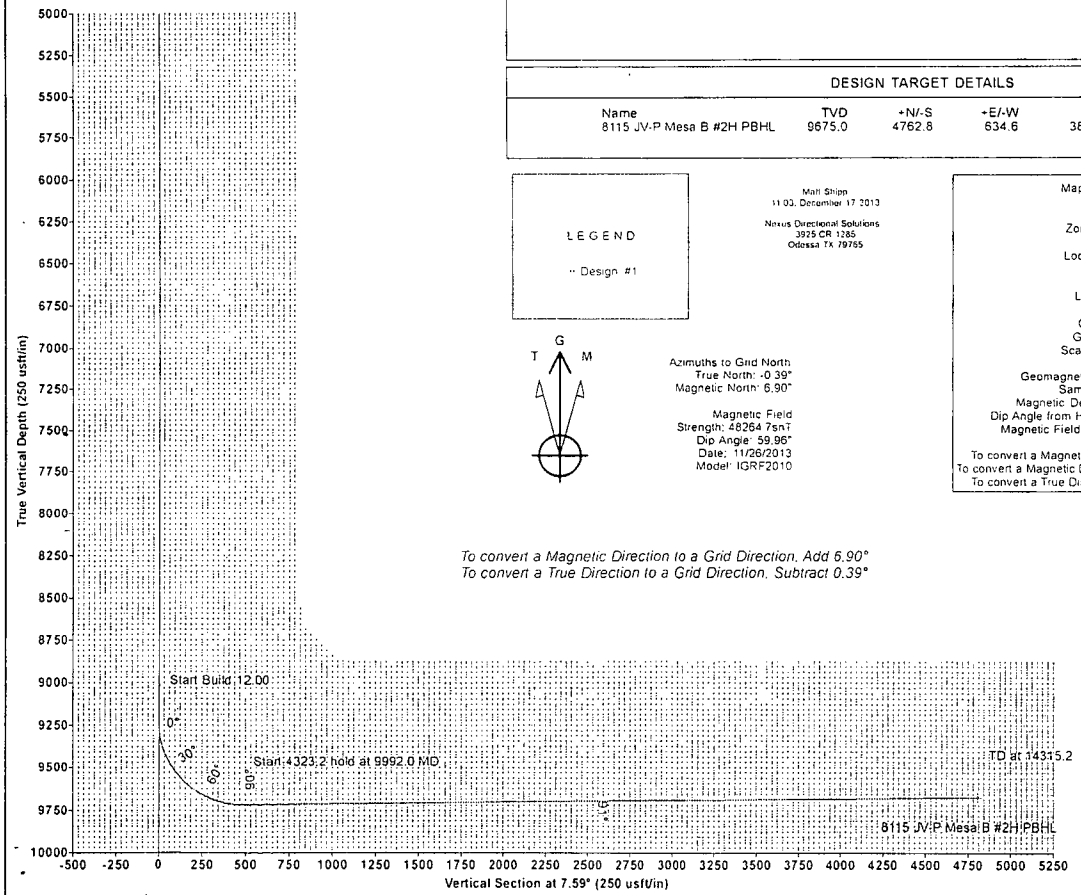
Latitude: 32° 3' 4.264 N
Longitude: 103° 36' 20.730 W

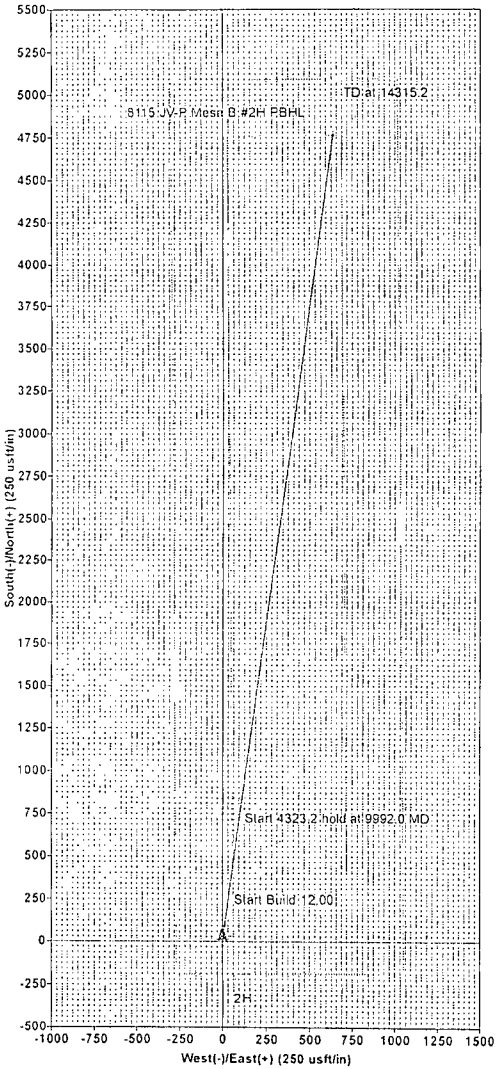
Grid East: 725421.70
Grid North: 383105.70
Scale Factor: 1.000

Geomagnetic Model: IGRF2010
Sample Date: 26-Nov-13
Magnetic Declination: 7.29°
Dip Angle from Horizontal: 59.96°
Magnetic Field Strength: 48265

To convert a Magnetic Direction to a Grid Direction, Add 6.90°
To convert a Magnetic Direction to a True Direction, Add 7.29° East
To convert a True Direction to a Grid Direction, Subtract 0.39°

To convert a Magnetic Direction to a Grid Direction, Add 6.90°
To convert a True Direction to a Grid Direction, Subtract 0.39°





New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 7 Township: 26S Range: 33E

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-basin Code	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02270	C	LE	1	1	2	27	26S	33E	636063	3543722	150	125	25
C 02273		LE		1	2	21	26S	33E	634549	3545134*	160	120	40
C 02285 POD1	C	LE	1	4	4	03	26S	33E	636613	3548855	220	220	0
C 02286	CUB	LE	3	4	4	03	26S	33E	636470	3548714	220	175	45
C 02287	CUB	LE	3	4	4	03	26S	33E	636427	3548708	220		
C 02288	CUB	LE	4	4	4	03	26S	33E	636646	3548758	220	180	40
C 02289	CUB	LE	4	4	4	03	26S	33E	636612	3548675*	200	160	40
C 02290	CUB	LE	4	4	4	03	26S	33E	636538	3548770	200	160	40
C 02293	CUB	LE	2	2	1	14	26S	33E	637501	3546975	200	135	65
C 02294	CUB	LE	4	4	3	11	26S	33E	637465	3547003	200	145	55
C 02295	CUB	LE	2	2	4	12	26S	33E	639850	3547710*	250	200	50
C 03577 POD1	C	LE	3	3	3	22	26S	33E	636010	3543771	750	110	640
C 03596 POD1	C	LE	3	3	4	22	26S	33E	636017	3543756	225		

Average Depth to Water: **157 feet**

Minimum Depth: **110 feet**

Maximum Depth: **220 feet**

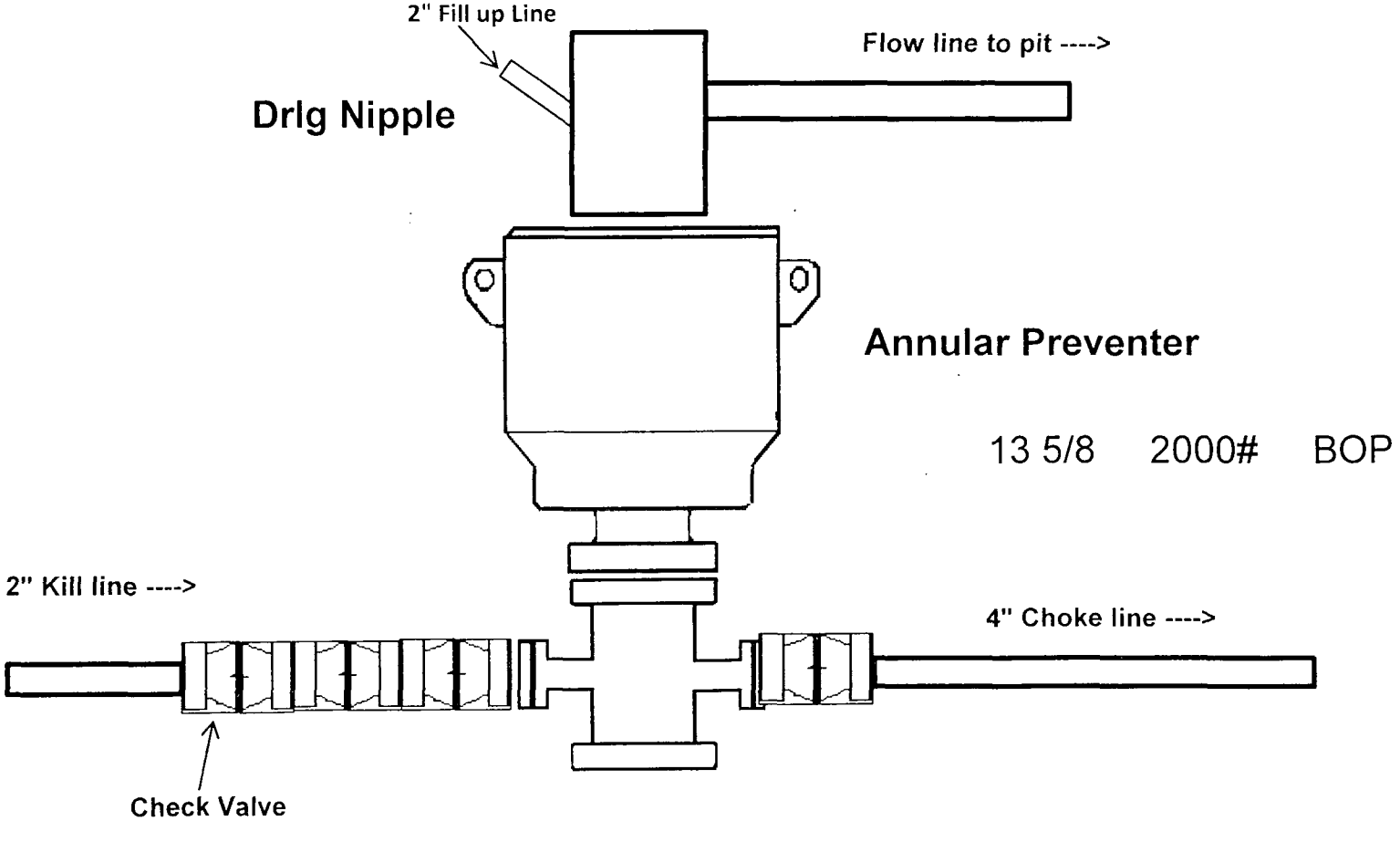
Record Count: 13

PLSS Search:

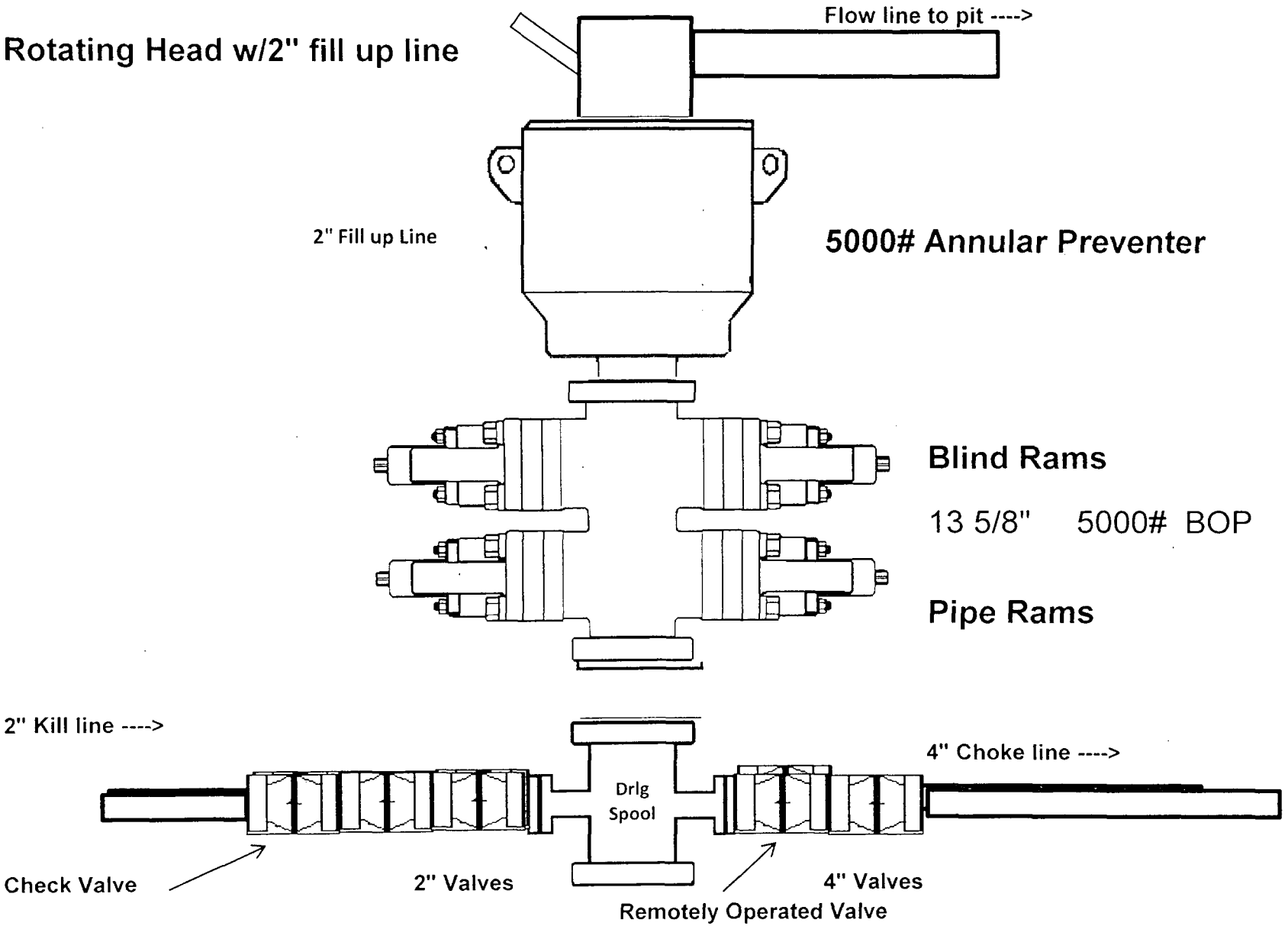
Township: 26S Range: 33E

*UTM location was derived from PLSS - see Help

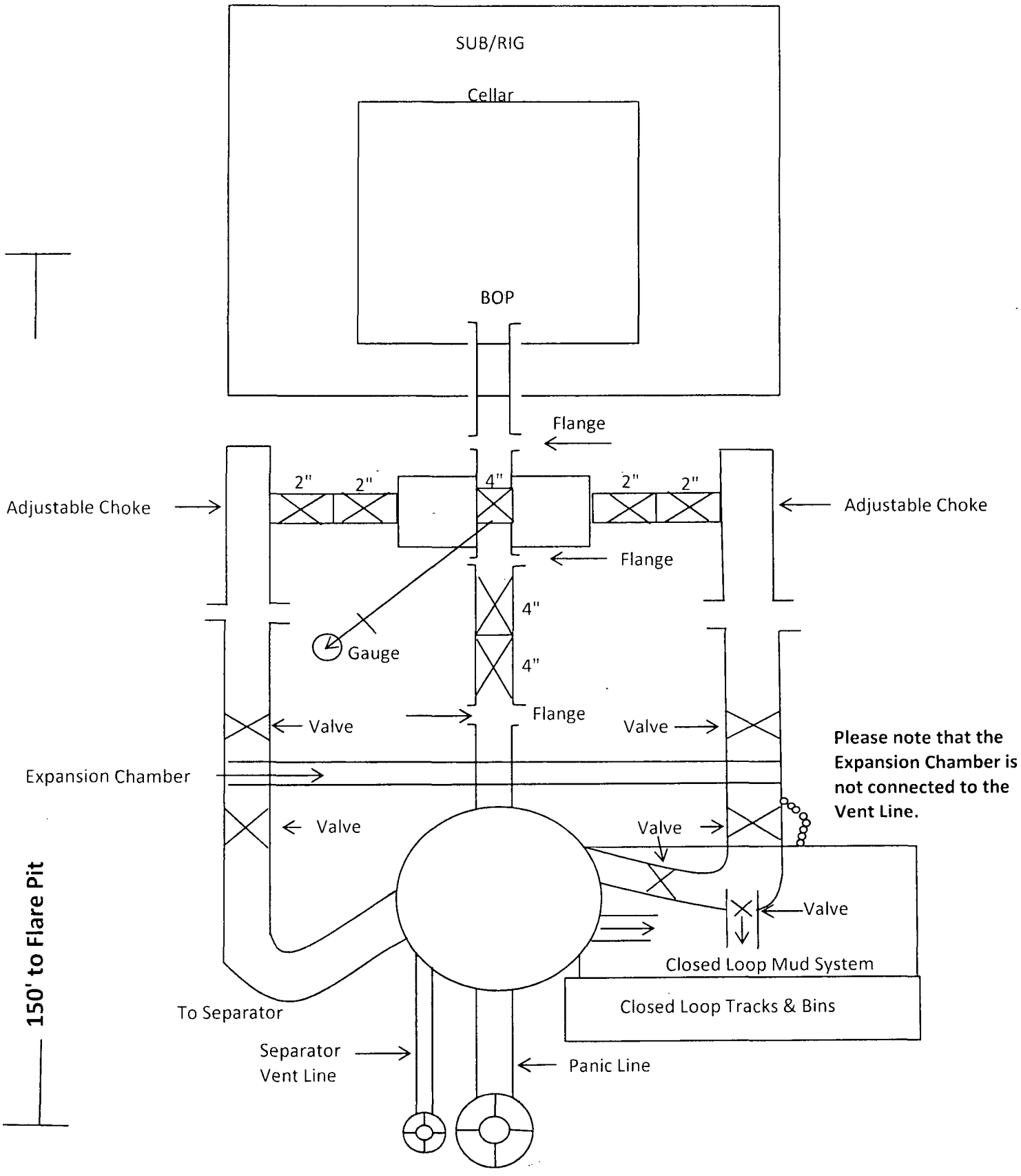
2,000 psi BOP Schematic



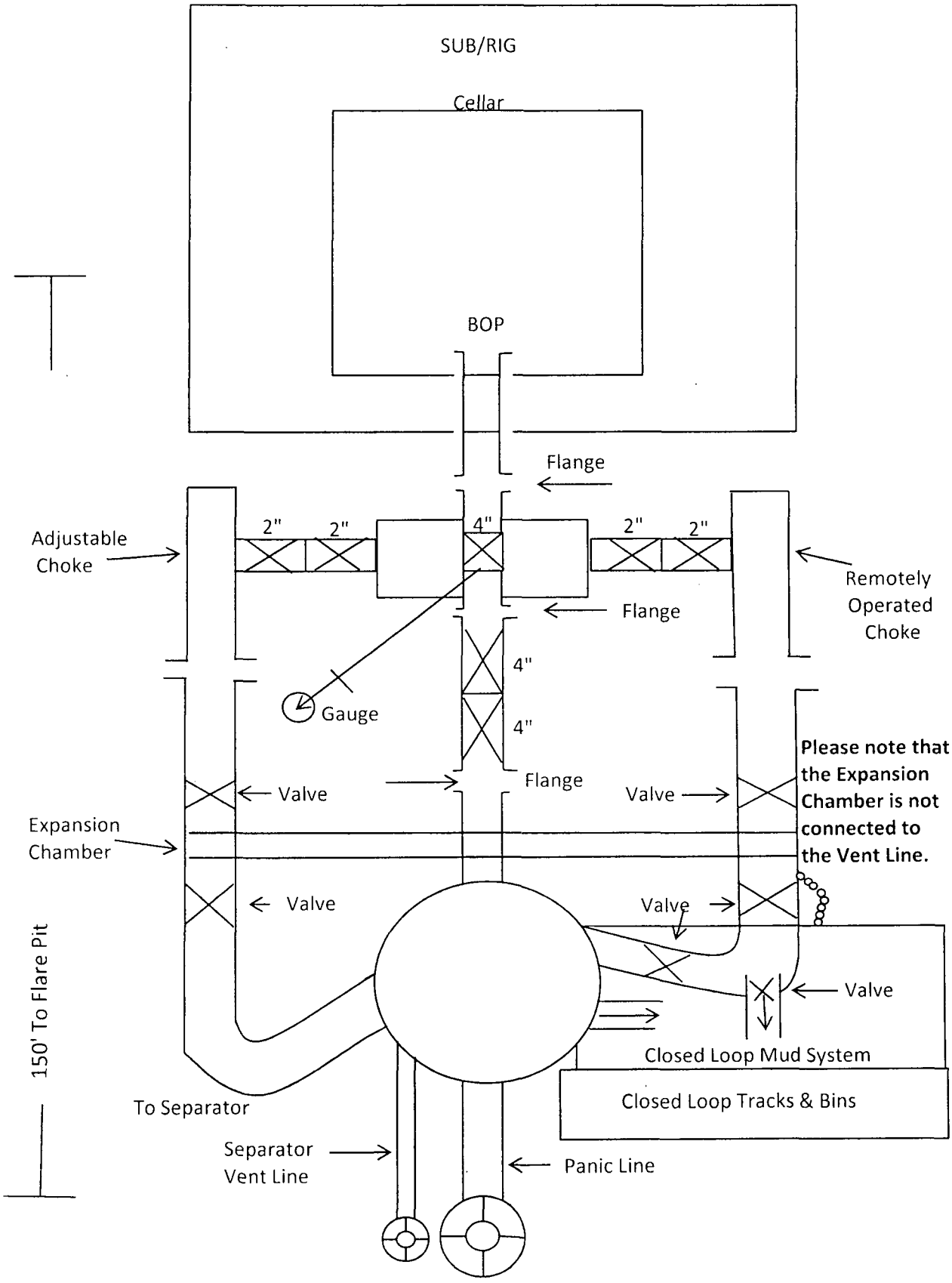
5,000 psi BOP Schematic



2M Choke Manifold Equipment



5M Choke Manifold Equipment



BTA Oil Producers, LLC

Rig Plat & Closed Loop Equipment Diagram

Well pad will be 340' X 340' with cellar in center of pad

Flare Lines will be from both Choke Manifold & Separator to edge of location which is +/- 170'

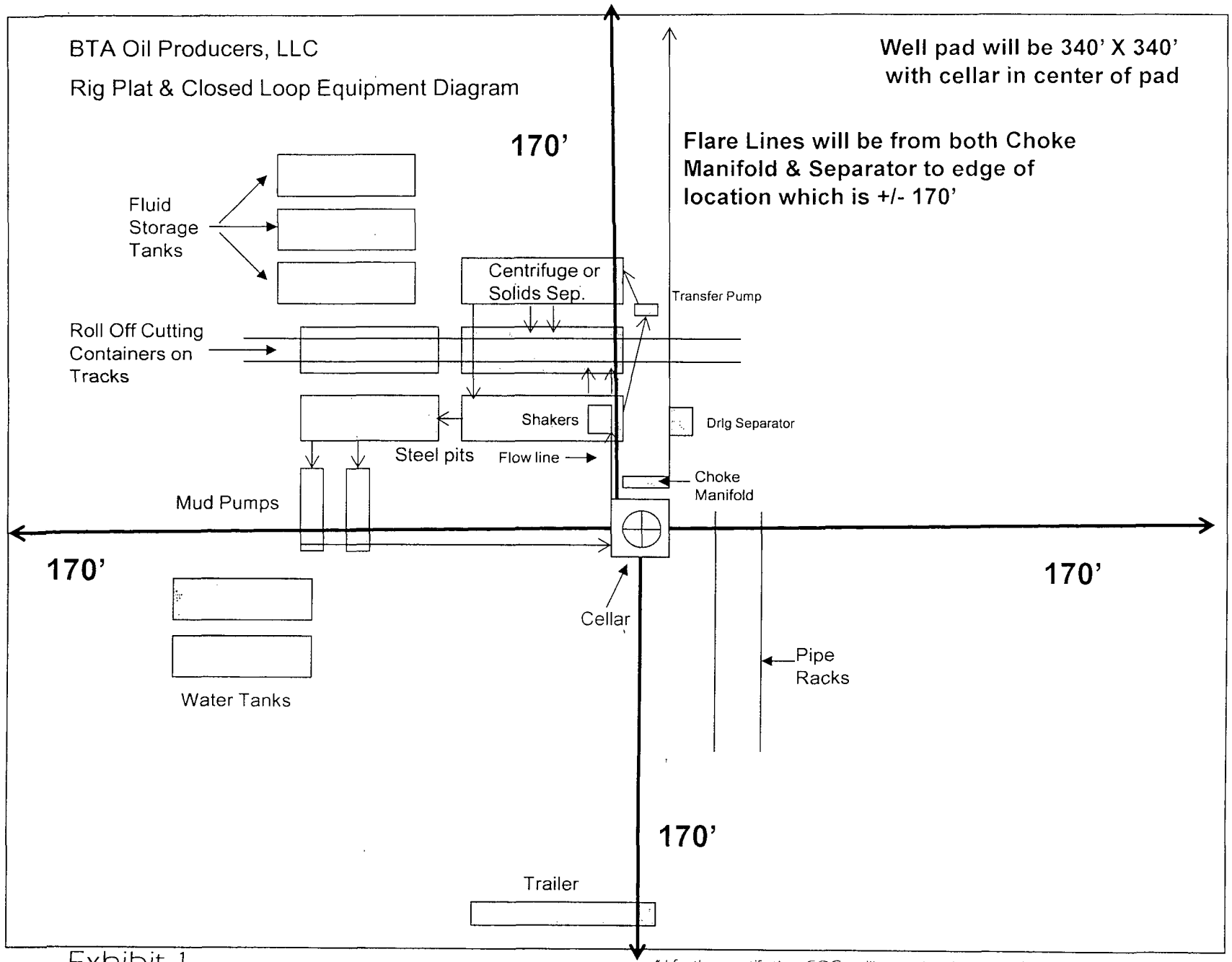


Exhibit 1

"I further certify that COG will comply with Rule 19.15.17 NMAC by using a Closed Loop System."

Well pad will be 340' X 340' with cellar in center of pad

BTA Oil Producers LLC
H_2S Equipment Schematic
Terrain: Shinnery Sand Hills.

Secondary egress.