AMS-12-406

OCD-HOBBS

Form 3160-3
(August 2007)

R-111-POTASH

FORM APPROVED
OMB No 1004-0137
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HOBBS OCD

APPLICATION FOR PERMIT TO DRILL OR REENTER

SEP 25 2012

RECEIVED

1a Type of work: ☑ DRILL ☐ REENTER	5 Lease Serial No. NM - 33955
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	6. If Indian, Allotee or Tribe Name
2. Name of Operator Fasken Oil and Ranch, Ltd. <151416>	7 If Unit or CA Agreement, Name and No.
3a. Address 303 W. Wall St., Ste. 1800 Midland, TX 79701	3b Phone No. (include area code) 432-687-1777
4 Location of Well (Report location clearly and in accordance with any State requirements *) At surface SHL - 1980' FSL and 1830' FWL of Section 23 Unit K At proposed prod. zone BHL - 1980' FSL and 330' FWL of Section 22	8 Lease Name and Well No Baetz "23" Federal No. 2H <181627>
	9 API Well No. 30-025-40815
	10 Field and Pool, or Exploratory Salt Lake; Bone Springs <53560>
	11 Sec, T R M or Blk and Survey or Area SHL - Sec. 23, T20S, R32E BHL - Sec. 22, T20S, R32E
14 Distance in miles and direction from nearest town or post office* 30 miles Southwest from Hobbs.	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) 330'	16. No of acres in lease 1280 / 17 Spacing Unit dedicated to this well 200 acres, NW4/SW4-Sec 23, N2/S2-Sec. 22
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 150'	19 Proposed Depth 9910' TVD 16,532' MD / 20 BLM/BIA Bond No on file NM 2729 Statewide Bond
21 Elevations (Show whether DF, KDB, RT, GL, etc) 3545' GL	22. Approximate date work will start* 07/01/2012 / 23 Estimated duration 40

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 Kim Tyson	Name (Printed/Typed) Kim Tyson	Date 03/09/2012
Title Regulatory Analyst		
Approved by (Signature) /s/ Aden L. Seidlitz	Name (Printed/Typed)	Date SEP 17 2012
Title STATE DIRECTOR	Office NM STATE 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)

KZ 10/13/12

Capitan Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

OCT 15 2012

APPLICATION FOR PERMIT TO DRILL

Fasken Oil and Ranch, Ltd.
Baetz 23 Federal No. 2H
SHL: 1980' FSL & 1830' FWL
Sec. 23, T20S, R32E
BHL: 1980' FSL & 330' FWL
Sec. 22, T20S, R32E
Lea County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, Fasken Oil and Ranch, Ltd. submits the following items of pertinent information in accordance with Onshore Oil & Gas Order Nos. 1 & 2, and with all other applicable federal and state regulations.

1. Location: SHL: 1980' FSL & 1830' FWL, Sec. 23, T20S, R32E
   BHL: 1980' FSL & 330' FWL, Sec. 22, T20S, R32E

2. Ground elevation: 3545'.

3. Geologic name of surface formation: Quaternery Alluvium Deposits

4. Drilling tools and associated equipment: Conventional rotary drilling using fluid as a circulating medium for solids removal

5. Proposed drilling depth: 16,532' MD, 9910' TVD.

6. Estimate tops of geologic markers are as follows;

Rustler	1150'
Top Salt	1270'
Base Salt	2800'
Yates	2980'
Capitan Reef	3400'
Delaware	5122'
Bone Springs	7833'
Second BSS	9730'

7. Possible mineral bearing formations:

   Depth to Fresh Water: The NM Office of the State Engineer-Roswell says that there is very little groundwater at this location and its exact depth is unknown, but is known to be deeper than 75' due to a dry monitor well nearby.

The Yates formation may contain trace amounts of hydrocarbons but they are not expected to be present in producible quantities.
Bone Springs Oil
Delaware Oil

8. Mud Program:

Depth	Type	Weight	Viscosity	Waterloss
0'-1,200'	Fresh Water	8.4-8.6	28	NC
1200'-2960'	Brine Water	10.0-10.2	30-32	NC
2960'-4750'	Fresh Water	8.4-8.6	30-32	NC
4750'-9500'	Cut Brine	8.6-9.0	28-29	NC
9500'-16,532'	2% KCL XC Polymer	8.5-9.5	28-45	NC

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DST's, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

Proposed Drilling Plan:

After setting surface casing, intermediate, and second intermediate drill 7-7/8" hole to KOP @ 9500'. Kick off and build 15 degrees/100' until 90 degree hold angle is reached at a TVD of 9910'/10,138' MD. Drill lateral to proposed BHL and run 5-1/2" production casing.

9. Proposed Casing and Cementing Program:

Casing Design (all casing is new)

String	Hole Size	Depth	Size	Weight	Grade	T&C
Surface	20"	0'-1200' See COA	16"	84#	K-55	ST&C
1st Intermediate	14-3/4"	0'-2960' See COA	11-3/4"	54#	K-55	ST&C

2nd Intermediate	10-5/8"	0'-4750'	8-5/8"	~~32#~~ 36# used (32# non-API)	L-80	LT&C
Production	7-7/8"	0'-16,532'	5-1/2"	17#	HCP-110	LT&C

Casing Design Factors: Burst 1.0, Collapse 1.125, Joint Strength 1.6

10. Cementing Design:

Surface	Lead with 900 sx Class "C" Halcem with 4% gel and 2% $CaCl_2$ (s.w. 13.5 ppg, yield 1.74 ft^3/sx) plus 350 sx Class "C" with 2% $CaCl_2$ (s.w. 14.8 ppg, yield 1.32 ft^3/sx). **TOC SURFACE, Calculated 100% excess, Centralized on bottom three joints then every 4th joint to surface.**
Intermediate	Lead with 1200 sx Class "C" Halcem with 4% gel and 2% $CaCl_2$ (s.w. 13.5 ppg, yield 1.74 ft^3/sx) plus 400 sx Class "C" with 2% $CaCl_2$ (s.w. 14.8 ppg, yield 1.32 ft^3/sx). **TOC SURFACE, Calculated 100% excess in the open hole, Centralized on bottom three joints then every 4th joint to surface.**
2nd Intermediate	450 sx HLC with 15# salt, 5# gilsonite, and 1/8# Poly-E-Flake (s.w. 12.6, yield 2.23 ft^3/sx) plus 300 sx Class "C" with 1" Calcium Chloride (s.w. 14.8 ppg, yield 1.32 ft^3/sx). **TOC Surface, calculated 30% excess for open hole volume.**
Production	Lead with 650 sx Econocem Lite H + .5% retarder + .1% fluid loss (s.w. 12 ppg, yield 2.44 ft^3/sx), tailed in with 1250 sx Versacem H + .5% retarder + .4% fluid loss + 1# salt + .1% defoamer (s.w. 14.5 ppg, yield 1.22 ft^3/sx). Calculated 25% excess over open hole volume, TOC 2800'.

11. Pressure Control Equipment: Exhibit "E". 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 anullar 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 8-5/8" 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. From the base of the 16" surface pipe the well will be equipped with a 2M diverter system with rotating head (Exhibit

first intermediate

E-1). From the base of the 11-3/4" ~~surface~~ pipe through the running of the production casing the well will be equipped with a 5000 psi BOP system. Before drilling out of the 16" surface casing the diverter will be tested to 250 psi low and ~~500~~ 1000 psi high ~~by rig equipment~~. see COA Before drilling out of the 11-3/4" 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. This test will be performed by an independent service company again before drilling out of the 8-5/8" casing.

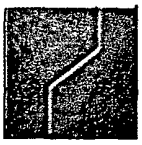
12. Auxiliary Equipment: Upper Kelly Cock, Full Opening Stabbing Valve, PVT.

13. Abnormal Pressure, Temperatures or Other Hazards: None anticipated. Maximum A nticipated. Bottom Hole Pressure is anticipated to be 4600 psi, with a BHT of 135°.

14. Testing Logging and Coring Programs: See COA

- DST's: None anticipated.
- Mud Logging: 2-man Mudlogging unit from 5,000' to T.D.
- Electric Logs: GR, Cased hole CNL, LDT, DLL
- Coring: None anticipated

15. Anticipated Starting Date: July 1st, 2012



Job Number: Baetz Prospect
Company: Fasken Oil and Ranch, LTD
Lease/Well: Baetz "23" Federal No 2H
Location: Lea County, NM
Rig Name: TBA
State/County: New Mexico/ Lea
Country: USA
API Number:

Elevation (To MSL): 0.00 ft
RKB: 3570.00 ft
Projection System: US State Plane 1927 (Exact solution)
Projection Group: Texas Central 4203
Projection Datum: CLARKE 1866
Magnetic Declination: 3.23
Grid Convergence: 2 41208 E
Date: Tuesday, February 28, 2012

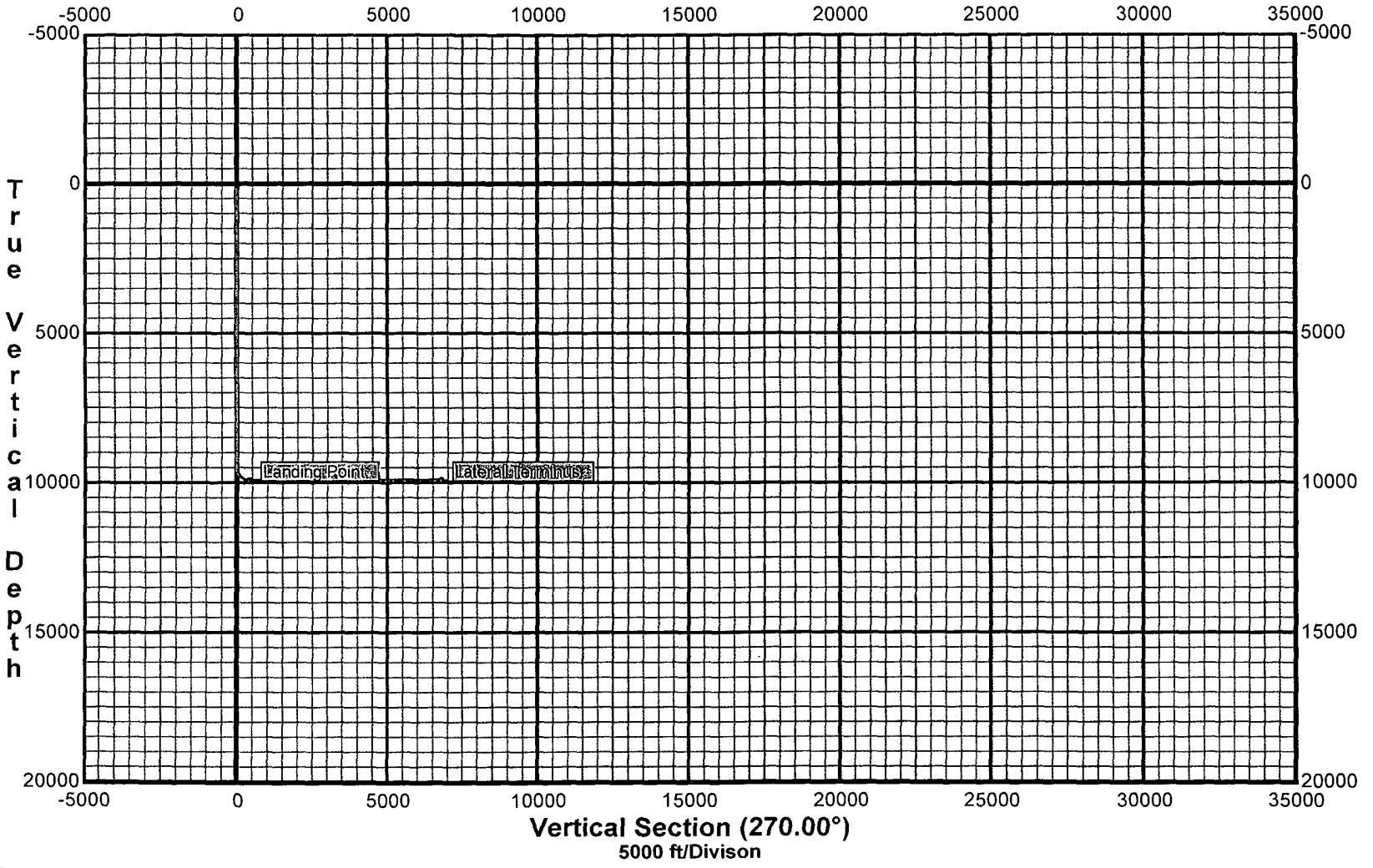
Calculated by HawkEye Software
Minimum Curvature Method
Vertical Section Plane 270.00°
Northing: 810940.54 Easting: 3455231.48
Latitude: 31°48'43.5024" N Longitude: -95°38'50.7877" W
Direction Reference: Grid North

Measured Depth (Ft)	INC Deg	AZM Deg	TVD (Ft)	EW (Ft)	NS (Ft)	VS (Ft)	Closure (Ft)	Walk Rate °/100Ft	Build Rate °/100Ft
0.00	0 00	0 00	0.00	0.00	0.00	0.00	0 00	0 00	0.00
9509.89	0.00	0.00	9509 89	0.00	0.01	0.00	0.01	0.00	0 00
9529.89	2.86	270.00	9529.88	-0 50	0.01	0.50	0.50	-450 01	14 32
9549.89	5.73	270.00	9549 82	-2.00	0.01	2.00	2.00	0 00	14 32
9569 89	8.59	270.00	9569 67	-4.49	0 01	4.49	4 49	0 00	14 32
9589.89	11 46	270.00	9589.36	-7 97	0 01	7 97	7 97	0.00	14 32
9609.89	14.32	270 00	9608.85	-12 43	0 01	12.43	12.43	0 00	14 32
9629 89	17.18	270 00	9628.10	-17.86	0.01	17 86	17 86	0.00	14.32
9649.89	20.05	270.00	9647 05	-24.24	0.01	24.24	24.24	0 00	14.32
9669.89	22.91	270 00	9665.66	-31 57	0 01	31.57	31.57	0 00	14 32
9689.89	25 78	270.00	9683.88	-39.81	0.01	39.81	39 81	0 00	14 32
9709.89	28.64	270 00	9701.66	-48 95	0 01	48.95	48.95	0.00	14 32
9729.89	31.50	270.00	9718.97	-58.97	0.01	58 97	58.97	0.00	14.32
9749 89	34 37	270.00	9735 75	-69.85	0.01	69.85	69.85	0.00	14.32
9769.89	37.23	270.00	9751.97	-81.55	0.01	81.55	81 55	0.00	14.32
9789.89	40.10	270.00	9767.59	-94.04	0.01	94.04	94.04	0.00	14.32
9809 89	42.96	270.00	9782.56	-107.30	0.01	107.30	107.30	0 00	14.32
9829.89	45.82	270.00	9796 85	-121 29	0 01	121.29	121.29	0.00	14.32
9849 89	48.69	270.00	9810.42	-135.97	0.00	135 97	135.97	0.00	14 32
9869.89	51.55	270.00	9823.25	-151.32	0.00	151.32	151.32	0.00	14.32
9889.89	54 42	270 00	9835.28	-167.29	0.00	167.29	167.29	0.00	14 32
9909.89	57 28	270.00	9846 51	-183 84	0.00	183.84	183.84	0 00	14 32
9929 89	60.14	270 00	9856 90	-200.93	0 00	200.93	200.93	0.00	14.32
9949.89	63.01	270.00	9866.42	-218.51	0.00	218.51	218.51	0 00	14 32
9969 89	65.87	270.00	9875.04	-236.55	0.00	236.55	236 55	0.00	14 32
9989.89	68 74	270.00	9882.76	-255.00	0.00	255.00	255.00	0 00	14.32
10009.89	71 60	270.00	9889.54	-273.82	0 00	273 82	273.82	0 00	14 32
10029.89	74.46	270.00	9895 38	-292.94	0 00	292.94	292 94	0.00	14.32
10049.89	77 33	270 00	9900.25	-312 34	0 00	312.34	312.34	0 00	14 32
10069 89	80 19	270 00	9904.15	-331 95	0 00	331 95	331 95	0 00	14 32
10089 89	83.06	270.00	9907.07	-351.74	0 00	351.74	351 74	0 00	14 32
10109.89	85 92	270 00	9908.99	-371 64	0 00	371 64	371 64	0.00	14 32
10129.89	88.78	270.00	9909 91	-391.62	0 00	391.62	391 62	0.00	14 32
10138.27	89 98	270.00	9910 00	-400.00	0 00	400.00	400.00	0.00	14 32
10138 41	90.00	270.00	9910.00	-400 14	0 00	400.14	400 14	1 01	11.13
16532 27	90 00	270 00	9910 00	-6794 00	0 00	6794.00	6794.00	0 00	0 00

Baetz "23" Federal No. 2-H

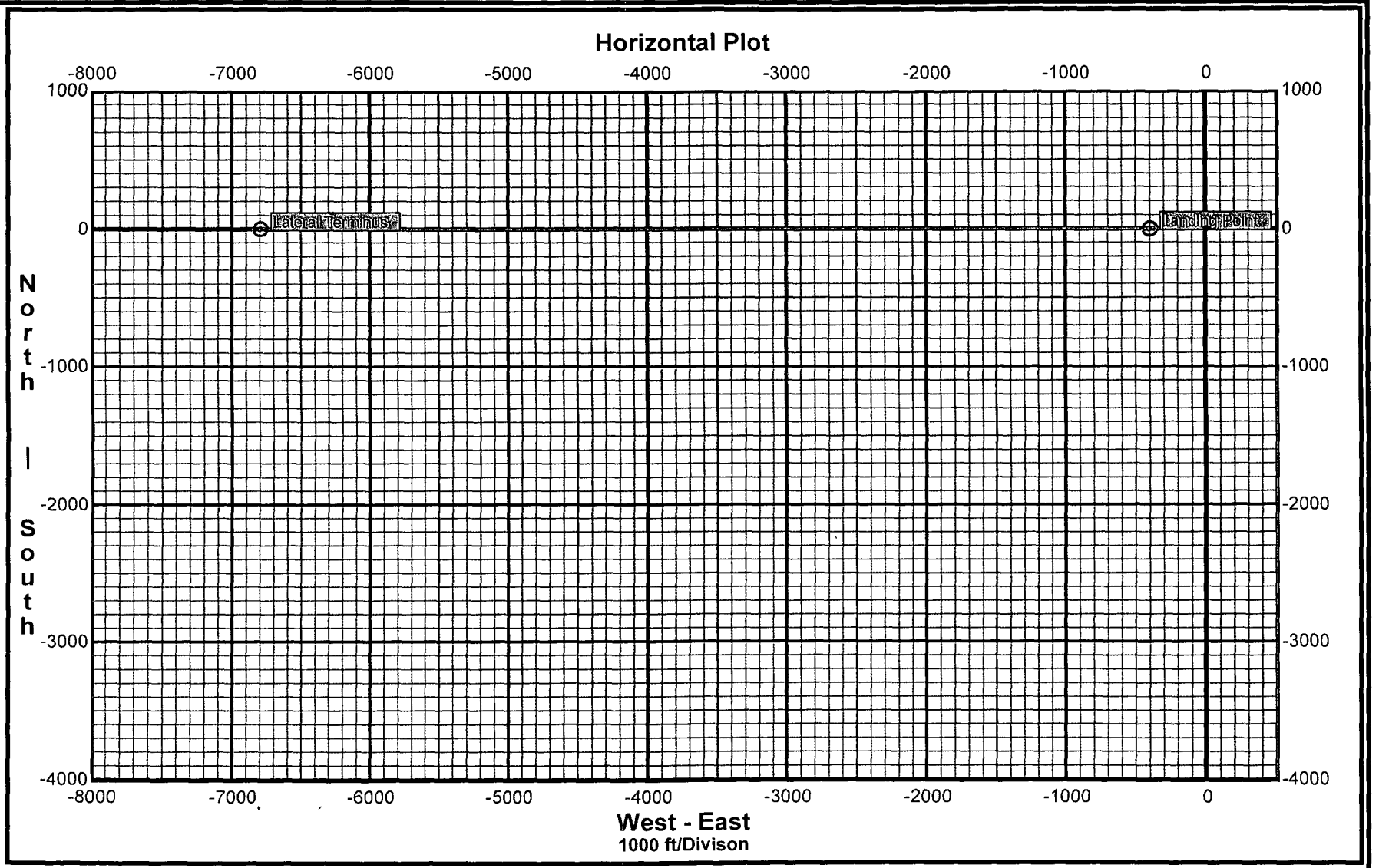
Job ID Baetz Prospect Company Fasken Oil and Ranch, LTD Location Lea County, NM API JOB # Rig Name TBA State/Province New Mexico County/Parish Lea Country USA	RKB · 3570 ft Elevation (To MSL) 0 ft Field . Township Range · SECTION .

Vertical Section Plot



Baetz "23" Federal No. 2H

Job ID Baetz Prospect Company Fasken Oil and Ranch, LTD Location Lea County, NM API JOB # Rig Name TBA State/Province New Mexico County/Pansh Lea Country USA	RKB 3570 ft Elevation (To MSL) 0 ft Field Township Range SECTION



20" Diverter System

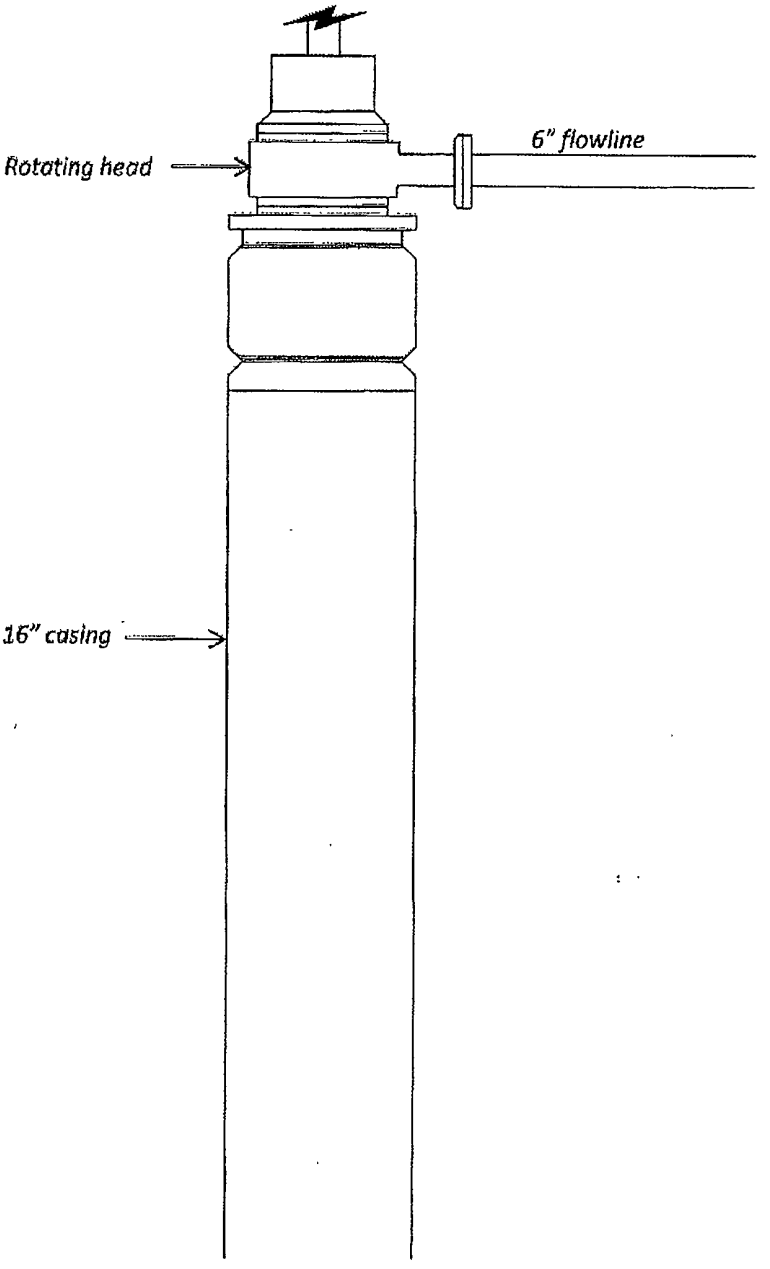
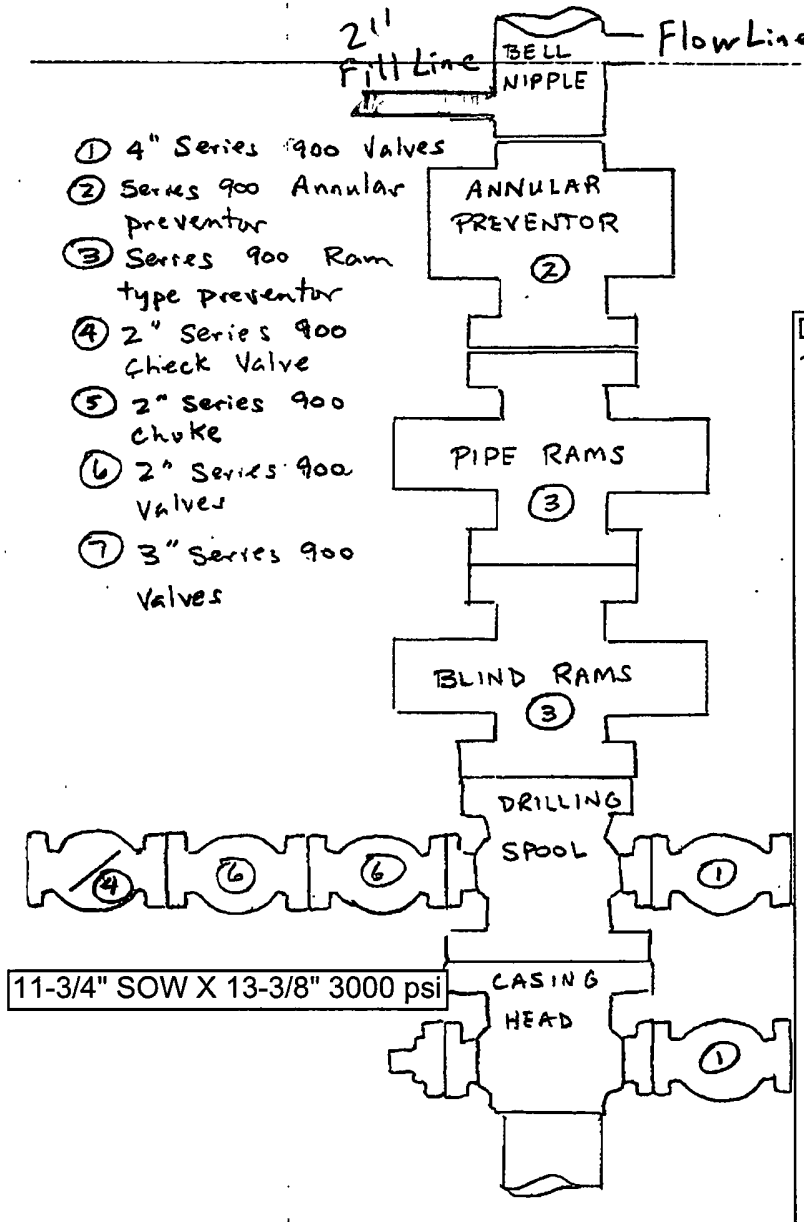


Exhibit E-1 -- 20" Diverter System
Baetz "23" Federal No. 2H
Fasken Oil and Ranch, Ltd.
SHL: 1980' FSL & 1830' FWL, Sec. 23, T20S, R32E
BHL: 1980' FSL & 330' FSL, Sec. 22, T20S, R32E
Lea County, NM

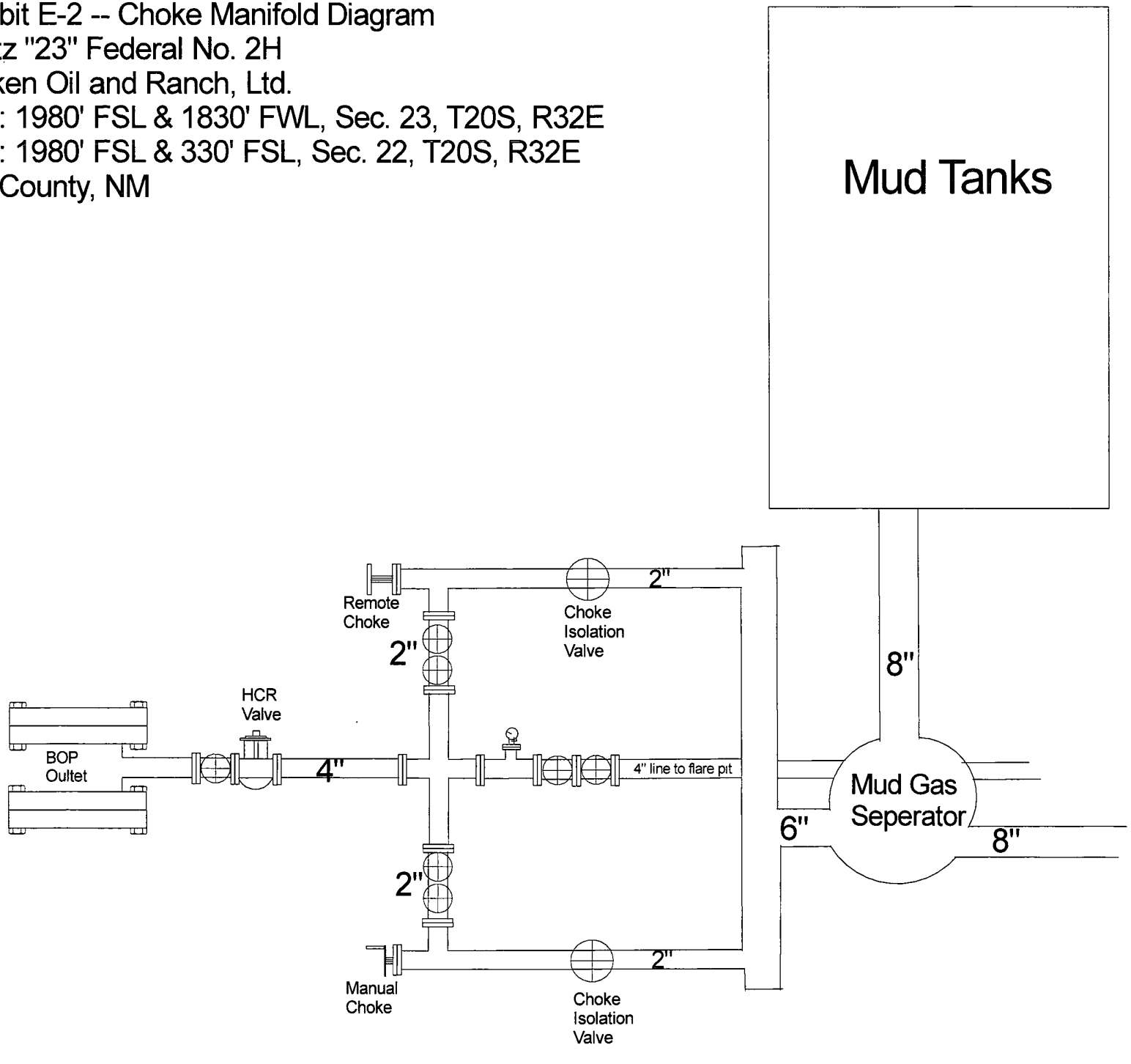
Exhibit E -- 5000# BOP
Baetz "23" Federal No. 2H
Fasken Oil and Ranch, Ltd.
SHL: 1980' FSL & 1830' FWL, Sec. 23, T20S, R32E
BHL: 1980' FSL & 330' FSL, Sec. 22, T20S, R32E
Lea County, NM

Drilling Spool is
13-5/8" 3000 psi X 11" 5000 psi

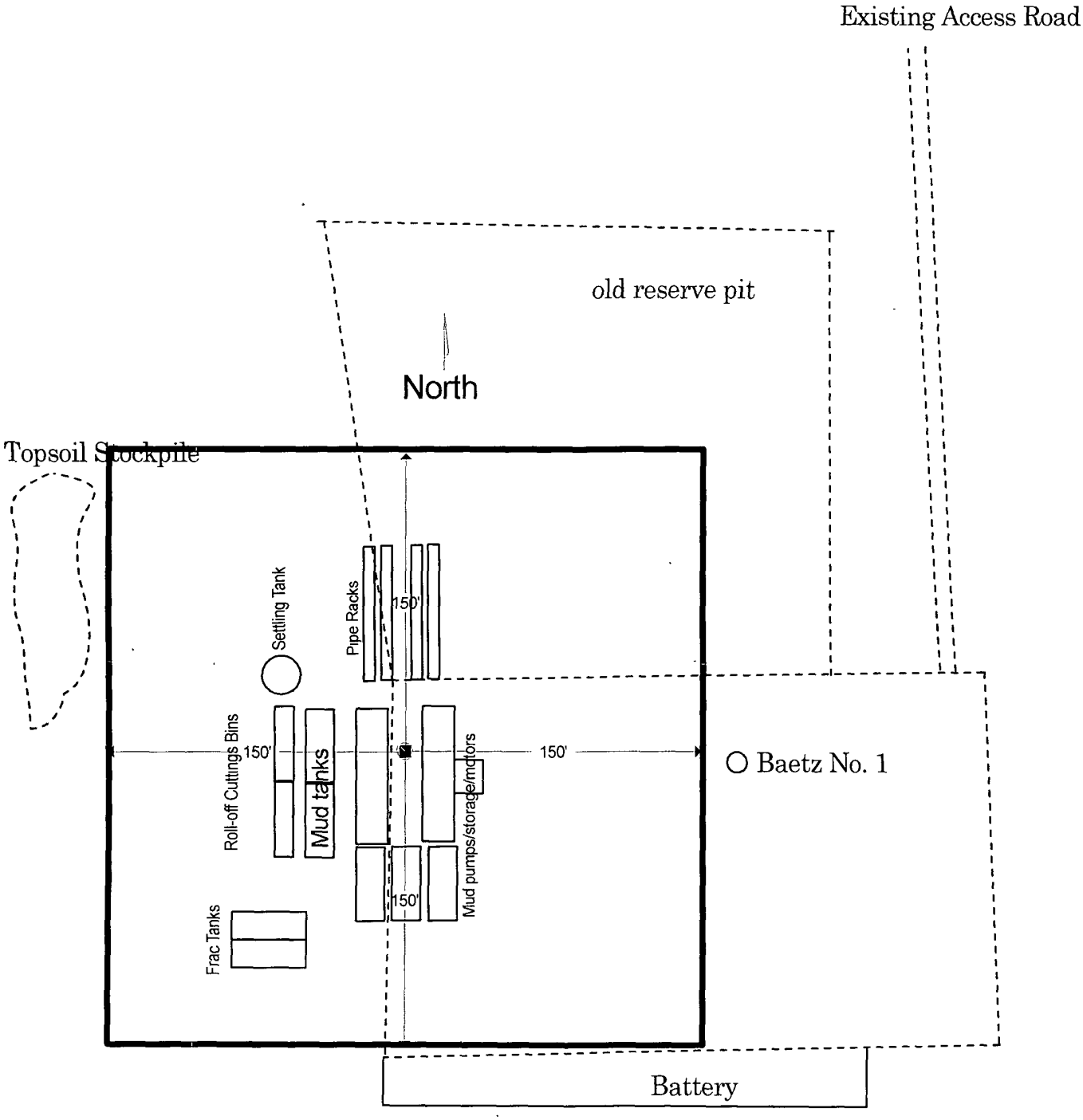


1. 4" Series 900 Valves
2. Series 900 Annular preventor
3. Series 900 Ram type preventor
4. 2" Series 900 Check Valve
5. 2" Series 900 Choke
6. 2" Series 900 Valves
7. 3" Series 900 Valves

Exhibit E-2 -- Choke Manifold Diagram
Baetz "23" Federal No. 2H
Fasken Oil and Ranch, Ltd.
SHL: 1980' FSL & 1830' FWL, Sec. 23, T20S, R32E
BHL: 1980' FSL & 330' FSL, Sec. 22, T20S, R32E
Lea County, NM

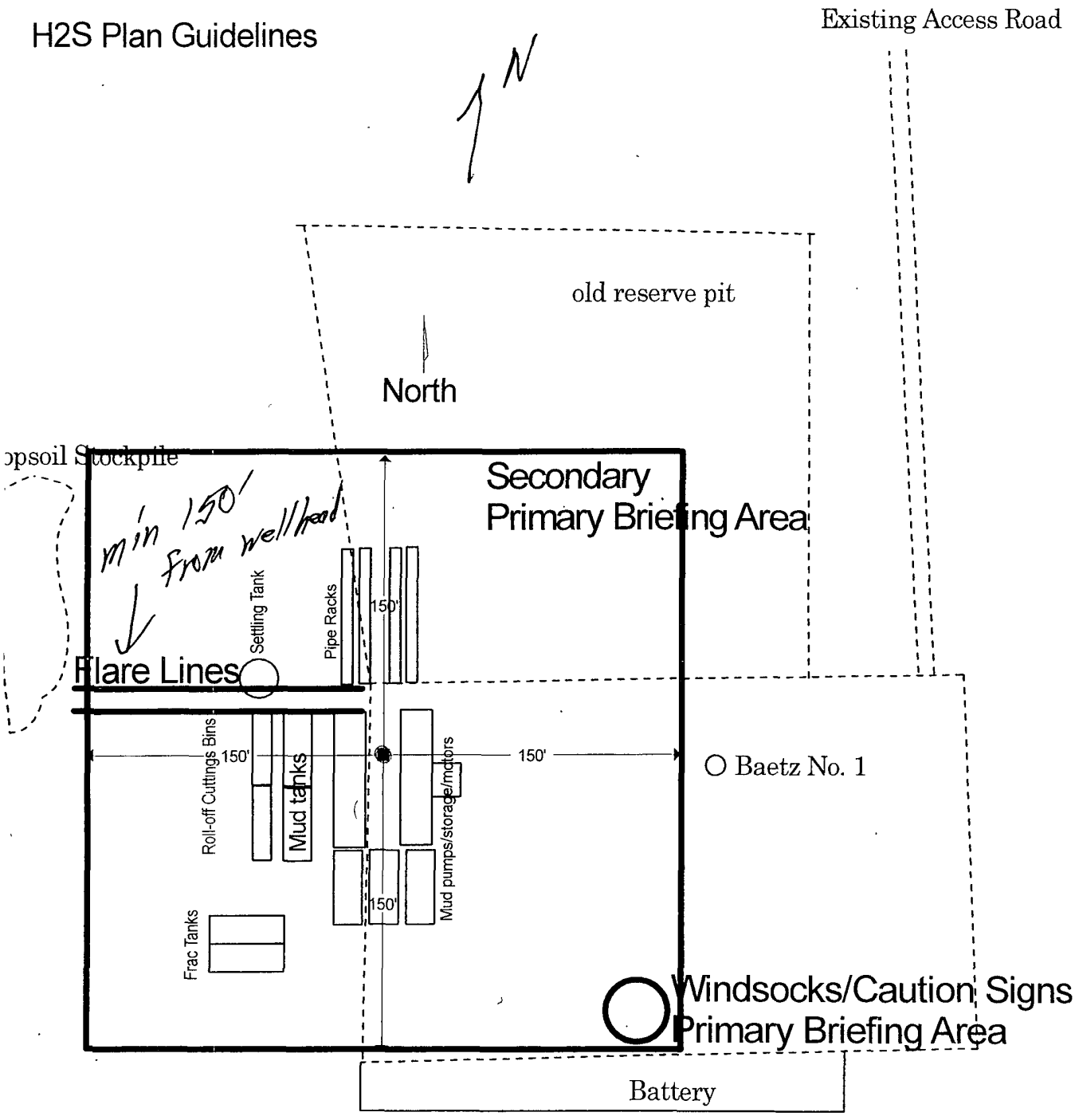


Fasken Oil and Ranch, Ltd.
Baetz "23" Federal No. 2H
Well Site Layout/Drilling Rig Layout
"Exhibit D"



Fasken Oil and Ranch, Ltd.
Baetz "23" Federal No. 2H
Well Site Layout/Drilling Rig Layout
"Exhibit H"

H2S Plan Guidelines



Terrain is flat, semi-brushy desert with little vegetation. The prevailing wind direction is South. The wellpad can be evacuated in virtually any direction due to the nature of the landscape.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

Fasken Oil and Ranch, Ltd.
Baetz 23 Federal No. 2H
SHL: 1980' FSL & 1830' FWL
Sec. 23, T20S, R32E
BHL: 1980' FSL & 330' FWL
Sec 22, T20S, R32E
Lea County, New Mexico

I. Hydrogen sulfide Training

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

1. The hazards and characteristics of hydrogen sulfide (H2S).

2. The proper use and maintenance of personal protective equipment and life support systems.

3. The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.

4. The proper techniques of first aid and rescue procedures.

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

1. The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.

2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.

3. The contents and requirements of the H2S Drilling Operations Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) 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. This plan shall be available at the will site. All personnel will be required to carry documentation that they have received the proper training.

II. 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 feet above or three days prior to penetration the first zone containing or reasonable expected to contain H2S.

1. Well Control Equipment:

   A Flare line.

B. Choke manifold.

C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

D. Auxiliary equipment to include: annular preventer, mud-gas separator (if necessary) and rotating head.

2 Protective equipment for essential personnel:

A. 5-minute escape units located in the dog house and 30-minute air units at briefing areas, as indicated on well site diagram.

3. H2S detection and monitoring equipment:

A. 3 - 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.

B. 1 - portable SO2 monitor positioned near flare line during H2S flaring operations.

4. Visual warning systems:

A. Wind direction indicators as shown on well site diagram

B. 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 a readable distance from the immediate location.

5. Mud program:

A. The mud program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weight safe drilling practices and the use of H2S scavengers when necessary will minimize hazards when penetrating H2S bearing zones.

6. Metallurgy:

A. All drill strings, casings, tubing, wellhead, blowout preventors, drilling spools kill lines, choke manifold and lines valves shall be suitable for H2S service.

B. All elastomers used for packing and seals shall be H2S trimmed.

7. Communications:

A Radio communications will be available in company vehicles and rig dog house.

8. Well testing:

A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity which are necessary to safely and adequately conduct the test. The drill stem testing of any known formation that contains H2S will be conducted during daylight hours.