R-111-POTASH

OCD Hobbs
HOBBS OCD
JUL 28 2014
RECEIVED

Form 3160-3
(March 2012)

NORTHODOX LOCATION

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

5. Lease Serial No.
LC-070315

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. (313461)
PALOMA 21 FEDERAL COM 2H

2. Name of Operator FASKEN OIL & RANCH (151416)

9. API Well No.
30-025-41994

3a. Address
6101 HOLIDAY HILL ROAD
MIDLAND, TEXAS 79707

3b. Phone No. *(include area code)*
(432) 687-1777 (CORY FREDRICK)

10. Field and Pool, or Exploratory
LEA; BONE SPRING, SOUTH (37580)

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

At surface 200 FNL & 1650 FWL, SECTION 21 (C)

At proposed prod. zone 2310 FNL & 1870 FWL, SECTION 28 (F)

11. Sec., T. R. M. or Blk. and Survey or Area
SHL: SECTION 21, T. 20 S., R. 34 E.
BHL: SECTION 28, T. 20 S., R. 34 E.

14. Distance in miles and direction from nearest town or post office*
26 MILES SOUTHWEST OF HOBBS, NM

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)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
SHL: 200' BHL: 330'	960	240
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on file**
SHL: 975' (#1) BHL: 1540' (#2)	TVD: 11,083' MD: 18,177'	NM-2729
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3638.8' GL	ASAP	30 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must 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 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 required by the BLM.

25. Signature (Barry W. Hunt) — Name *(Printed/Typed)* BARRY W. HUNT — Date 3/24/14

Title
PERMIT AGENT FOR FASKEN OIL & RANCH

Approved by *(Signature)* /S/ JEANETTE MARTINEZ — Name *(Printed/Typed)* — Date JUL 22 2014

Title
FIELD MANAGER

Office
CARLSBAD FIELD OFFICE

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.

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)

KZ 07/28/14

Capitan Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

PM

Approval Subject to General Requirements & Special Stipulations Attached

JUL 29 2014

CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed 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 Fasken Oil & Ranch, Ltd. 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 13th. day of March 2014.

Signed: Barry W. Hunt

Printed Name: Barry Hunt
Position: Agent for Faskin Oil & Ranch, Ltd.
Address: 1403 Springs Farm Place, Carlsbad, NM 88220
Telephone: (575) 361-4078
E-mail: specialtpermitting@gmail.com

APPLICATION FOR PERMIT TO DRILL
EIGHT POINT DRILLING PLAN
Fasken Oil and Ranch, Ltd.

HOBBS OCD

JUL 28 2014

RECEIVED

Paloma "21" Federal No. 2H COM
SHL: 200' FNL & 1650' FWL, Sec. 21, T20S, R34E
BHL: 2310' FNL & 1870' FWL, Sec. 28, T20S, R34E
Lea County, New Mexico

1. Estimated formation tops, please see below.

2. Water, oil, gas, and/or mineral bearing formations, see below.

KB: 3,664' (estimated)

Formation	Top Est. From KB (TVD)	MD	Bearing
Fresh Water	125'	125'	Fresh Water
Rustler	1513'	1513'	Barren
Salt	1605'	1605'	Barren
Base Salt	3523'	3523'	Barren
Yates	3576'	3576'	Oil/Gas
Reef	3915'	3915'	Fresh Water
Del. Mountain Group	5553'	5553'	Oil/Gas
Bone Springs	8319'	8319'	Oil/Gas
1st Bone Springs	9447'	9447'	Oil/Gas
2nd Bone Springs	9975'	9975'	Oil/Gas
3rd Bone Springs	10,661'	10,661'	Oil/Gas
TD	11,083'	18,177'	Oil/Gas

3. Casing Program:

All casing will be new.

See COA

Hole Size	Interval	Size	Weight	Grade	Thread
17-1/2"	0'-1100'	13-3/8"	48.00#	H-40	ST&C
	1100'-~~1600'~~ 1620'	13-3/8"	54.50#	K-55	ST&C
12-1/4"	0'-5200'	9-5/8"	40.00#	HCK-55	BT&C
8-3/4"	0'-18,177'	5-1/2"	17.00#	HCP-110	Modified BT&C TTRS

Minimum casing design factors used are a 1.8 for tensile strings, 1.125 for collapse, and 1.1 for burst.

4. Pressure Control Equipment:

Exhibit "I". A 13-5/8" 5000 psi working pressure BOP consisting of one set of blind rams, one set of pipe rams, and a 5000 psi annular preventer. A choke manifold and accumulator with floor and remote operating stations and an auxiliary power system. There will also be a rotating head equipped after drilling out from the 9-5/8" casing. A Kelly cock will be installed and maintained in operating condition and a drill string safety valve in the open position will be available on the rig floor. A mud gas separator will also be utilized. The BOP unit will be hydraulically operated. BOP will be operated once a day while drilling and the blind rams will be function tested when out of the hole on trips. No abnormal temperatures or pressures are anticipated on this well.

Before drilling out of the 13-3/8" surface casing, the BOP will be tested to 250 psi low and 2000 psi high by an independent service company. Before drilling out of the 9-5/8" casing the BOP will be tested to 250 psi low and 5000 psi high by an independent service company. The Hydril (annular) will be tested to 250 psi low/2500 psi high.

5. Drilling Fluids Program:

See COA

Depth	Type	Weight	Viscosity	Waterloss
0'-~~1,600'~~ 1620'	Fresh Water	8.4-8.6	28	NC
~~1600'~~-5200'	Brine Water	10.0-10.2	30-32	NC
5200'-11,083'	Cut Brine	8.6-9.0	28-29	NC
11,083'-18,177'	FW/Gel/Starch	8.5-9.5	28-45	<20

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks.

An electronic pit volume totalizer with pit level indicators and alarms will be rigged up as part of the active mud system.

6. Technical Testing/Drilling and Cementing Plans

- DST's: None anticipated.
- Cores: None anticipated.
- Mud Logging: 2-man Mudlogging unit from 5,200' to T.D.
- Electric Logs: MWD/Azimuthal Gamma Ray

See COA

Cementing Design:

13-3/8" Surface Casing: Lead with 800 sx Class "C" with 4% gel, 0.125 lbs/sx cellophane flake, and 0.2% anti foam, mix water 9.126 gal/sk (s.w. 13.5 ppg, yield 1.72 ft^3/sx) tail in with 350 sx Class "C" with 0.2% retarder, mix water 6.373 gal/sk (s.w. 14.8 ppg, yield 1.33 ft^3/sx). Cement will be calculated at 100% excess. Casing will be centralized on bottom 3 joints and then every 4th joint up to surface. TOC will be surface.

9-5/8" Intermediate Casing:

1st stage: Lead with 400 sx Lightweight C with 5% salt, 28.98 lb/sx D035 (extender), 0.03 gal/sx D177 (retarder), 6% D020 (extender), 0.125 lb/sx D130 (celloflake), 0.2% D046 (anti foamer), 0.4% D112 (fluid loss), 2 lb/sx D042 (extender), mix water 11.271 gal/sk (s.w.12.6 ppg, yield 2.07 ft^3/sx) tailed in with 250 sx Class "C" with 0.2% D201 (retarder), mix water 6.373 gal/sk (s.w. 14.8 ppg, yield 1.33 ft^3/sx). DV Tool/ECP will be installed at 3700'.

See COA

2nd Stage: Lead with 1500 sx Lightweight C with 5% salt, 28.98 lb/sx D035 (extender), 6% D020 (extender), 0.125 lb/sx D130 (celloflake), 0.2% D046 (anti foamer), 0.4% D112 (fluid loss), 2 lb/sx D042 (extender), mix water 11.296 gal/sk (s.w. 12.6, yield 2.23 ft^3/sx), tail in with 200 sx Class "C" with 0.2% D201 (retarder), mix water 6.373 gal/sk (s.w. 14.8 ppg, yield 1.33 ft^3/sx). Cement will be calculated at 50% excess over fluid caliper, TOC will be surface.

5-1/2" Production Casing:

1400 sx Light Weight Cement with 5% Salt, 8% gel, 0.2% D046 (anti-foam), .134 lbs/sack cellophane flake, 0.2% D112 (fluid loss), 0.1% D208 (viscosifier), 0.2% D013 (retarder), mix water 14.229 gal/sk (s.w. 11.9 ppg, yield 2.46 ft3/sx), tailed in with 1850 sx Lateral Tail Slurry with 2% gel, 0.5% D065 (dispersant), 0.2% D046 (anti foam), 2% D174 (expanding agent), 3 lb/sx D174 (extender), 0.2% D207 (fluid loss), 0.1% D208 (viscosifier), mix water 5.499 gal/sk (s.w. 14.5 ppg, yield 1.31 ft3/sx). Displaced plug with 2% KCL water. Cement will be calculated at 15% over calculated hole volume. TOC will be surface.

Directional Drilling Program:

Fasken Oil and Ranch, Ltd. will run a gyro survey at a TVD of 10,300'. A rotary steerable will then be picked up. A build rate of 10 degrees/100' will be utilized to build up to a hold angle of 89.32 degrees. This is the dip angle of the 3rd Bone Springs Sand target. The lateral will be drilled holding an azimuth of 180 degrees. The lateral will be drilled into the northern half of Section 28. TD is anticipated to be 18,177' MD/11,083' TVD. 5-1/2" production casing will then be installed and cemented to surface. The 3rd Bone Springs will then be hydraulically fractured in multiple stages.

H2S Safety Equipment:

See COA

H2S equipment will be rigged up prior to drilling out from surface casing. The flare pit will be located 100' from location. There is not any H2S anticipated in the area, but in the event it is encountered the attached H2S plan will be implemented. Please refer to the attached H2S location layout diagram.

Closed loop system and choke manifold: Please see attached Exhibit "K"

7. **Abnormal Pressure, Temperatures or Other Hazards:** None anticipated. Maximum Anticipated Bottom Hole Pressure is anticipated to be 5500 psi, with a BHT of 175°. Lost circulation is possible in the Reef and Delaware formations.

See COA

8. **Other Information:**

   Auxiliary Equipment will include upper and lower kelly cocks. There will be a full opening stabbing valve on the rig floor.

   Anticipated Starting Date: June 15th, 2014

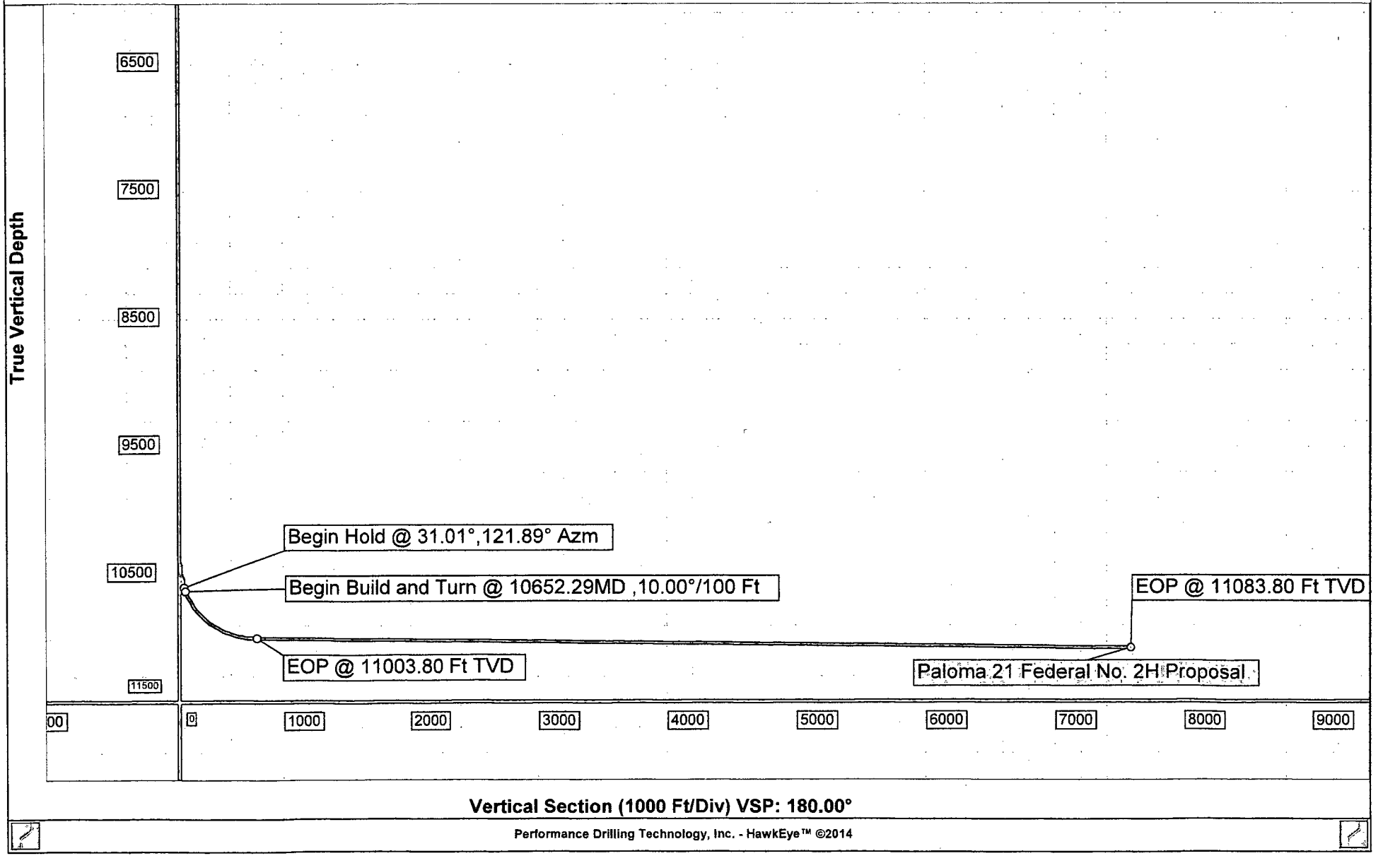
Tejas Tubular® TTRS1® Connection

5 ½" 17# P-110 Tejas Tubular Reduced Stress TTRS1®

Pipe Dimensions			
Pipe O.D. (Nominal)			5.500"
Pipe Weight			17.00 lbs./ft.
Pipe I.D. (Nominal)			4.892"
Pipe Wall			0.304"
Pipe Drift			4.767"
Connection Dimensions			
Coupling O.D.			6.050"
Coupling I.D.			4.892"
Coupling Length			9.250"
Make-Up Loss			4.125"
Threads Per Inch			5 TPI
Connection Efficiency			
Tensile Yield Strength			546,000 lbs.
Internal Pressure			10,640 psi
Collapse Strength			7,480 psi
Compression Strength			546,000 lbs.
Tested Working Bending Rate			20°/100 ft.
Bending Rate (Calculated)			91°/100 ft.
Make-Up Torque (ft.-lbs.)			
•Minimum		6,800 ft.-lbs.	
•Optimum – Recommended Make-Up			7,200 ft.-lbs.
•Maximum		15,500 ft.-lbs.	
•Yield Torque	0312	17,000 ft.-lbs.	

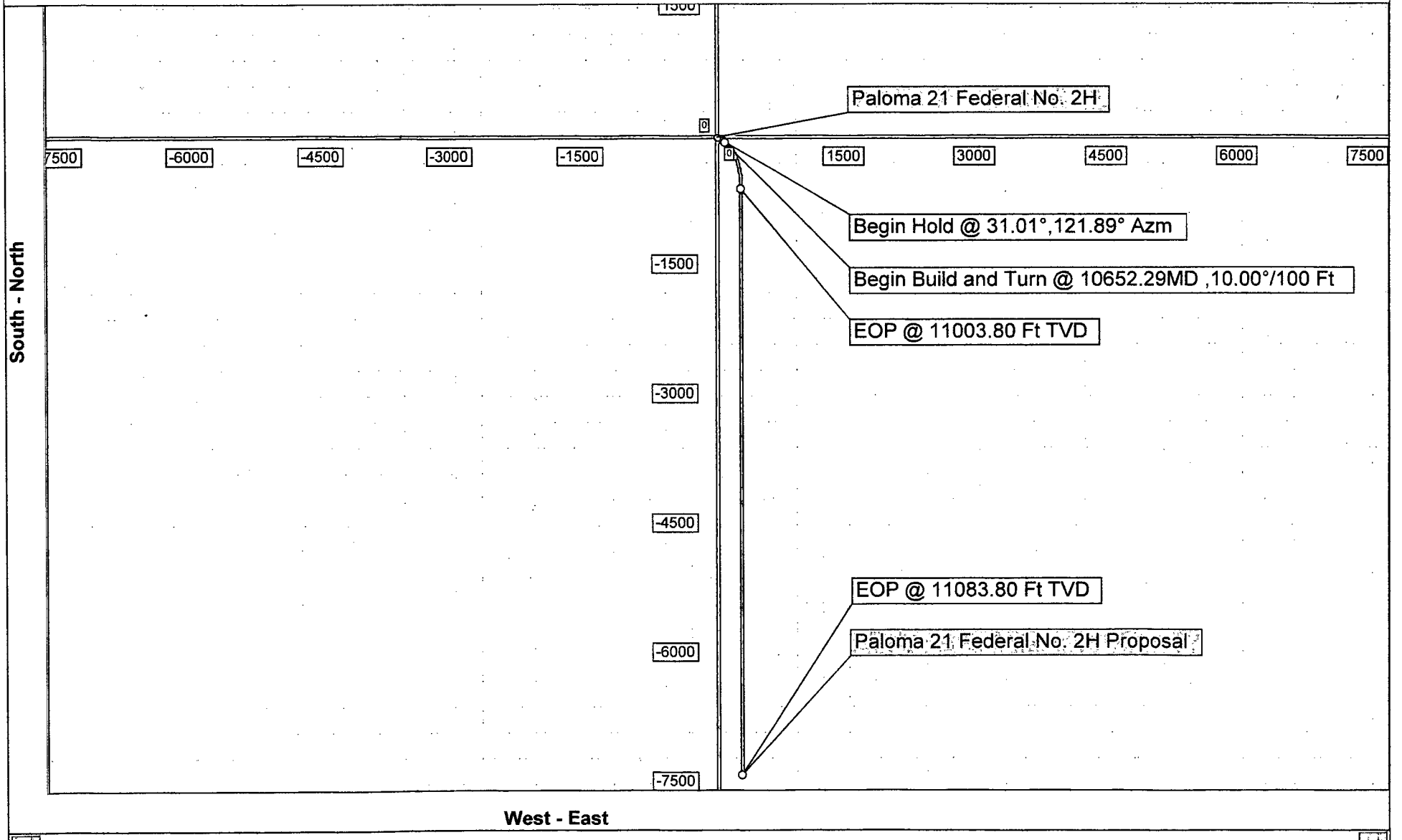
Job Number: 2902
Company: Fasken Oil and Ranch .com
Lease/Well: Paloma 21 Federal No. 2H
Location: Southeast New Mexico
Rig Name:
State/County: New Mexico/ Lea
Country: USA
API Number:

Elevation (To MSL): 3638.80 ft
RKB: 25.00 ft
Projection System: US State Plane 1927 (Exact solution)
Projection Group: New Mexico East 3001
Projection Datum: CLARKE 1866
Magnetic Declination: 7.28
Grid Convergence: 0.41196 E
Date: Friday, February 14, 2014



Job Number: 2902
Company: Fasken Oil and Ranch COM
Lease/Well: Paloma 21 Federal No. 2H
Location: Southeast New Mexico
Rig Name:
State/County: New Mexico/ Lea
Country: USA
API Number:

Elevation (To MSL): 3638.80 ft
RKB: 25.00 ft
Projection System: US State Plane 1927 (Exact solution)
Projection Group: New Mexico East 3001
Projection Datum: CLARKE 1866
Magnetic Declination: 7.28
Grid Convergence: 0.41196 E
Date: Friday, February 14, 2014

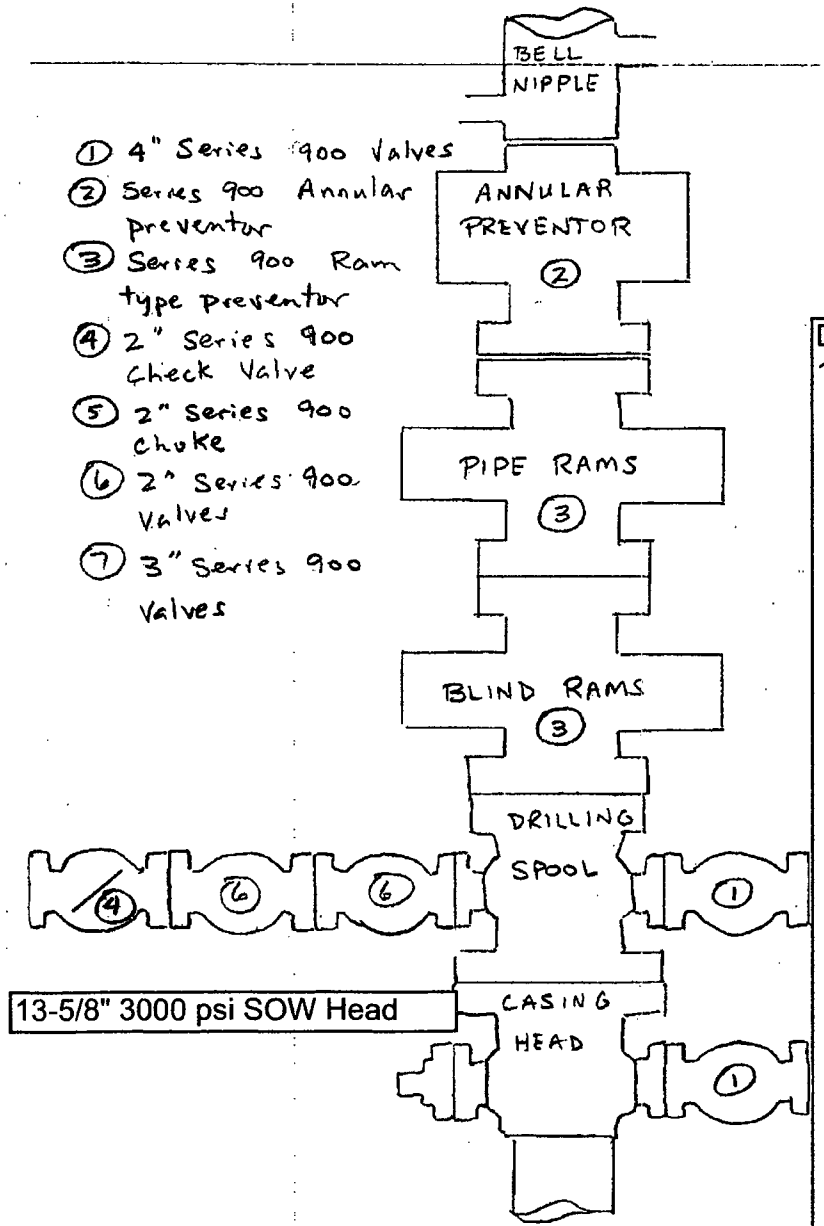


Job Number:	2902	**Elevation GL:**	3638.80 ft **RKB:** 25.00 ft
Company:	Fasken Oil and Ranch COM	**Projection System:**	US State Plane 1927 (Exact solution)
Lease/Well:	Paloma 21 Federal No. 2H	**Projection Group:**	New Mexico East 3001
Location:	Southeast New Mexico	**Projection Datum:**	CLARKE 1866
Rig Name:		**Mag. Declination:**	7.28° (C:\HawkEye\IGRF2005.MIF)
State/County:	New Mexico/ Lea	**Grid Convergence:**	0.41196 E
Country:	USA	**Date:**	Friday, February 14, 2014

Calculated by HawkEye Software
Minimum Curvature Method
Vertical Section Plane 180.00°
Northing (US ft): 570187.30 Easting (US ft): 735781.80
Latitude: 32°33'54.7989" N Longitude: -103°34'4.8415" W
Well Location: 199.70 FNL, 1620.67 FWL, Section 21, T20S, R34E, New Mexico Principal Meridian, Lea County, NM
Direction Reference: Grid North

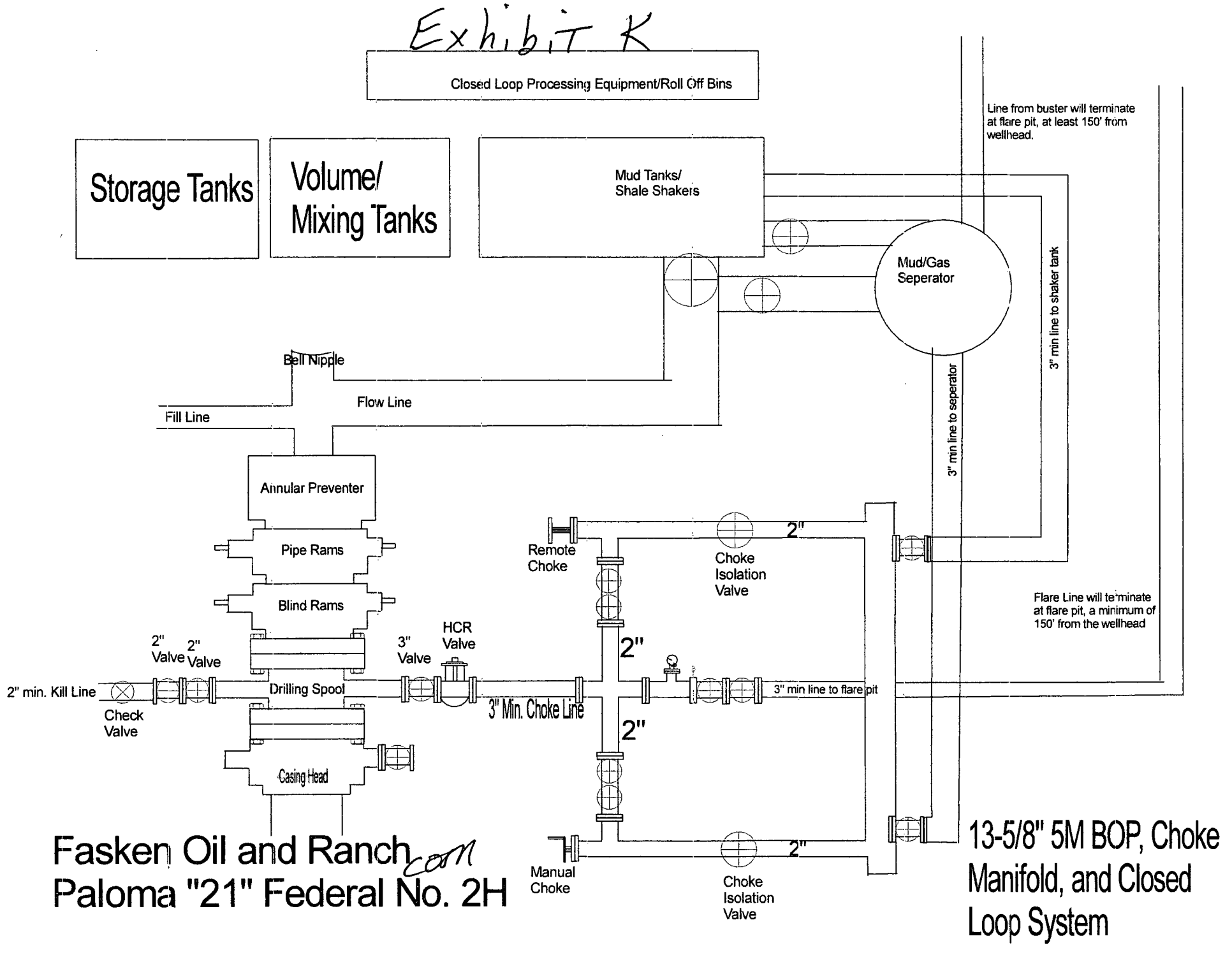
Measured Depth (Ft)	INC Deg	AZM Deg	TVD (Ft)	EW (Ft)	NS (Ft)	VS (Ft)	Closure (Ft)	Walk Rate °/100 Ft	Build Rate °/100 Ft	Subsea TVD (Ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-3663.80
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	-2663.80
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	-1663.80
3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00	0.00	0.00	-663.80
4000.00	0.00	0.00	4000.00	0.00	0.01	-0.01	0.01	0.00	0.00	336.20
5000.00	0.00	0.00	5000.00	0.00	0.01	-0.01	0.01	0.00	0.00	1336.20
6000.00	0.00	0.00	6000.00	0.00	0.01	-0.01	0.01	0.00	0.00	2336.20
7000.00	0.00	0.00	7000.00	0.00	0.01	-0.01	0.01	0.00	0.00	3336.20
8000.00	0.00	0.00	8000.00	0.00	0.01	-0.01	0.01	0.00	0.00	4336.20
9000.00	0.00	0.00	9000.00	0.00	0.01	-0.01	0.01	0.00	0.00	5336.20
10000.00	0.00	0.00	10000.00	0.00	0.02	-0.02	0.02	0.00	0.00	6336.20
10300.00	0.00	0.00	10300.00	0.00	0.02	-0.02	0.02	0.00	0.00	6636.20
10400.00	10.00	121.89	10399.49	7.39	-4.58	4.58	8.70	121.89	10.00	6735.69
10500.00	20.00	121.89	10495.96	29.34	-18.24	18.24	34.54	0.00	10.00	6832.16
10600.00	30.00	121.89	10586.48	65.18	-40.53	40.53	76.75	0.00	10.00	6922.68
10610.12	31.01	121.89	10595.20	69.54	-43.25	43.25	81.89	0.00	10.00	6931.40
10652.29	31.01	121.89	10631.34	87.99	-54.72	54.72	103.62	0.00	0.00	6967.54
10752.29	36.64	136.81	10714.53	130.39	-90.18	90.18	158.54	14.92	5.63	7050.73
10852.29	43.67	147.89	10791.01	169.27	-141.31	141.31	220.50	11.08	7.03	7127.21
10952.29	51.51	156.31	10858.46	203.43	-206.56	206.56	289.91	8.42	7.85	7194.66
11052.29	59.84	163.03	10914.84	231.84	-283.94	283.94	366.57	6.72	8.33	7251.04
11152.29	68.46	168.68	10958.43	253.65	-371.12	371.12	449.52	5.65	8.62	7294.63
11252.29	77.24	173.69	10987.90	268.17	-465.43	465.43	537.16	5.01	8.78	7324.10
11352.29	86.12	178.35	11002.37	274.98	-564.02	564.02	627.48	4.67	8.87	7338.57
11388.31	89.32	180.00	11003.80	275.50	-599.99	599.99	660.22	4.57	8.90	7340.00
12388.31	89.32	180.00	11015.63	275.50	-1599.92	1599.92	1623.47	0.00	0.00	7351.83
13388.31	89.32	180.00	11027.41	275.50	-2599.85	2599.85	2614.41	0.00	0.00	7363.61
14388.31	89.32	180.00	11039.19	275.50	-3599.78	3599.78	3610.31	0.00	0.00	7375.39
15388.31	89.32	180.00	11050.98	275.50	-4599.71	4599.71	4607.96	0.00	0.00	7387.18
16388.31	89.32	180.00	11062.76	275.50	-5599.65	5599.65	5606.42	0.00	0.00	7398.96
17388.31	89.32	180.00	11074.55	275.50	-6599.58	6599.58	6605.32	0.00	0.00	7410.75
18177.18	89.32	180.00	11083.84	275.50	-7388.39	7388.39	7393.53	0.00	0.00	7420.04

Exhibit I -- 5000# BOP COM
Paloma "21" Federal No. 2H
Fasken Oil and Ranch, Ltd.
SHL: 200' FNL & 1650' FWL, Sec. 21, T20S, R34E
BHL: 2310' FNL & 1870' FWL, Sec. 28, T20S, R34E
Lea County, NM



Drilling Spool is
13-5/8" 3000 psi X 13-5/8"" 5000 psi

Exhibit K



Fasken Oil and Ranch, LTD
Paloma "21" Federal No. 2H

13-5/8" 5M BOP, Choke Manifold, and Closed Loop System

Exhibit B

Plat for Closed Loop System

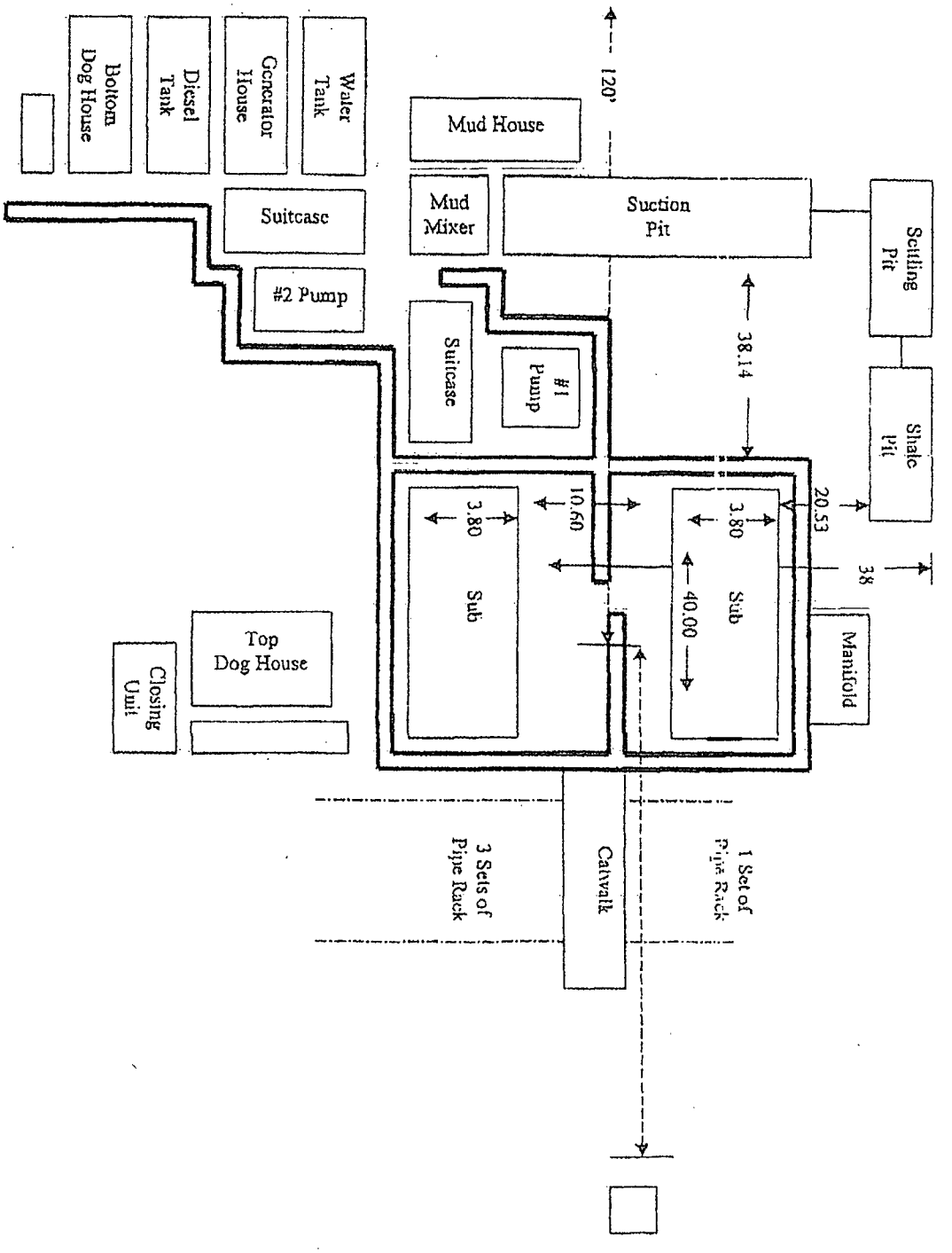


EXHIBIT A

Rig Plat Only com
PALOMA 21 FEDERAL #2H
V-DOOR WEST