

HOBBS OCD
OCD Hobbs

OCT 26 2015

RECEIVED

15-624

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMNM015091	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name ---	
2. Name of Operator BTA OIL PRODUCERS, LLC		7. If Unit or CA Agreement, Name and No. ---	
3a. Address 104 South Pecos Midland, TX 79701		8. Lease Name and Well No. Rojo D 7811 JV-P Com #3H	
3b. Phone No. (include area code) 432-682-3753		9. API Well No. 30-025-42899	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 210' FNL & 2178' FEL Unit Letter B (NWNE) SHL Sec 22-T25S-R33E At proposed prod. Zone 330' FSL & 2178' FEL Unit Letter O (SWSE) BHL Sec 22-T25S-R33E		10. Field and Pool, or Exploratory Red Hills; Upper Bone Spring Shale	
14. Distance in miles and direction from nearest town or post office* Approximately 20 miles from Jal		11. Sec., T.R.M. or Blk and Survey or Area Section 22 - T25S - R33E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. Unit line, if any) 210'		12. County or Parish Lea County	
16. No. of acres in lease 840		13. State NM	
17. Spacing Unit dedicated to this well 160		18. Distance from location* to nearest well, drilling, completed, applied for, on this lease, ft. SHL: 924' (Rojo D 7811 JV-P #2H) BHL: None on lease	
19. Proposed Depth TVD: 9,345' MD: 13,873'		20. BLM/BIA Bond No. on file NMB1195 & NMB000849	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3364.7' GL		22. Approximate date work will start* 7/1/2015	
		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. | 4. Bond to cover the operations unless covered by an existing bond on file (see item 20 above). |
| 2. A Drilling Plan | 5. Operator certification |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>Pam Inskip</i>	Name (Printed/Typed) Pam Inskip	Date 4/23/2015
Title Regulatory Administrator		
Approved by (Signature) <i>STEPHEN J. CAFFEY</i>	Name (Printed/Typed)	Date OCT 23 2015
Title FOR FIELD MANAGER		
Office BLM-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 thereon.

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)

Witness Surface Casing

*(Instructions on page 2)

Carlsbad Controlled Water Basin

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

KZ
10/26/2015

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

OCT 28 2015

OCT 26 2015

1. Geologic Formations

RECEIVED

TVD of target	9345'	Pilot hole depth	NA
MD at TD:	13,873'	Deepest expected fresh water:	625

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1056	Water	
Top of Salt	1390	Salt	
Base of Salt	4743	Salt	
Lamar	4989	Barren	
Bell Canyon	5021	Oil/Gas	
Cherry Canyon	6093	Oil/Gas	
U. Avalon Shale	9214	Oil/Gas Target Zone	
L. Avalon Shale	9798	Oil/Gas	

*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
17.5"	0	1100 1170'	13.375"	54.5	J55	STC	1.33	1.09	8.6
12.25"	0	4300	9.625"	40	J55	BTC	1.125	1.515	3.15
12.25"	4300	4995	9.625"	40	HCL80	BTC	1.60	2.20	32.7
8.75"	0	13,873	5.5"	17	P110	LTC	1.50	2.28	2.8
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N

If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft ³ / sack	H ₂ O gal/s k	500# Comp. Strength (hours)	Slurry Description
Surf.	625	13.5	1.75	9	12	Lead: Class C + 4% Gel + 2% CaCl ₂
	600	14.8	1.34	4.8	8	Tail: Class C + 2% CaCl ₂
Inter.	1200	12.7	1.90	10	12	1 st stage Lead: Econocem HLC 65:35:6 + 5% Salt
	250	14.8	1.34	6.4	8	1 st stage Tail: Class C + 2% CaCl
Prod.	550	10.4	3.38	19	72	1 st Lead: Halliburton Tune Lite Blend
	1225	14.4	1.24	5.7	20	1 st Tail: Versacem 50:50:2 Class H + 1% Salt

Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	75%
Production	4495'	20% OH in Lateral (KOP to EOL) – 40% OH in Vertical (to KOP) - Tie In 500' Inside 9-5/8" Casing Shoe @ 4995' + 100 sx Lead

4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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BTA Oil Producers, LLC – Rojo D 7811 JV-P Com 3H

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12-1/4"	13-5/8"	2M	Annular	x	2000 psi
			Blind Ram		2M
			Pipe Ram		
			Double Ram		
			Other*		
8-3/4"	11"	3M	Annular	x	50% testing pressure
			Blind Ram	x	3M
			Pipe Ram	x	
			Double Ram		
			Other*		
			Annular		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		

*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

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. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or 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. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
N	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
N	Are anchors required by manufacturer?
N	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. shoe	FW Gel	8.6-8.8	28-34	N/C
Surf csg	Int shoe	Saturated Brine	10.0-10.2	28-34	N/C
Int shoe	TD@ 13,873	Cut Brine	8.5-9.3	28-34	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
---	-----------------------------

6. Logging and Testing Procedures

Logging, Coring and Testing.	
Y	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
N	No Logs are planned based on well control or offset log information.
N	Drill stem test? If yes, explain
N	Coring? If yes, explain

Additional logs planned		Interval
N	Resistivity	
N	Density	
Y	CBL	Production casing (If cement not circulated to surface)
Y	Mud log	Intermediate shoe to TD
N	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4115 psi at 9360' TVD
Abnormal Temperature	NO

Sufficient supplies of Paper/LCM for periodic sweeps to control seepage and losses will be maintained on location.

Hydrogen Sulfide (H ₂ S) monitors will be installed prior to drilling out the surface shoe. If H ₂ S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H ₂ S is present
Y	H ₂ S Plan attached

8. Other facets of operation

Is this a walking operation? NO If yes, describe.

Will be pre-setting casing? NO If yes, describe.

Attachments

- Directional Plan
- BOP & Choke Schematics
- C102 and supporting maps
- Rig plat
- H2S schematic
- H2S contingency plan
- Interim reclamation plat

BTA Oil Producers LLC.

Lea County, NM

Rojo D 7811 JV-P Com

#3H

OH

Plan: Design #1

Standard Planning Report

21 April, 2015

Wellplanning

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #3H
Company:	BTA Oil Producers LLC.	TVD Reference:	WELL @ 3382.7usft (Original Well Elev)
Project:	Lea County, NM	MD Reference:	WELL @ 3382.7usft (Original Well Elev)
Site:	Rojo D 7811 JV-P	North Reference:	Grid
Well:	#3H	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		Rojo D 7811 JV-P			
Site Position:		Northing:	409,181.50 usft	Latitude:	32° 7' 21.235 N
From:	Map	Easting:	740,890.90 usft	Longitude:	103° 33' 18.814 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.41 °

Well	#3H					
Well Position	+N/-S	-3.5 usft	Northing:	409,178.00 usft	Latitude:	32° 7' 21.266 N
	+E/-W	-923.8 usft	Easting:	739,967.10 usft	Longitude:	103° 33' 29.556 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,364.7 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/17/2015	7.10	60.00	48,173

Design	Design #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.66

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	
8,867.5	0.00	0.00	8,867.5	0.0	0.0	0.00	0.00	0.00	0.00	
9,619.8	90.27	179.66	9,345.0	-479.7	2.8	12.00	12.00	0.00	179.66	
13,872.7	90.27	179.66	9,325.0	-4,732.5	28.1	0.00	0.00	0.00	0.00	PBHL(JVPD#3H)

Wellplanning

Planning Report

Database: EDM 5000.1 Single User Db
 Company: BTA Oil Producers LLC.
 Project: Lea County, NM
 Site: Rojo D 7811 JV-P
 Well: #3H
 Wellbore: OH
 Design: Design #1

Local Co-ordinate Reference: Well #3H
 TVD Reference: WELL @ 3382.7usft (Original Well Elev)
 MD Reference: WELL @ 3382.7usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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

Wellplanning

Planning Report

Database: EDM 5000.1 Single User Db
 Company: BTA Oil Producers LLC.
 Project: Lea County, NM
 Site: Rojo D 7811 JV-P
 Well: #3H
 Wellbore: OH
 Design: Design #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Well #3H
 WELL @ 3382.7usft (Original Well Elev)
 WELL @ 3382.7usft (Original Well Elev)
 Grid
 Minimum Curvature

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
8,867.5	0.00	0.00	8,867.5	0.0	0.0	0.0	0.00	0.00	0.00
KOP - 8867.5 'MD, 0.00° INC, 0.00° AZI									
8,875.0	0.90	179.66	8,875.0	-0.1	0.0	0.1	12.00	12.00	0.00
8,900.0	3.90	179.66	8,900.0	-1.1	0.0	1.1	12.00	12.00	0.00
8,925.0	6.90	179.66	8,924.9	-3.5	0.0	3.5	12.00	12.00	0.00
8,950.0	9.90	179.66	8,949.6	-7.1	0.0	7.1	12.00	12.00	0.00
8,975.0	12.90	179.66	8,974.1	-12.0	0.1	12.0	12.00	12.00	0.00
9,000.0	15.90	179.66	8,998.3	-18.3	0.1	18.3	12.00	12.00	0.00
9,025.0	18.90	179.66	9,022.2	-25.7	0.2	25.7	12.00	12.00	0.00
9,050.0	21.90	179.66	9,045.6	-34.5	0.2	34.5	12.00	12.00	0.00
9,075.0	24.90	179.66	9,068.5	-44.4	0.3	44.4	12.00	12.00	0.00
9,100.0	27.90	179.66	9,090.9	-55.5	0.3	55.5	12.00	12.00	0.00
9,125.0	30.90	179.66	9,112.7	-67.8	0.4	67.8	12.00	12.00	0.00
9,150.0	33.90	179.66	9,133.8	-81.2	0.5	81.2	12.00	12.00	0.00
9,175.0	36.90	179.66	9,154.2	-95.6	0.6	95.6	12.00	12.00	0.00
9,200.0	39.90	179.66	9,173.8	-111.2	0.7	111.2	12.00	12.00	0.00
9,225.0	42.90	179.66	9,192.5	-127.7	0.8	127.7	12.00	12.00	0.00
9,250.0	45.90	179.66	9,210.4	-145.2	0.9	145.2	12.00	12.00	0.00

Wellplanning Planning Report

Database: EDM 5000.1 Single User Db
Company: BTA Oil Producers LLC.
Project: Lea County, NM
Site: Rojo D 7811 JV-P
Well: #3H
Wellbore: OH
Design: Design #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well #3H
WELL @ 3382.7usft (Original Well Elev)
WELL @ 3382.7usft (Original Well Elev)
Grid
Minimum Curvature

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)
9,275.0	48.90	179.66	9,227.3	-163.6	1.0	163.6	12.00	12.00	0.00
9,300.0	51.90	179.66	9,243.2	-182.8	1.1	182.8	12.00	12.00	0.00
9,325.0	54.90	179.66	9,258.1	-202.9	1.2	202.9	12.00	12.00	0.00
9,350.0	57.90	179.66	9,272.0	-223.7	1.3	223.7	12.00	12.00	0.00
9,375.0	60.89	179.66	9,284.7	-245.2	1.5	245.2	12.00	12.00	0.00
9,400.0	63.89	179.66	9,296.3	-267.4	1.6	267.4	12.00	12.00	0.00
9,425.0	66.89	179.66	9,306.7	-290.1	1.7	290.1	12.00	12.00	0.00
9,450.0	69.89	179.66	9,315.9	-313.4	1.9	313.4	12.00	12.00	0.00
9,475.0	72.89	179.66	9,323.9	-337.0	2.0	337.1	12.00	12.00	0.00
9,500.0	75.89	179.66	9,330.6	-361.1	2.1	361.1	12.00	12.00	0.00
9,525.0	78.89	179.66	9,336.1	-385.5	2.3	385.5	12.00	12.00	0.00
9,550.0	81.89	179.66	9,340.2	-410.2	2.4	410.2	12.00	12.00	0.00
9,575.0	84.89	179.66	9,343.1	-435.0	2.6	435.0	12.00	12.00	0.00
9,600.0	87.89	179.66	9,344.7	-459.9	2.7	459.9	12.00	12.00	0.00
9,619.8	90.27	179.66	9,345.0	-479.7	2.8	479.8	12.00	12.00	0.00
EOC- 9619.8 'MD, 90.27° INC, 179.66° AZI									
9,700.0	90.27	179.66	9,344.6	-559.9	3.3	559.9	0.00	0.00	0.00
9,800.0	90.27	179.66	9,344.2	-659.9	3.9	659.9	0.00	0.00	0.00
9,900.0	90.27	179.66	9,343.7	-759.9	4.5	759.9	0.00	0.00	0.00
10,000.0	90.27	179.66	9,343.2	-859.9	5.1	859.9	0.00	0.00	0.00
10,100.0	90.27	179.66	9,342.7	-959.9	5.7	959.9	0.00	0.00	0.00
10,200.0	90.27	179.66	9,342.3	-1,059.9	6.3	1,059.9	0.00	0.00	0.00
10,300.0	90.27	179.66	9,341.8	-1,159.9	6.9	1,159.9	0.00	0.00	0.00
10,400.0	90.27	179.66	9,341.3	-1,259.9	7.5	1,259.9	0.00	0.00	0.00
10,500.0	90.27	179.66	9,340.9	-1,359.9	8.1	1,359.9	0.00	0.00	0.00
10,600.0	90.27	179.66	9,340.4	-1,459.9	8.7	1,459.9	0.00	0.00	0.00
10,700.0	90.27	179.66	9,339.9	-1,559.9	9.3	1,559.9	0.00	0.00	0.00
10,800.0	90.27	179.66	9,339.4	-1,659.9	9.9	1,659.9	0.00	0.00	0.00
10,900.0	90.27	179.66	9,339.0	-1,759.9	10.4	1,759.9	0.00	0.00	0.00
11,000.0	90.27	179.66	9,338.5	-1,859.9	11.0	1,859.9	0.00	0.00	0.00
11,100.0	90.27	179.66	9,338.0	-1,959.9	11.6	1,959.9	0.00	0.00	0.00
11,200.0	90.27	179.66	9,337.6	-2,059.9	12.2	2,059.9	0.00	0.00	0.00
11,300.0	90.27	179.66	9,337.1	-2,159.9	12.8	2,159.9	0.00	0.00	0.00
11,400.0	90.27	179.66	9,336.6	-2,259.9	13.4	2,259.9	0.00	0.00	0.00
11,500.0	90.27	179.66	9,336.1	-2,359.9	14.0	2,359.9	0.00	0.00	0.00
11,600.0	90.27	179.66	9,335.7	-2,459.9	14.6	2,459.9	0.00	0.00	0.00
11,700.0	90.27	179.66	9,335.2	-2,559.9	15.2	2,559.9	0.00	0.00	0.00
11,800.0	90.27	179.66	9,334.7	-2,659.9	15.8	2,659.9	0.00	0.00	0.00
11,900.0	90.27	179.66	9,334.3	-2,759.9	16.4	2,759.9	0.00	0.00	0.00
12,000.0	90.27	179.66	9,333.8	-2,859.9	17.0	2,859.9	0.00	0.00	0.00
12,100.0	90.27	179.66	9,333.3	-2,959.9	17.6	2,959.9	0.00	0.00	0.00
12,200.0	90.27	179.66	9,332.8	-3,059.9	18.2	3,059.9	0.00	0.00	0.00
12,300.0	90.27	179.66	9,332.4	-3,159.9	18.8	3,159.9	0.00	0.00	0.00
12,400.0	90.27	179.66	9,331.9	-3,259.9	19.3	3,259.9	0.00	0.00	0.00
12,500.0	90.27	179.66	9,331.4	-3,359.9	19.9	3,359.9	0.00	0.00	0.00
12,600.0	90.27	179.66	9,331.0	-3,459.8	20.5	3,459.9	0.00	0.00	0.00
12,700.0	90.27	179.66	9,330.5	-3,559.8	21.1	3,559.9	0.00	0.00	0.00
12,800.0	90.27	179.66	9,330.0	-3,659.8	21.7	3,659.9	0.00	0.00	0.00
12,900.0	90.27	179.66	9,329.5	-3,759.8	22.3	3,759.9	0.00	0.00	0.00
13,000.0	90.27	179.66	9,329.1	-3,859.8	22.9	3,859.9	0.00	0.00	0.00
13,100.0	90.27	179.66	9,328.6	-3,959.8	23.5	3,959.9	0.00	0.00	0.00
13,200.0	90.27	179.66	9,328.1	-4,059.8	24.1	4,059.9	0.00	0.00	0.00
13,300.0	90.27	179.66	9,327.7	-4,159.8	24.7	4,159.9	0.00	0.00	0.00
13,400.0	90.27	179.66	9,327.2	-4,259.8	25.3	4,259.9	0.00	0.00	0.00

Wellplanning

Planning Report

Database: EDM 5000.1 Single User Db
 Company: BTA Oil Producers LLC.
 Project: Lea County, NM
 Site: Rojo D 7811 JV-P
 Well: #3H
 Wellbore: OH
 Design: Design #1

Local Co-ordinate Reference: Well #3H
 TVD Reference: WELL @ 3382.7usft (Original Well Elev)
 MD Reference: WELL @ 3382.7usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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)
13,500.0	90.27	179.66	9,326.7	-4,359.8	25.9	4,359.9	0.00	0.00	0.00
13,600.0	90.27	179.66	9,326.2	-4,459.8	26.5	4,459.9	0.00	0.00	0.00
13,700.0	90.27	179.66	9,325.8	-4,559.8	27.1	4,559.9	0.00	0.00	0.00
13,800.0	90.27	179.66	9,325.3	-4,659.8	27.7	4,659.9	0.00	0.00	0.00
13,872.7	90.27	179.66	9,325.0	-4,732.5	28.1	4,732.6	0.00	0.00	0.00

TD at 13872.7 - PBHL(JVPD#3H)

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL(JVPD#3H)	0.00	0.01	9,325.0	-4,732.5	27.7	404,445.50	739,994.80	32° 6' 34.433 N	103° 33' 29.630 W
- plan misses target center by 0.4usft at 13872.7usft MD (9325.0 TVD, -4732.5 N, 28.1 E)									
- Rectangle (sides W100.0 H4,733.0 D0.0)									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,867.5	8,867.5	0.0	0.0	KOP - 8867.5 'MD, 0.00° INC, 0.00° AZI
9,619.8	9,345.0	-479.7	2.8	EOC- 9619.8 'MD, 90.27° INC, 179.66° AZI
13,872.7	9,325.0	-4,732.5	28.1	TD at 13872.7

BTA

BTA Oil Producers LLC.
Project: Lea County, NM
Site: Rojo D 7811 JV-P COM

Well: #3H
Wellbore: OH
Plan: Design #1 (#3H/OH)

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	8867.5	0.00	0.00	8867.5	0.0	0.0	0.00	0.00	0.0
3	9619.8	90.27	179.66	9345.0	-479.7	2.8	12.00	179.66	479.8
4	13872.7	90.27	179.66	9325.0	-4732.5	28.1	0.00	0.00	4732.6

PBHL(JVPD#3H)

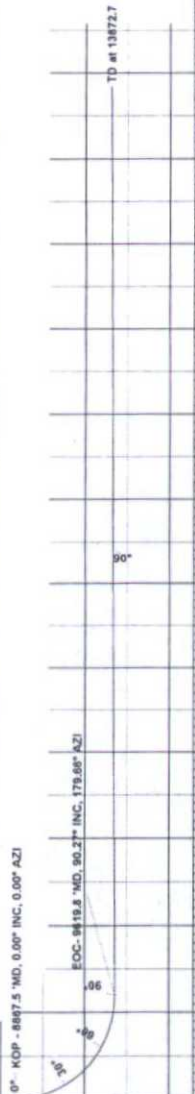
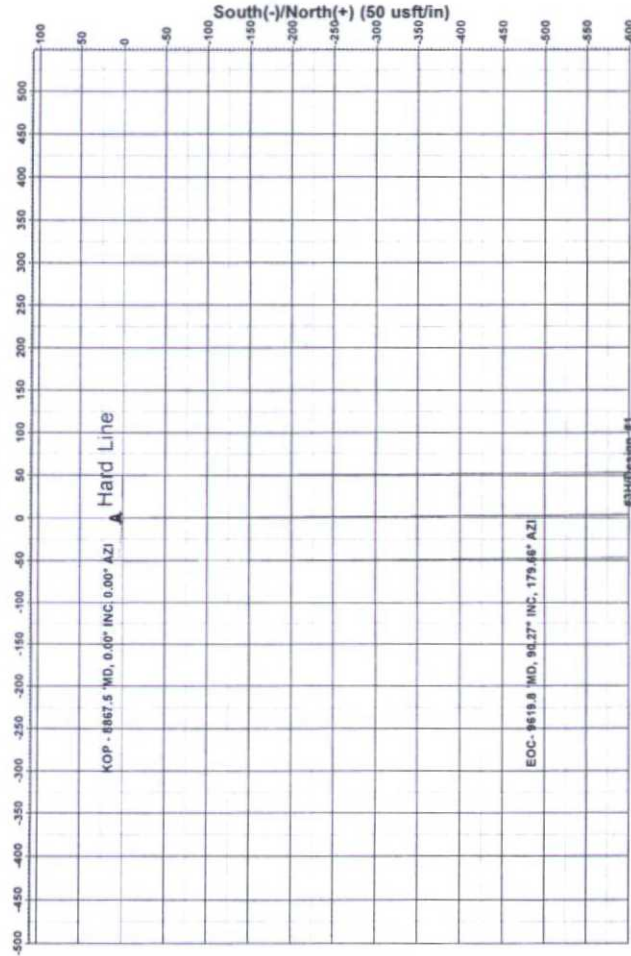
WELL DETAILS: #3H

Ground Elevation: 3364.7
RKB Elevation: WELL @ 3382.7usft (Original Well Elev)
Rig Name: Original Well Elev

Northing 409178.00
Easting 739967.10
Latitude 32° 7' 21.266 N
Longitude 103° 33' 29.566 W



West(-)/East(+) (50 usft/in)

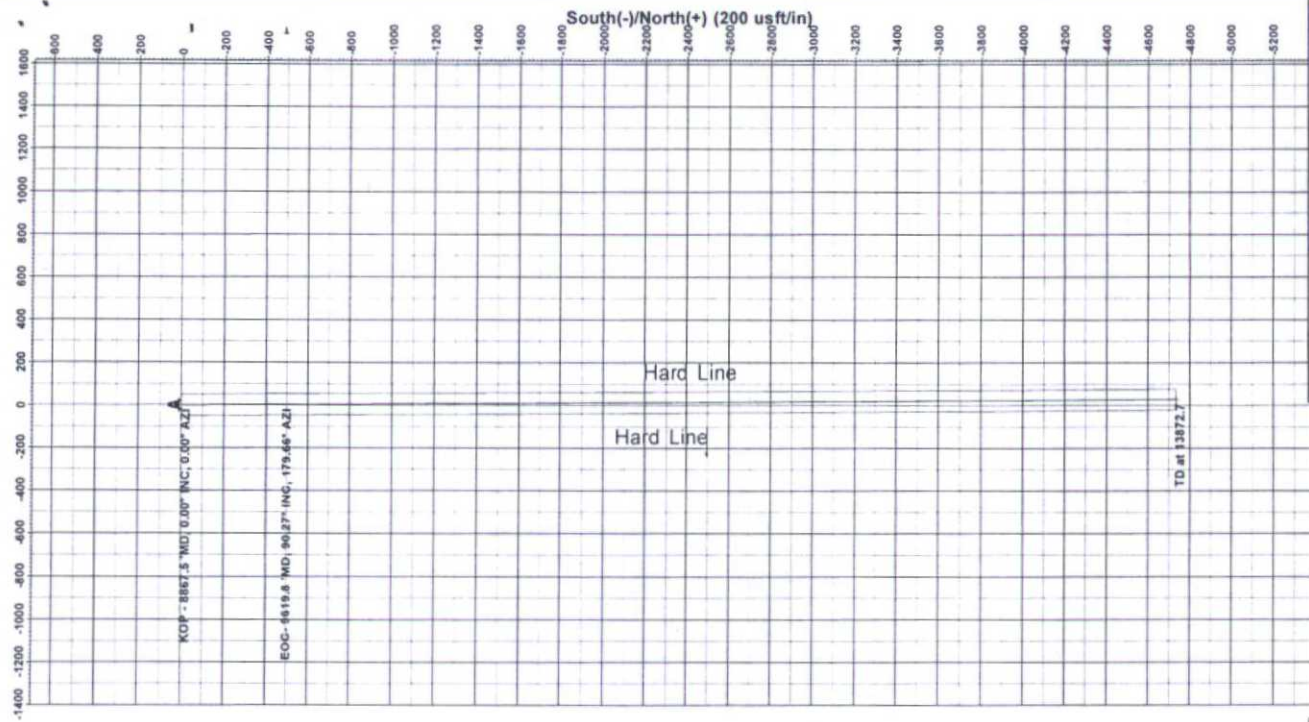


NEXUS
DIRECTIONAL SOLUTIONS, L.P.

Nexus Directional Solutions

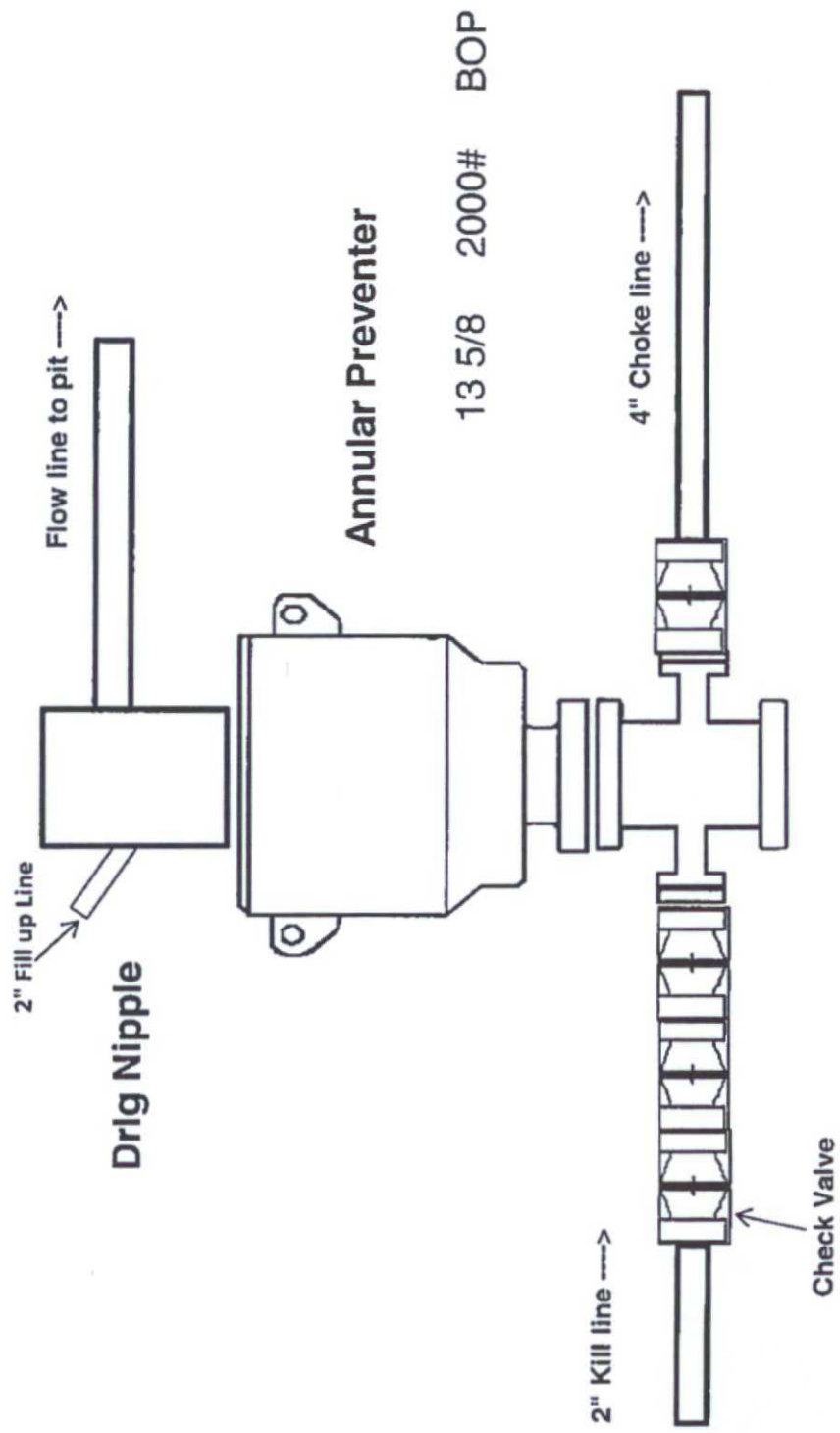
Vertical Section at 179.66° (200 usft/in)

West(-)/East(+) (200 usft/in)

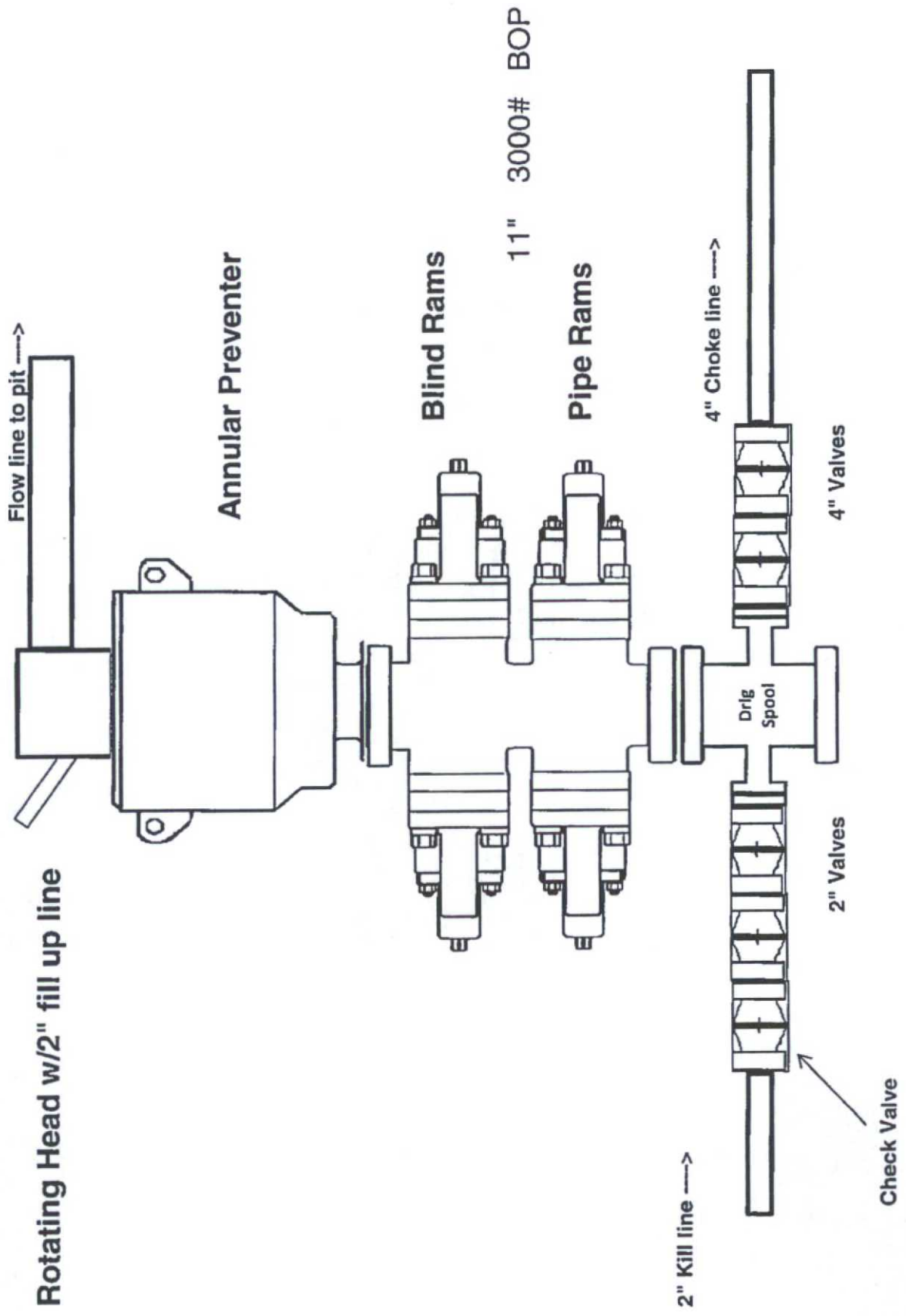


PROJECT DETAILS: Lea County, NM
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid

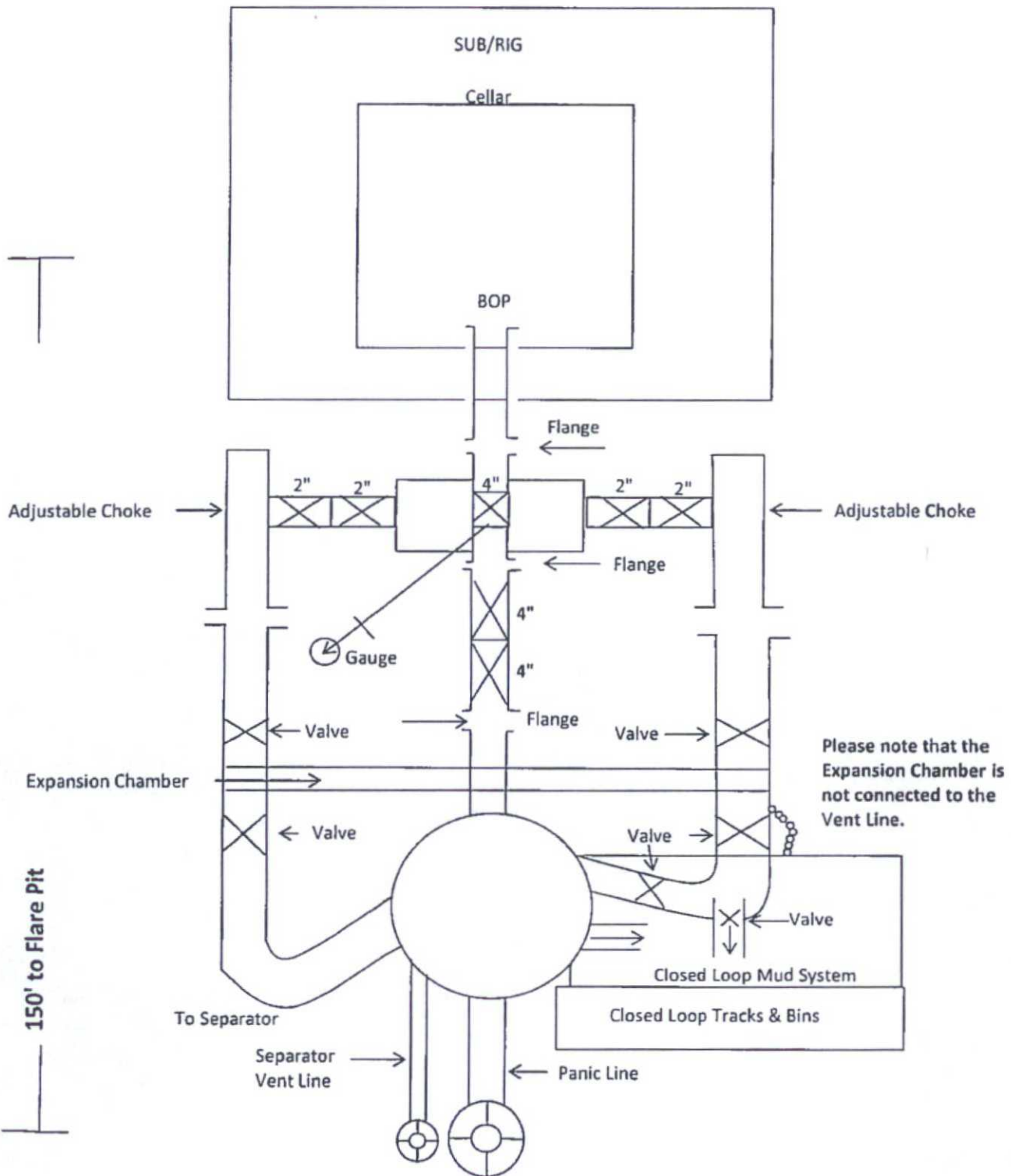
2,000 psi BOP Schematic



3,000 psi BOP Schematic



2M Choke Manifold Equipment



3M Choke Manifold Equipment

