

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

Hobbs  
OCD Artesia

BBS OC  
JAN 25 2016  
RECEIVED

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. LC-061374-A, NM-02335-b
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator Kaiser-Francis Oil Company (12361)		8. Lease Name and Well No. South Bell Lake Unit 6 3BS #1H (315949)
3a. Address 6733 South Yale Ave Tulsa Oklahoma 74136	3b. Phone No. (include area code) 918-494-0000	9. API Well No. 30-025-43034
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 2215' FSL & 375' FEL Section 6-24S-34E (I) At proposed prod. zone 330' FNL & 400' FWL Section 32-23S-34E (D)		10. Field and Pool, or Exploratory South Bell Lake Antelope Ridge, West
11. Sec., T. R. M. or Blk. and Survey or Area Section 6-24S-34E		12. County or Parish Lea
13. State NM		
14. Distance in miles and direction from nearest town or post office* Approximatley 27 miles southwest of Eunice, NM	15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 300'	16. No of acres in lease 519.20
17. Spacing Unit dedicated to this well 160 acres	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 220'	19. Proposed Depth MD 18,203.22 TVD 11,550'
20. BLM/BIA Bond No. in file WYB000055	21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3601' GL	22. Approximate date work will start* ASAP
23. Estimated duration 25 days	24. Attachments	

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- |  |   |
|--|---|
| 1. Well plat certified by a registered surveyor.   | 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 must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be requested by the BLM.            |

25. Signature 	Name (Printed/Typed) Steven A. Dowdy	Date 12/4/2015
Title Consulting Engineer for Kaiser-Francis Oil Company		
Approved by (Signature) /s/ STEPHEN J. CAFFEY	Name (Printed/Typed)	Date JAN 20 2016
Title FCR FIELD MANAGER	Office BLM-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.

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

K2 SEE ATTACHED FOR  
01/26/16 CONDITIONS OF APPROVAL

Witness Surface Casing

Carlsbad Controlled Water Basin

JAN 27 2016

CONFIDENTIAL-TIGHT HOLE



**DRILLING PROGRAM**

**South Bell Lake Unit 6 3BSS #1H**

**SHL: 2215' FSL, 375' FEL, SEC. 6 T24S-R34E**

**BHL: 330' FNL, 400' FWL, SEC. 32, T23S-R34E**

**LEA COUNTY, NEW MEXICO**

Submitted by:

**Kaiser Francis Oil Company**

6733 S Yale Avenue  
Tulsa, OK 74136

**Copies Sent To:**

**1 Bureau of Land Management**

## ONSHORE OIL &amp; GAS ORDER NO.1

1. ESTIMATED TOPS OF ALL GEOLOGIC GROUPS, FORMATIONS, MEMBERS, OR ZONES

Elevation above sea level: 3601'

Geologic Name of Surface Formation: Quaternary Aeolian Deposits

Estimated tops of important geologic markers are as follows:

Formation	Depth TVD	Interval Thickness	Depth Subsea	Mineral Zone
Surface	350			Water
Rustler Anhydrite	1325			Barren
Salado	1700			Barren
Bell Canyon	5275			Oil / Water
Cherry Canyon	6125			Oil / Water
Brushy Canyon	7550			Oil / Water
Leonard Shale	8525			Oil / Water
Upper Bone Spring Lime	8690			Oil / Water
Avalon	8850			Oil / Water
1 <sup>st</sup> Bone Spring Lime	9150			Oil / Water
1 <sup>st</sup> Bone Spring	9800			Oil / Water
2 <sup>nd</sup> Bone Spring Lime	10250			Oil / Water
2 <sup>nd</sup> Bone Spring	10350			Oil / Water
3 <sup>rd</sup> Bone Spring Lime	10800			Oil / Water
3 <sup>rd</sup> Bone Springs Sand	11250			Oil / Water
Wolfcamp	11650			Oil / Water

## 2. ESTIMATED DEPTH AND THICKNESS OF OIL, GAS, WATER & OTHER MINERAL ZONES

a. The estimated depths at which water, oil, gas or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation(Primary Target Zone)	Depth (TVD)	Thickness
Oil	3 <sup>RD</sup> Bone Spring	11,550	400'

All shows of fresh water and minerals will be reported and protected.

## 3. SPECIFICATIONS FOR BLOWOUT PREVENTION EQUIPMENT AND DIVERTER SYSTEMS

Kaiser Francis Oil Company minimum specifications for pressure control equipment are as follows:

**Ram Type: 5000 psi working pressure**

Ram type preventers and associated equipment shall be tested to working pressure if isolated by test plug or to 70 percent of internal yield pressure of casing. Pressure shall be maintained for at least 10 minutes or until requirements of test are met, whichever is longer. If a test plug is utilized, no bleed-off pressure is acceptable. For a test not utilizing a test plug, if a decline in pressure of more than 10 percent in 30 minutes occurs the test shall be considered to have failed. Valve on casing head below test plug shall be open during test of BOP stack.

Annular type preventers shall be tested to 50 percent of rated working pressure. Pressure shall be maintained at least 10 minutes or until provisions of test are met, whichever is longer.

As a minimum, the above test shall be performed:

- a. when initially installed
- b. whenever any seal subject to test pressure is broken
- c. following related repair
- d. 30-day intervals

Valves shall be tested from working pressure side during BOPE tests with all downstream valves open.

When testing the kill line valve(s) the check valve shall be held open or the ball removed.

The kill lines should be separate from the fill line. Kill lines should be installed a safe distance (usually not less than 75 feet) from the BOP assembly in a conspicuous place and not in areas of suspected H<sub>2</sub>S concentration. Slow pump speeds for kill purposes must be posted.

Annular preventers shall be functionally operated at least weekly.

Pipe and blind rams shall be activated each trip; however, this function need not be performed more than once a day.

A BOPE pit level drill shall be conducted weekly for each drilling crew.

Pressure tests shall apply to all related well control equipment.

All of the above described tests and/or drills shall be recorded in the drilling log.

The choke manifold, BOP extension rods and hand wheels will be located outside the substructure. The BOP remote control unit will be located on the rig floor. The casing head and BOP will be flanged 13 5/8" 5000 psi w.p. Kill line will be 2" i.d. with burst pressure rating of at least 10,000 psi. These items will be pressure tested concurrently with BOP's. The BOP will be tested when the stack is first installed on the well. It will also be tested at each casing shoe and at least every 30 days. BOP and choke manifold sizes will be in accordance with API-RP-53 as per the attached. See attached schematic of choke manifold.

- a. The size and rating of the BOP stack is shown on the attached diagram.
- b. A choke line and a kill line are to be properly installed. The kill line is not to be used as a fill-up line. There will be no remote kill line used.
- c. The accumulator system shall have a pressure capacity to provide for repeated operation of hydraulic preventers.
- d. The accumulator will be certified, and date of certification will be logged within 6 months of spud of subject well.
- e. Drill string safety valve(s), to fit all tools in the drill string, are to be maintained on the rig floor while drilling operations are in progress.

- See  
CWA*
- f. A Manufacturers' certification that BOPE and other equipment with potential to be exposed to H2S, is suitable for H2S service will be available at the rig.
  - g. There will be a 50' Flex Hose used from the BOP to the choke manifold. The Flex Hose will not be straight and will conform to Onshore Order No 2. III.A.2.a
    - a. The flex hose will have an ID of 3.0" minimum with a min. bend radius of 5' or 60".
    - b. Rated pressure rating of 5000 psi with a test pressure of 10,000 psi.
    - c. Has a minimum temperature rating of -22 to 200 deg. F but can withstand a min. of 5 min. at 700 deg C at maximum working pressure.
    - d. Manufacture in accordance to specification for H2S Service and NACE treated compliance.

#### 4. PROPOSED DIRECTIONAL PLAN

The well will be drilled vertically until approximately 600' TVD above target zone. The well will then be kicked off as per attached directional program.

#### 5. PROPOSED CASING PROGRAM

- See  
CWA*
- a) The proposed casing and cementing program shall be conducted as approved to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat opposite a competent formation which will contain the maximum pressure to which it will be exposed during normal drilling operations. Determination of casing setting depth shall be based on all relevant factors, including: presence/absence of Hydrocarbons, formation pressures; lost circulation zones, other minerals or other unusual characteristics. All indications of usable water shall be reported.
  - b) All waiting on cement times shall be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.
  - c) All casing except the conductor casing, shall be new or reconditioned and tested used casing that meets or exceeds API standards for new casing.

- d) The surface casing shall be cemented back to surface with a minimum of one centralizer per three joints, and a maximum one centralizer per joint.
- e) Surface Casing-Three centralizers will be run on the bottom ~~two~~ <sup>3, per on shore order</sup> joints of surface casing with a minimum of one centralizer per joint starting with the shoe joint.
- f) All casing strings below the conductor shall be pressure tested to 1500 psi.
- g) KFOC default design for the production casing is to use a conventional cemented casing back to surface, and perform a plug and perforation completion. Depending on well conditions at the end of drilling, we may employ sliding sleeves with swell packers on the casing run. Neither case would require a frac string.
- h) The proposed casing program will be as follows:

**NOTE: DEPTHS FROM DIRECTIONAL PLAN**

*See CWP*

Purpose	Depth	Hole Size	O.D.	Weight	Grade	Type	New/Used
Surface	1400'	17 1/2"	13 3/8"	54.50#	J-55	ST&C	New
Intermediate	<del>6700'</del> <sup>515'</sup>	12 1/4"	9 5/8"	40#	P-110	LT&C	New
Production Liner	0' to TD'	8 1/2"	5 1/2"	20#	P-110	BT&C	New

**Interval-Surface 0-1400'**

13-3/8" 54.50# J-55 STC	Collapse	Burst	Tension (connection)	Tension (body of pipe)
Design	1130 psi	2730 psi	514K	853K
Actual	655 psi	1500 psi	81.7K	81.7K
Safety Factor	1.7	1.82	6.2	10.4

**Interval- Intermediate 0-6700'**

9 5/8" 40# P110 HCP LTC	Collapse	Burst	Tension (connection)	Tension (body of pipe)
Design	4230 psi	7900 psi	737K	1260K
Actual	3484 psi	2500psi	268K	268K
Safety Factor	1.2	3.1	2.7	4.7

**Interval-Production Liner KOP'-TD'**

5.5" 20# P-110	Collapse	Burst	Tension	Tension
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BTC			(connection)	(body of pipe)
Design	11,100 psi	12,640 psi	548K	641K
Actual	10,500 psi	9,000 psi	206K	206K
Safety Factor	1+	1.4	2.6	3.1

- i) Casing design subject to revision based on geologic conditions encountered.

*See 6. CWA*

### PROPOSED CEMENTING PROGRAM

- a. The cement program will be as follows:

Interval	Type and Amount
<b>SURFACE 13 3/8"</b>	
TOC @ Surface	<p>Lead: ECONOCЕМ (TM) CEMENT w/ 0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)</p> <p>Fluid Weight 12.7 lbm/gal  Slurry Yield: 1.939 ft<sup>3</sup>/sk  Total Mixing Fluid: 10.51 Gal/sk  Proposed Sacks: 780 sks</p> <p>Tail: HALCEM (TM) CEMENT w/ 0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)</p> <p>Fluid Weight 14.8 lbm/gal  Slurry Yield: 1.326 ft<sup>3</sup>/sk  Total Mixing Fluid: 6.34 Gal/sk  Proposed Sacks: 345 sks</p>
<b>INTERMEDIATE 9 5/8"</b>	
TOC @ Surface	<p>Lead: ECONOCЕМ (TM) SYSTEM with 5% Salt, 0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)</p> <p>Fluid Weight 12.5 lbm/gal  Slurry Yield: 2.039 ft<sup>3</sup>/sk  Total Mixing Fluid: 11.25 Gal/sk  Proposed Sacks: 1733 sks</p> <p>Tail: HALCEM (TM) SYSTEM with 0.125 lbm/sk Poly-E-</p>



	<p>Flake (Lost Circulation Additive), 0.3 % HR-5 (Retarder), 35 % SSA-1 (Heavy Weight Additive), &amp; 0.07 % Ez-Flo LI (Dispersant)</p> <p>Fluid Weight 14.8 lbm/gal          Slurry Yield: 1.326 ft<sup>3</sup>/sk          Total Mixing Fluid: 6.34 Gal/sk          Proposed Sacks: 249 sks</p>
<p><b>Production 5 1/2"</b>          TOC to 100' into 9 5/8" casing if cemented option used.</p>	<p>If cemented option used:</p> <p><b>Lead cement:</b> VERSACEM (TM) SYSTEM with 10% Bentonite, 0.125 lbs/bbl PolyE-Flake, 0.10 % HR-601 (Retarder) &amp; 0.5 % D-AIR 5000 (defoamer)</p> <p>Fluid Weight 11.9 lbm/gal          Slurry Yield: 2.243 ft<sup>3</sup>/sk          Total Mixing Fluid: 12.8 Gal/sk          Proposed Sacks: 895 sks</p> <p><b>Tail cement:</b> SOLUCEM™ CEMENT 0.25 lb/bbl D-AIR 5000, and 0.60% HR-601</p> <p>Fluid Weight 15.0 lbm/gal          Slurry Yield: 2.622 ft<sup>3</sup>/sk          Total Mixing Fluid: 11.38 Gal/sk          Proposed Sacks: 1045 sks</p>

*See  
Cora*

- b. After cementing but before commencing any test, the casing string shall stand cemented until the cement has reached a compressive strength of at least 500 psi at the shoe.
- c. The following reports shall be filed with the District Manager within 30 days after the work is completed.
  - 1) Progress reports, Form 3160-5 (formerly 9-331) "Sundry Notices and Reports on Wells", must include complete information concerning:

*See  
Cora*

- a) Setting of each string of casing, showing the size, grade, weight of casing set, hole size; setting depth, amounts and type of cement used, whether cement circulated or the top of the cement behind the casing, depth of cementing tools used, casing test method and results, and the date work was done. Show the spud date on the first reports submitted.
- b) Temperature or bond logs must be submitted for each well where the casing cement was not circulated to the surface.
- d. Auxiliary equipment to be used is as follows:
  1. Upper and lower kelly cock valves with handles will be used if kelly utilized.
  2. If top drive system utilized then a full opening safety valve or an IBOP (internal blow out preventer) will be installed.

## 7. PROPOSED CIRCULATING MEDIUM OR MEDIUMS

- a. The proposed circulating mediums to be employed in drilling are as follows: Note- Depths are taken from the Directional Plan.  
~ Drill fluids will be self-contained and recycled via closed loop system.  
Cuttings will be hauled off-site to **R360 disposal site.**

Interval	Mud Type	Mud Weight.	Viscosity	Fluid Loss	pH
Surface (80'-1400')	FW	8.8-9.0	28-30	NC	7.5
Intermediate Vertical  Surface to 9 5/8 casing point  (1400'-6700')	BRINE	9.4-10	30-40	4-8 ML 30 min	9.0
Lower Vertical and Curve	Cut Brine and lite mud up	9.1-9.5	30-40	4-6 ML 30 min	9.0

Drillout to Landing Point (6700'-10500')					
<b>Lateral</b> Landing Point to TD (10500-18000')	<b>Cut Brine and lite mud up</b>	<b>9.1-9.5</b>	<b>29/40</b>	<b>4-6 ML 30 min</b>	<b>9.0</b>

A mud test shall be performed every 24 hours after mudding-up to determine, as applicable, density, viscosity, gel strength, filtration, and pH.

- b. Mud monitoring equipment to be used is as follows:
  - 1) Periodic checks will be made each tour of the mud system. The mud level will be checked visually.
  - 2) The minimum quantity of mud material to be kept on location, in case of an emergency, is 700 Bbls.

8. **PROPOSED TESTING, LOGGING, AND CORING**

The anticipated type and amount of testing, logging and coring are as follows:

- a. The logging program will consist of: a SLB Quad-Combo logging suite to be run at kick off point, consisting of gamma ray, resistivity, neutron density, and sonic logs.
- b. No cores are anticipated.
- c. The anticipated completion program is as follows: After drilling the Bone Spring lateral, a 5-1/2" production casing with cemented liner for isolation will be run from Surface to the lateral TD.

9. **EXPECTED BOTTOM HOLE PRESSURE**

- a. The maximum bottom hole pressure 5350 psi. The maximum bottom hole temperature is 195 degrees Fahrenheit.
- b. H<sub>2</sub>S is not anticipated. However, an H<sub>2</sub>S Plan has been prepared by Kaiser Francis and is attached to this APD package.

10. **OTHER INFORMATION & NOTIFICATION REQUIREMENTS**

- a. Kaiser Francis Oil Company agrees to be responsible under the terms and conditions of the lease for the operations on the lease.
- b. Drilling is planned to commence on approximately February 1, 2015, using Cactus Rig #170. It is anticipated that completion operations will begin within 40 days after the well has been drilled.
- c. The approved New Mexico OCD permit will be submitted upon its receipt.
- d. It is anticipated that the drilling of this well will take approximately 35 days.
- e. The following shall be entered on the well site supervisor's log:
  - 1) Blowout preventer pressure tests, including test pressures and results;
  - 2) Blowout preventer tests for proper functioning;
  - 3) Blowout prevention drills conducted;
  - 4) Casing run, including size, grade, weight, and depth set;
  - 5) How the pipe was cemented, including amount of cement, type, whether cement circulated, location of the cementing tools, etc.
  - 6) Waiting on cement ( WOC ) time for each casing string;
  - 7) Casing pressure tests after cementing, including test pressures and results.
- f. Section 102 (b) (3) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provision of the operating regulations at Title 43 CFR 3162.4-1, requires that "not later than the 5th business day after any well begins production on which royalty is due anywhere on the lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160-5 or orally to be followed by a letter or sundry notice of the date on which such production has begun or resumed." The date on which production is commenced or resumed will be construed for oil wells as the date on which liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which liquid hydrocarbons are first produced into a permanent storage facility, whichever first occurs; and, for gas sales as the date on which associated liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which gas is first measured through permanent metering facilities, whichever first occurs. If the operator fails to comply with

these requirements in the manner and time allowed, the operator shall be liable for a civil penalty of up to \$10,000 per violation for each day such violation continues, not to exceed a maximum of 20 days. See Section 109 (3) of the Federal Oil and Gas Royalty Management Act of 1982 and the implementing regulations at Title 43 CFR 3163.4.

g. Notification Requirements:

1. The BLM in Carlsbad will be notified verbally not more than 48 hours after the well is spudded, or on the next regular work day.
2. The BLM will be notified verbally at least 48 hours prior to running/cementing surface casing.
3. For verbal plugging orders on drilling locations, the BLM will be notified 24 hours prior to plugging.

The following standards apply to the abandonment of newly drilled dry or nonproductive wells in accordance with 43 CFR 3162.3-4. Approval shall be obtained prior to the commencement of abandonment. All formations being useable quality water, oil, gas, or geothermal resources, and/or a prospectively valuable deposit of minerals shall be protected. Approval may be given orally by the authorized officer before abandonment operations are initiated. This oral request and approval shall be followed by a written notice of intent to abandon filed not later than the fifth business day following oral approval. Failure to obtain approval prior to commencement of abandonment operations shall result in immediate assessment under 43 CFR 3163.1 (b) (3). The hole shall be in static condition at the time any plugs are placed (this does not pertain to plugging lost circulation zones). Within 30 days of completion of abandonment, a subsequent report of abandonment shall be filed.

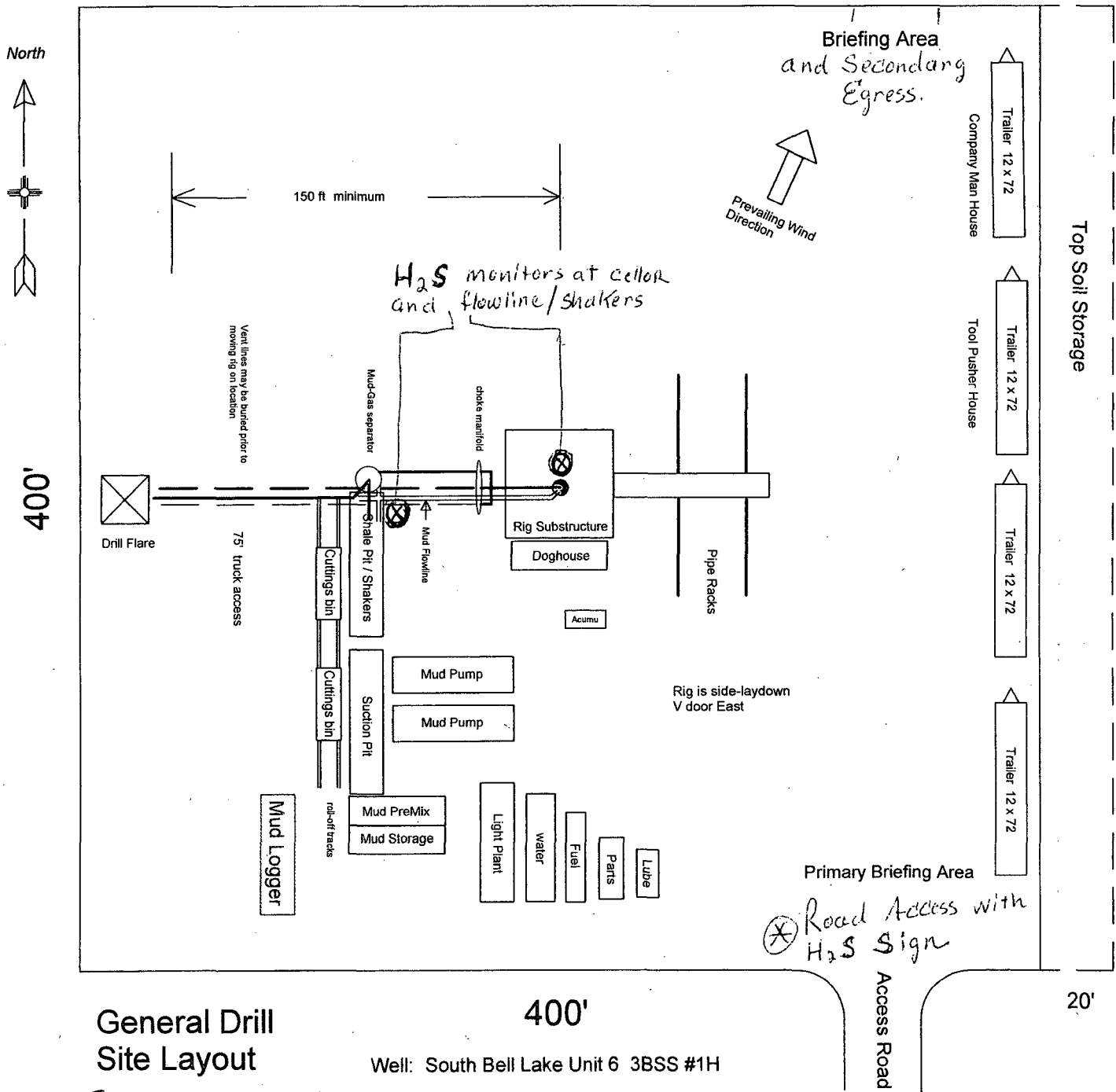
4. BLM Representatives- Office Telephone No. XXXXXXXXXXXXX.

<i>Position</i>	<i>Name</i>	<i>Telephone</i>
Petroleum Engineer	Ed Fernandez	575-234-2220

# CASING TABLES

Dimensional & Grade Designators								Collapse Resistance
OD Size	Weight		NOM Wall	NOM ID	API Drift	Alternate Drift	Product	
	T&C	PE						
in.	lb/ft	lb/ft	in.	in.	in.	in.	Grade	psi
9 5/8	36.00	34.89	0.352	8.921	8.765	--	USS C110	2,480
9 5/8	36.00	34.89	0.352	8.921	8.765	--	USS RVH110	2,480
9 5/8	36.00	34.89	0.352	8.921	8.765	--	USS RVS110	2,480
9 5/8	36.00	34.89	0.352	8.921	8.765	--	P110 SR16	2,480
9 5/8	36.00	34.89	0.352	8.921	8.765	--	P110	2,480
9 5/8	36.00	34.89	0.352	8.921	8.765	--	P110 HC	3,090
9 5/8	36.00	34.89	0.352	8.921	8.765	--	P110 HP	3,360
9 5/8	36.00	34.89	0.352	8.921	8.765	--	Q125	2,480
9 5/8	36.00	34.89	0.352	8.921	8.765	--	Q125 HC	3,120
9 5/8	36.00	34.89	0.352	8.921	8.765	--	Q125 HP	3,390
9 5/8	36.00	34.89	0.352	8.921	8.765	--	USS 140	2,480
9 5/8	36.00	34.89	0.352	8.921	8.765	--	USS V150	2,480
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	J55	2,570
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	K55	2,570
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	USS HCK55	3,810
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	USS GT80S	3,090
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	L80	3,090
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	L80 HC	3,870
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	L80 HP	4,230
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	N80	3,090
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	N80 HC	3,940
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	N80 HP	4,290
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	C90	3,250
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	USS C90	3,250
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	R95	3,320
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	T95	3,320
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	USS C95	3,320
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	USS C100	3,380
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	USS RVS100	3,380
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	C110	3,470
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	USS C110	3,470
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	USS RVH110	3,470
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	USS RVS110	3,470
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	P110 SR16	3,470
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	P110	3,470
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	P110 HC	4,230
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	P110 HP	4,590
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	Q125	3,530
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	Q125 HC	4,300
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	Q125 HP	4,660
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	USS 140	3,530
9 5/8	40.00	38.97	0.395	8.835	8.679	8.750	USS V150	3,530
9 5/8	43.50	42.73	0.435	8.755	8.599	--	J55	3,250
9 5/8	43.50	42.73	0.435	8.755	8.599	--	K55	3,250
9 5/8	43.50	42.73	0.435	8.755	8.599	--	USS GT80S	3,810

TENSION				Internal Yield						Ductile Rupture Capped End	Outside Diameter	
				API Historical			Lame' - Von Mises					
Joint Strength, 1,000 lbs				Pipe Body	Threaded & Coupled			Open End	Capped End			
Yield	Threaded and Coupled				STC	LTC	BTC					
Pipe Body	STC	LTC	BTC	psi	psi	psi	psi	psi	psi	psi	in.	in.
1,128	--	--	--	7,040	--	--	--	7,020	7,850	7,660	--	--
1,128	--	--	--	7,040	--	--	--	7,020	7,850	7,660	--	--
1,128	--	--	--	7,040	--	--	--	7,020	7,850	7,660	--	--
1,128	--	--	--	7,040	--	--	--	7,020	7,850	7,230	--	--
1,128	--	--	--	7,040	--	--	--	7,020	7,850	7,980	--	--
1,128	--	--	--	7,040	--	--	--	7,020	7,850	7,980	--	--
1,282	--	--	--	8,000	--	--	--	7,980	8,920	8,360	--	--
1,282	--	--	--	8,000	--	--	--	7,980	8,920	8,680	--	--
1,282	--	--	--	8,000	--	--	--	7,980	8,920	8,680	--	--
1,384	--	--	--	8,640	--	--	--	8,620	9,630	9,050	--	--
1,436	--	--	--	8,960	--	--	--	8,940	9,990	9,720	--	--
1,538	--	--	--	9,600	--	--	--	9,580	10,700	10,420	--	--
630	452	520	714	3,950	3,950	3,950	3,950	3,940	4,390	3,950	10.625	10.125
630	486	561	843	3,950	3,950	3,950	3,950	3,940	4,390	5,000	10.625	10.125
630	486	561	843	3,950	3,950	3,950	3,950	3,940	4,390	5,000	10.625	10.125
916	--	727	947	5,750	--	5,750	5,750	5,730	6,380	6,100	10.625	10.125
916	--	727	947	5,750	--	5,750	5,750	5,730	6,380	6,100	10.625	10.125
916	--	727	947	5,750	--	5,750	5,750	5,730	6,380	6,100	10.625	10.125
974	--	760	968	6,110	--	6,110	6,110	6,090	6,780	6,100	10.625	10.125
916	--	737	979	5,750	--	5,750	5,750	5,730	6,380	6,430	10.625	10.125
916	--	737	979	5,750	--	5,750	5,750	5,730	6,380	6,430	10.625	10.125
1,088	--	847	1,074	6,830	--	6,830	6,830	6,810	7,580	6,800	10.625	10.125
1,031	--	804	1,021	6,470	--	6,470	6,470	6,450	7,180	7,120	10.625	10.125
1,031	--	804	1,021	6,470	--	6,470	6,470	6,450	7,180	7,120	10.625	10.125
1,088	--	847	1,074	6,830	--	6,830	6,830	6,810	7,580	6,800	10.625	10.125
1,088	--	847	1,074	6,830	--	6,830	6,830	6,810	7,580	7,500	10.625	10.125
1,088	--	847	1,074	6,830	--	6,830	6,830	6,810	7,580	7,500	10.625	10.125
1,145	--	870	1,062	7,190	--	7,190	7,190	7,170	7,980	7,160	10.625	10.125
1,145	--	870	1,062	7,190	--	7,190	7,190	7,170	7,980	7,160	10.625	10.125
1,260	--	--	--	7,910	--	--	--	7,880	8,770	8,280	--	--
1,260	--	--	--	7,910	--	--	--	7,880	8,770	8,640	--	--
1,260	--	--	--	7,910	--	--	--	7,880	8,770	8,640	--	--
1,260	--	--	--	7,910	--	--	--	7,880	8,770	8,640	--	--
1,260	--	988	1,266	7,910	--	7,910	7,910	7,880	8,770	8,150	10.625	10.125
1,260	--	988	1,266	7,910	--	7,910	7,910	7,880	8,770	9,000	10.625	10.125
1,260	--	988	1,266	7,910	--	7,910	7,910	7,880	8,770	9,000	10.625	10.125
1,432	--	1,098	1,360	8,990	--	8,990	8,990	8,960	9,970	9,430	10.625	10.125
1,432	--	1,108	1,393	8,990	--	8,990	8,990	8,960	9,970	9,790	10.625	--
1,432	--	1,108	1,393	8,990	--	8,990	8,990	8,960	9,970	9,790	10.625	--
1,546	--	1,185	1,467	9,710	--	9,710	9,710	9,670	10,770	10,200	10.625	--
1,604	--	1,239	1,552	10,070	--	10,070	10,070	10,030	11,170	10,960	10.625	--
1,718	--	1,326	1,658	10,780	--	10,780	10,780	10,750	11,960	11,750	10.625	--
691	--	--	--	4,350	--	--	--	4,340	4,810	4,360	--	--
691	--	--	--	4,350	--	--	--	4,340	4,810	5,520	--	--
1,005	--	813	1,038	6,330	--	6,330	6,330	6,310	7,000	6,740	10.625	10.125

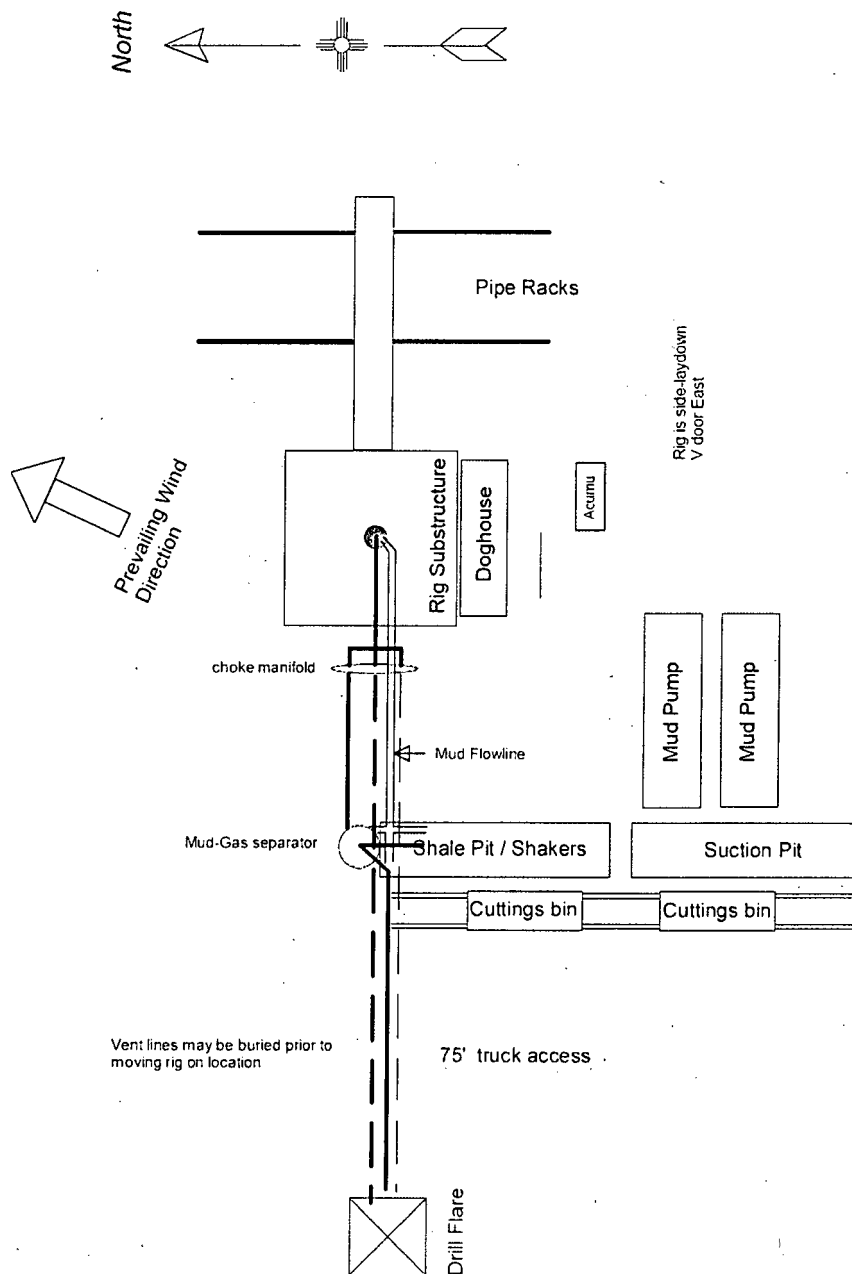


General Drill  
Site Layout

Well: South Bell Lake Unit 6 3BSS #1H

Exhibit 1H  
Rig & Location  
Drilling Program





**EXHIBIT A2** Expanded view of flowlines to mud-gas separator and blow-down lines to flare

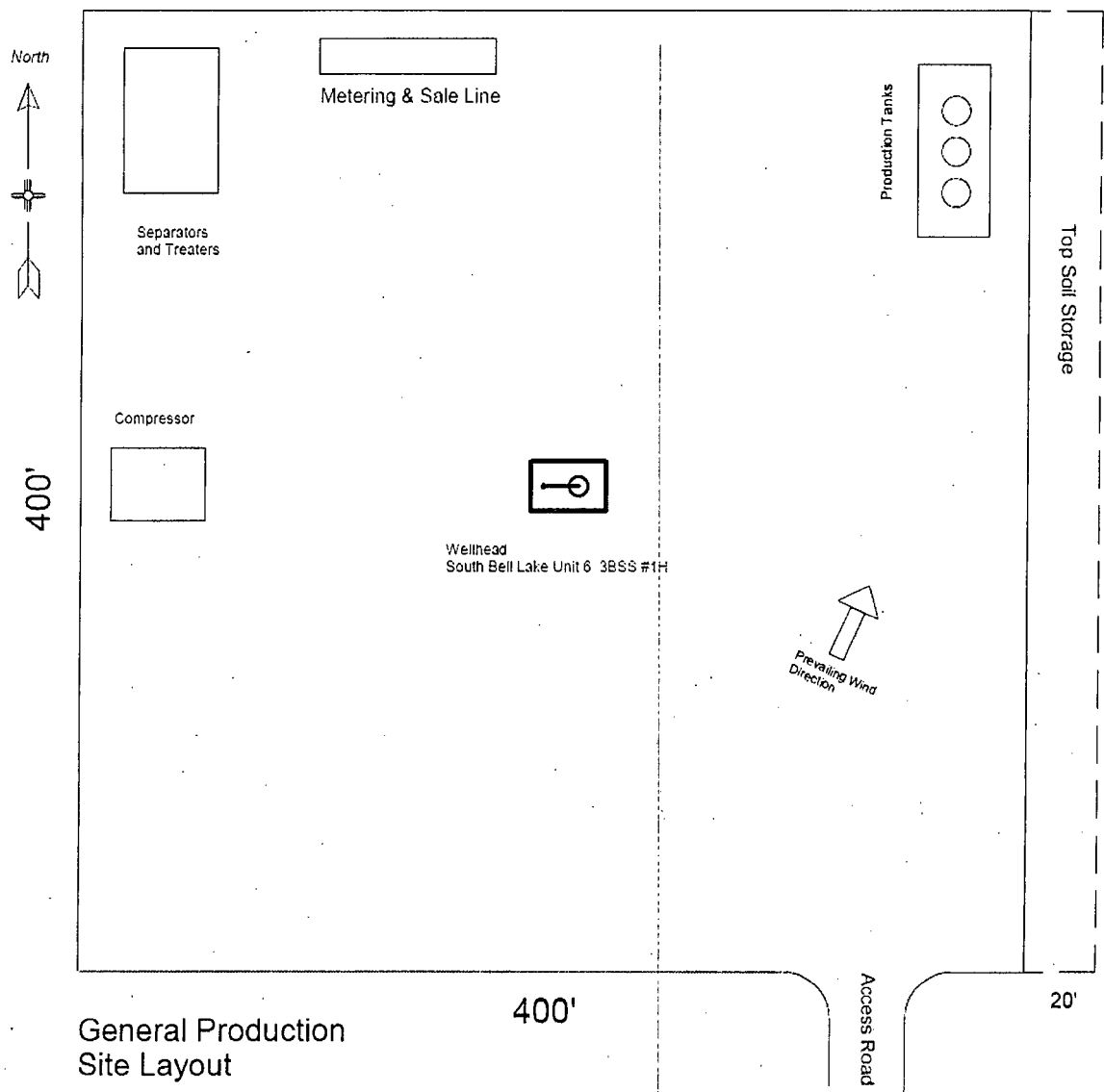


EXHIBIT A3 General production pad layout

EXHIBIT B1

5000 psi BOP STACK

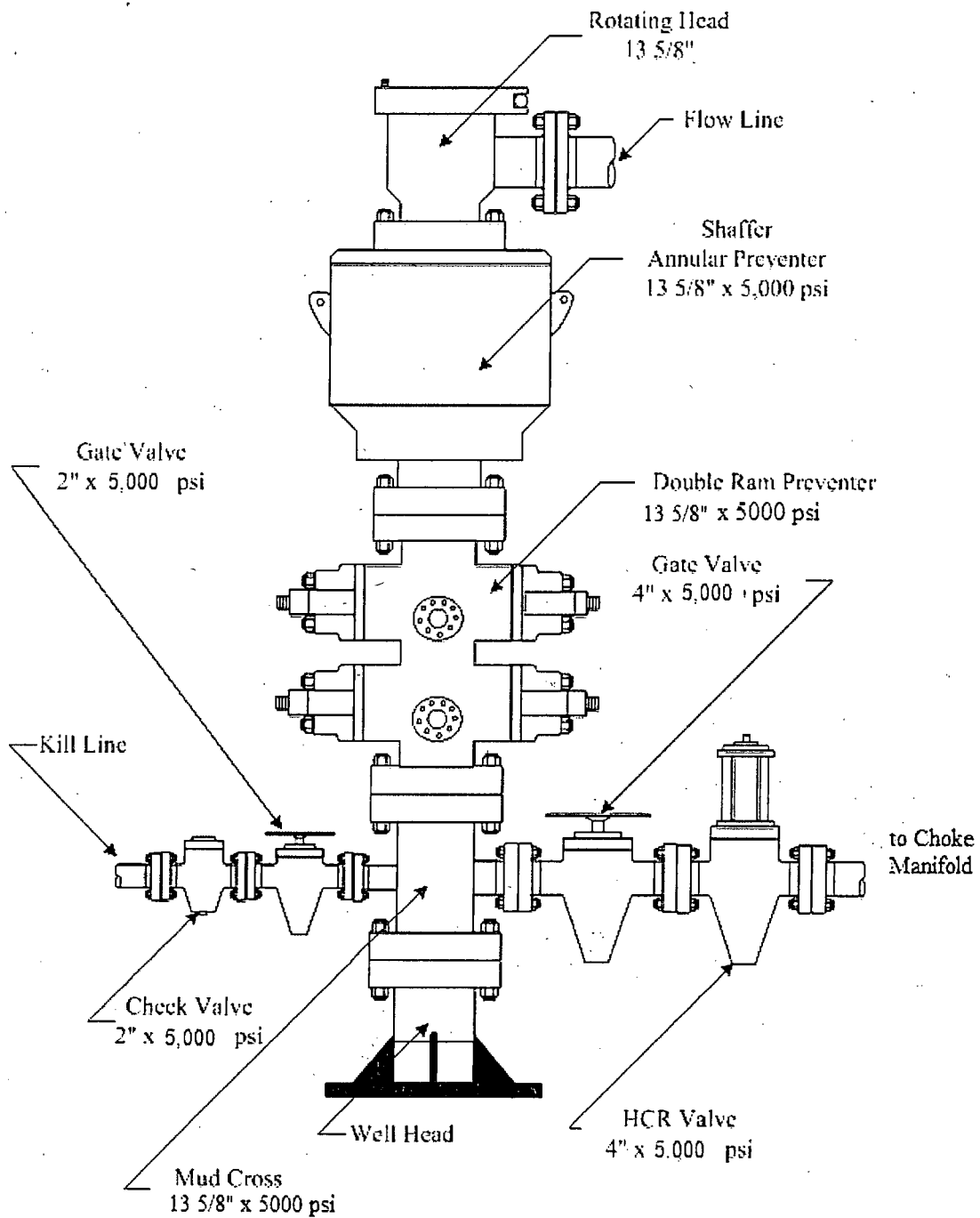
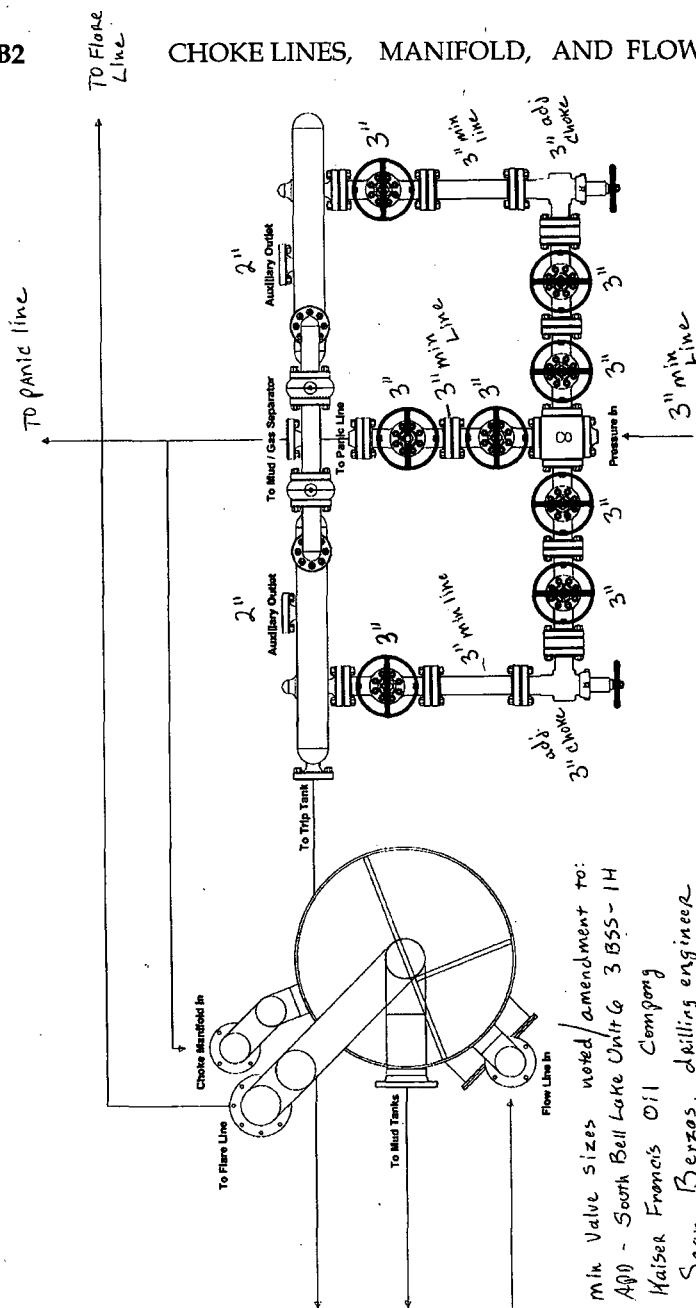


EXHIBIT B2

CHOKE LINES, MANIFOLD, AND FLOW



\* min valve sizes noted/amendment to:  
 App - South Bell Lake Unit G 3 BSS-1H  
 Kaiser Francis Oil Company  
 Sean Berzas, drilling engineer  
 5-Br  
 1-4-2016