

OCD-ARTESIA

ATS-11-465
EA-11-717
R-111-POTASH

Form 3160-3
(February 2005)

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

FORM APPROVED
OMB NO 1004-0137
Expires March 31, 2007

1a Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5 Lease Serial No NM-85891
1b Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6 If Indian, Allottee or Tribe Name N/A
2 Name of Operator Yates Petroleum Corporation (025575)		7 If Unit or CA Agreement, Name and No N/A
3a Address 105 South Fourth Street, Artesia, NM 88210	3b Phone No (include area code) 575 505-748-1471	8 Lease Name and Well No Knoll "AOK" Federal #4-H (15751)
4 Location of well (Report location clearly and in accordance with any State requirements. *) At surface (A) 430' FNL & 480' FEL, NENE Section 3, T24S-R29E At proposed prod zone 660' FNL & 330' FWL, NWNW Section 3, T24S-R29E		9 API Well No. 30-015-39353
14 Distance in miles and direction from the nearest town or post office* Approximately 6 miles east of Malaga, New Mexico.		10 Field and Pool, or Exploratory NASH DRAW, Wildcat Delaware, SW
15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg unit line, if any) 330'		11 Sec, T, R, M, or Blk And Survey or Area Section 3, T24S-R29E
16 No. of acres in lease 318.62	17 Spacing Unit dedicated to this well N2N2, Section 3 T24S-R29E	12 County or Parish Eddy
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 100'	19 Proposed Depth 6850' TVD 11,124' TMD	13 State NM
20 BLM/ BIA Bond No on file NATIONWIDE BOND #NMB000434	21 Elevations (Show whether DF, KDB, RT, GL, etc) 3086' GL	22 Aproximate date work will start* May 15, 2011
23 Estimated duration 60 days	24 Attachments	

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

- 1 Well plat certified by a registered surveyor
- 2 A Drilling Plan
- 3 A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).

- 4 Bond to cover the operations unless covered by 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 	Name (Printed/ Typed) Cy Cowan	Date 3/30/2011
Title Land Regulatory Agent		

Approved By (Signature) 	Name (Printed/ Typed) STATE DIRECTOR	Date AUG 4 2011
Title acting		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 cc 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 wilfully 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

*(Instructions on page 2)

Carlsbad Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

YATES PETROLEUM CORPORATION
 Knoll "AOK" Federal #4-H
 430' FNL and 480' FEL Surface Hole Location
 660' FNL & 330' FWL Bottom Hole Location
 Section 3-T24S-R29E
 Eddy County, New Mexico

DRILLING INFORMATION

1. The estimated tops of geologic markers are as follows:

Rustler	150'	Brushy Canyon Mkr	7260'-Oil	6610-MD
Top of Salt	730'	Brushy Canyon Target	6850'-Oil	7123-MD
Base of Salt	2920'	TD (Lateral)	6850'	
Bell Canyon	3170'	TMD	11124'	
Cherry Canyon	4070' Oil			
Brushy Canyon	5300'-Oil			
2. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:

Water: 170'
 Oil or Gas: Oil Zones: 4070', 5300', 7260', & 6850'.
3. Pressure Control Equipment: 3000 PSI BOPE with a 13.625" opening will be installed on the 13.375" casing and also on the 9 5/8" casing. Pressure tests to 3000 PSI and held for 30 minutes will be conducted before drilling out from under all casing strings, which are set and cemented in place. Blowout Preventer controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit B.
4. Auxiliary Equipment: Kelly cock, pit level indicators, flow sensor equipment, and a sub with full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when Kelly is not in use.
5. THE PROPOSED CASING AND CEMENTING PROGRAM:

A. Casing Program: All new casing to be used

<u>Hole Size</u>	<u>Casing Size</u>	<u>Wt./Ft</u>	<u>Grade</u>	<u>Coupling</u>	<u>Interval</u>	<u>Length</u>
17 1/2"	13 3/8"	48#	J-55	ST&C	0-400'	400'
12 1/4"	9 5/8"	36#	K-55	LT&C	0-3100'	3100'
8 1/2"	5 1/2"	17#	P- 110	LT&C	0'-7200'	7200'
8 1/2"	5 1/2"	17#	L-80	LT&C	7200-11124'	3920'

Minimum Casing Design Factors: Burst 1.0, Tensile Strength 1.8, Collapse 1.125

Hole drilled vertically to 6373'. At 6373 MD well will be kicked off at 12 degrees per 100' with a 8 3/4" hole to 7200' MD (6850 TVD). If hole conditions dictate, 7" casing will be set. A 6 1/8" hole will then be drilled to 11124' MD (6850' TVD) where 4 1/2" casing will be set and cemented. If 7" is not set, hole will be reduced to 8 1/2" and drilled to 11124' MD (6850' TVD) where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 455' FNL and 957' FEL, 3-24S-29E. Deepest TVD in this well is 6850' in the lateral.

Knoll AOK Federal #4H

Contingency Casing Design

If hole conditions dictate, 7" casing will be set at 7,200' MD (6,850' TVD) A 6 1/8" hole will then be drilled to 11,124' MD (6,850' TVD) where 4 1/2" casing will be set and cemented with one stage up to dv tool. After completion procedures, the 4 1/2" casing will be cut and pulled at 6300'

2nd Intermediate

0 ft to 100 ft				Make up Torque ft-lbs			Total ft = 100
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	26 #/ft	J-55	LT&C	3670	2750	4590	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
4,320 psi	4,980 psi	367,000 #		415,000 #		6,151	

100 ft to 6,000 ft				Make up Torque ft-lbs			Total ft = 5,900
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	23 #/ft	J-55	LT&C	3130	2350	3910	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
3,270 psi	4,360 psi	313,000 #		366,000 #		6,251	

6,000 ft to 7,200 ft				Make up Torque ft-lbs			Total ft = 1,200
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	26 #/ft	J-55	LT&C	3670	2750	4590	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
4,320 psi	4,980 psi	367,000 #		415,000 #		6,151	

DV tools placed at 6000' and 4200'.

Stage I: Cemented w/260sx PVL (YLD 1.41 Wt 13) TOC= 6000'

Stage II: Cemented w/400sx PVL (YLD 1.41 Wt 13) TOC= 4200'

Stage III: Cemented w/400sx Lite Crete (YLD 2.78 Wt 9.9), tail w/100sx PVL (YLD 1.41 Wt 13) TOC= 0'

Production

0 ft to 11124 ft				Make up Torque ft-lbs			Total ft = 12,215
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
4.5 inches	11.6 #/ft	HCP-110	LT&C	3020	2270	3780	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
8,650 psi	10,690 psi	279,000 #		367,000 #		3,875	

DV tool placed at approx. 6300' and cemented with one stage up to dv tool. After completion procedures, the 4 1/2" casing will be cut and pulled at 6300'.

Cemented w/500sx PVL (YLD 1.83 Wt 13) TOC= 6300'

B. CEMENTING PROGRAM:

Surface Casing: Lead in with 425 sacks C w/CaCl₂ (Wt 14.80 Yld 1.34) TOC surface using 100% excess.

Intermediate Casing: 850 sacks of C Lite w/ 2% CaCl₂ (Wt 12.50 Yld 2.00). Tail in with 200 sacks C w/ 2% CaCl₂ (Wt 14.80 Yld 1.34). TOC surface using 100% excess.

Production Casing: Cement will be done in 3 stages with DV tools at 4200' & 6000'. Designed using 100% excess,

Stage One: 1325 sacks Pecos Valley Lite (Wt 13.00 Yld 1.83). TOC. 7000'.

Stage Two: Lead with 650 sacks Pecos Valley Lite (Wt 13.00 Yld 1.41). TOC 4200'

Stage Three: Lead 1500 sacks of Pecos Valley Lite (Wt 13.00 Yld 1.41). TOC 0'..

6. MUD PROGRAM AND AUXILIARY EQUIPMENT:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-400'	Fresh Water	8.60-9.20	29-32	N/C
400'-3100'	Brine Water	10.00-10.20	28-30	N/C
3100'-6373'	Cut Brine	8.90-9.10	28-29	N/C
6373'-11124'	Cut Brine(Lateral Section)	8.90-9.00	28-34	<15

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. Rig personnel will check mud hourly.

7. EVALUATION PROGRAM: *See COA*

Samples: Thirty foot samples to 3000'. Every 10' from 3000' to TD

Logging: Platform Hals; for shallow control

Coring: None anticipated

DST's: None Anticipate

Mudlogging: Yes: From surface casing to TD.

8. ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURE, AND POTENTIAL HAZARDS:

Maximum Anticipated BHP:

0'-400' 191 PSI

400'-3100' 1644 PSI

3100'-6850' 3206 PSI

Abnormal Pressures Anticipated: None

Lost Circulation Zones Anticipated: None.

H₂S Zones Anticipated: H₂S is possible for this well

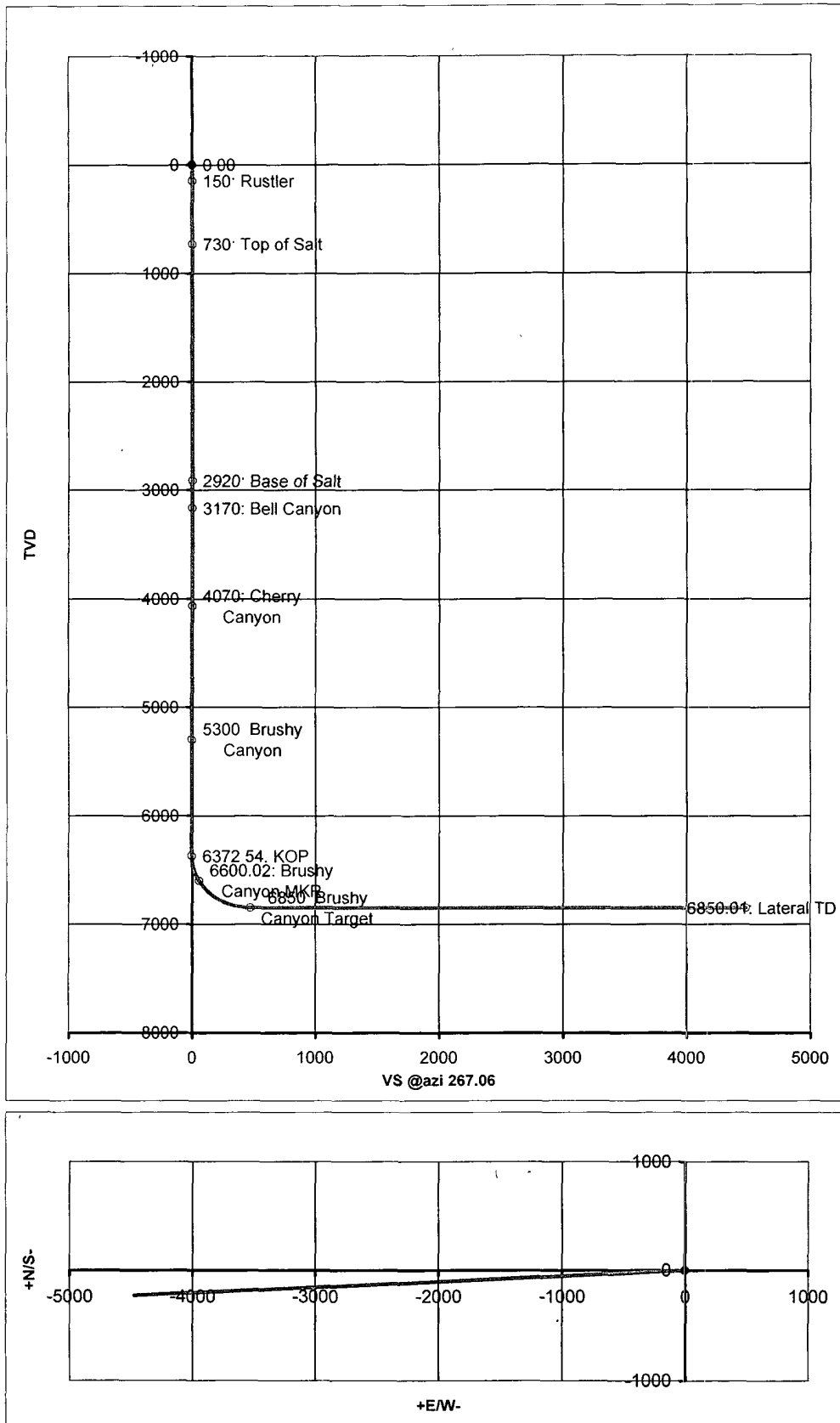
Maximum Bottom Hole Temperature: 150 F

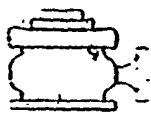
9. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 65 days to drill the well with completion taking another 45 days.

Co: Yates Petroleum Corporation				Units: Feet, ° 7100ft		VS Az: 267.06		Tgt TVD: 6850.00	
Drillers: 0				Elevation:		Tgt Radius: 0.00		Tgt MD: 0.00	
Well Name: Knoll AOK Federal #4H				Northing:		Tgt N/S: -230.00		Tgt Displ.: 0.00	
Location: Sect. 3, 24S-29E				Easting:		Tgt E/W: -4473.00		Method: Minimum Curvature	

No.	MD	CL	Inc.	Azi.	TVD	VS	+N/S-	+E/W-	BR	WR	DLS	Comments
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
1	150.00	150.00	0.00	360.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	Rustler
2	730.00	580.00	0.00	360.00	730.00	0.00	0.00	0.00	0.00	0.00	0.00	Top of Salt
3	2920.00	2190.00	0.00	360.00	2920.00	0.00	0.00	0.00	0.00	0.00	0.00	Base of Salt
4	3170.00	250.00	0.00	360.00	3170.00	0.00	0.00	0.00	0.00	0.00	0.00	Bell Canyon
5	4070.00	900.00	0.00	360.00	4070.00	0.00	0.00	0.00	0.00	0.00	0.00	Cherry Canyon
6	5300.00	1230.00	0.00	360.00	5300.00	0.00	0.00	0.00	0.00	0.00	0.00	Brushy Canyon
7	6372.54	6372.54	0.00	267.06	6372.54	0.00	0.01	0.00	0.00	4.19	0.00	KOP
8	6400.00	27.46	3.30	267.06	6399.98	0.79	-0.03	-0.79	12.00	0.00	12.00	
9	6500.00	100.00	15.30	267.06	6498.49	16.91	-0.86	-16.89	12.00	0.00	12.00	
10	6600.00	100.00	27.30	267.06	6591.49	53.16	-2.72	-53.09	12.00	0.00	12.00	
11	6609.64	9.64	28.45	267.06	6600.02	57.67	-2.96	-57.60	11.97	0.00	11.97	Brushy Canyon MKR
12	6700.00	100.00	39.30	267.06	6674.93	107.96	-5.54	-107.82	12.00	0.00	12.00	
13	6800.00	100.00	51.30	267.06	6745.14	178.91	-9.18	-178.67	12.00	0.00	12.00	
14	6900.00	100.00	63.30	267.06	6799.07	262.90	-13.49	-262.55	12.00	0.00	12.00	
15	7000.00	100.00	75.30	267.06	6834.36	356.27	-18.29	-355.80	12.00	0.00	12.00	
16	7100.00	100.00	87.30	267.06	6849.47	454.94	-23.36	-454.34	12.00	0.00	12.00	
17	7122.53	750.00	90.00	267.06	6850.00	477.46	-24.51	-476.83	12.00	0.00	12.00	Brushy Canyon Target
18	11123.98	4001.45	90.00	267.06	6850.01	4478.91	-229.99	-4473.00	0.00	0.00	0.00	Lateral TD





Yates Petroleum Corporation

BOP-3

Typical 3,000 psi Pressure System

Schematic

Annular with Double Ram Preventer Stack

YATES PETROLEUM CORPORATION

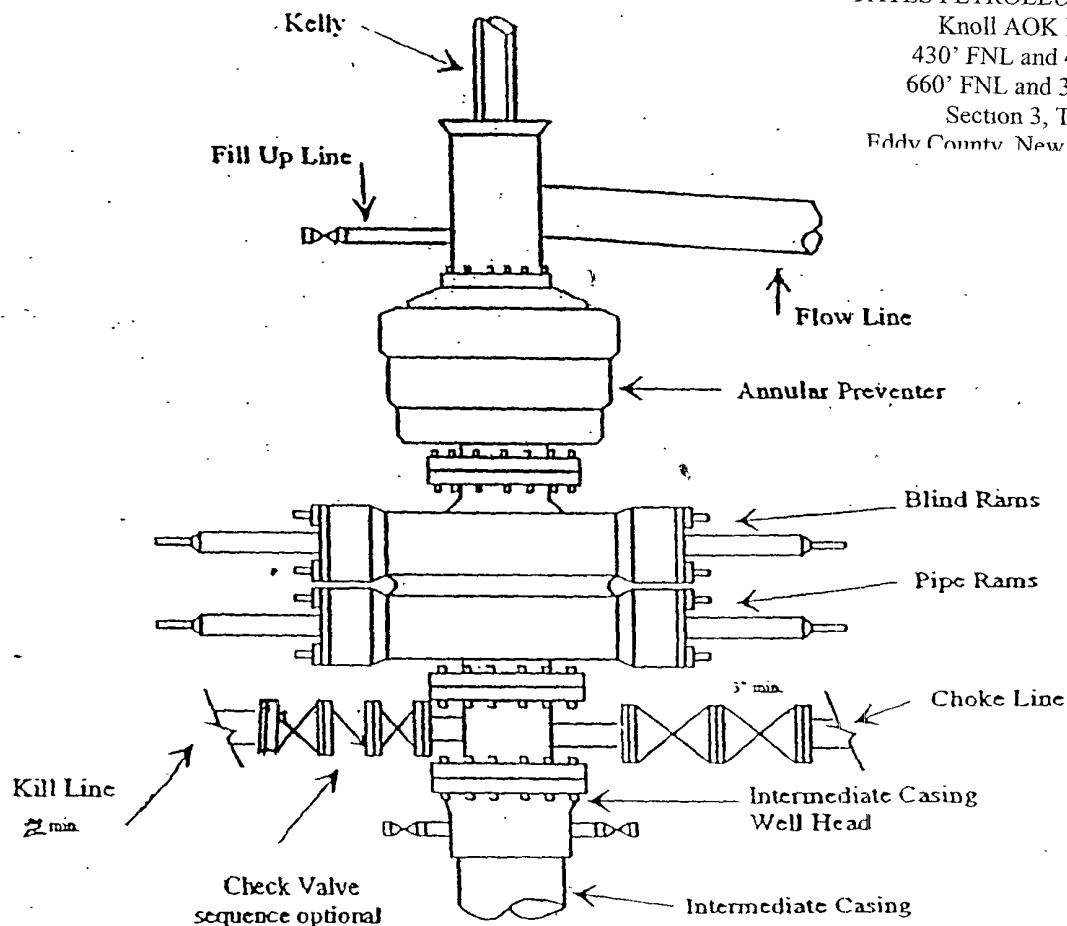
Knoll AOK Federal #4H

430' FNL and 480' FEL SHL

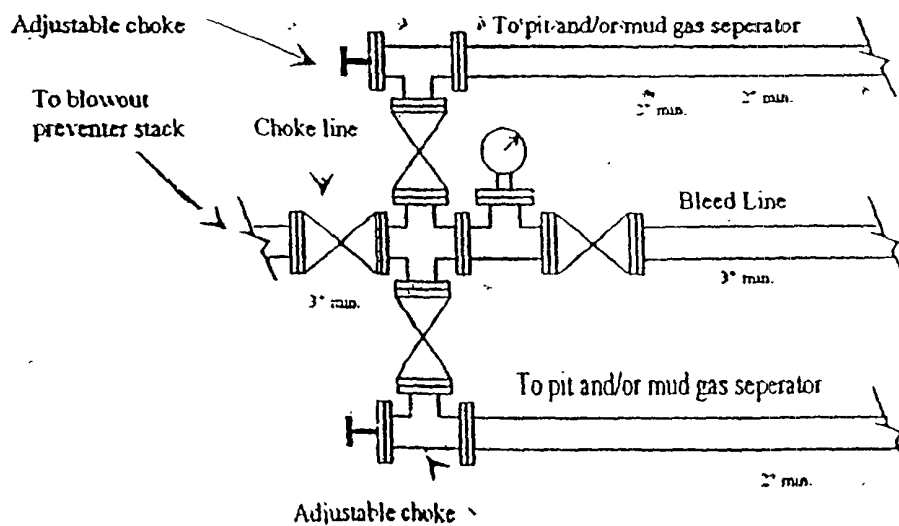
660' FNL and 330' FWL BHL

Section 3, T24S-R29E

Eddy County, New Mexico Exhibit C

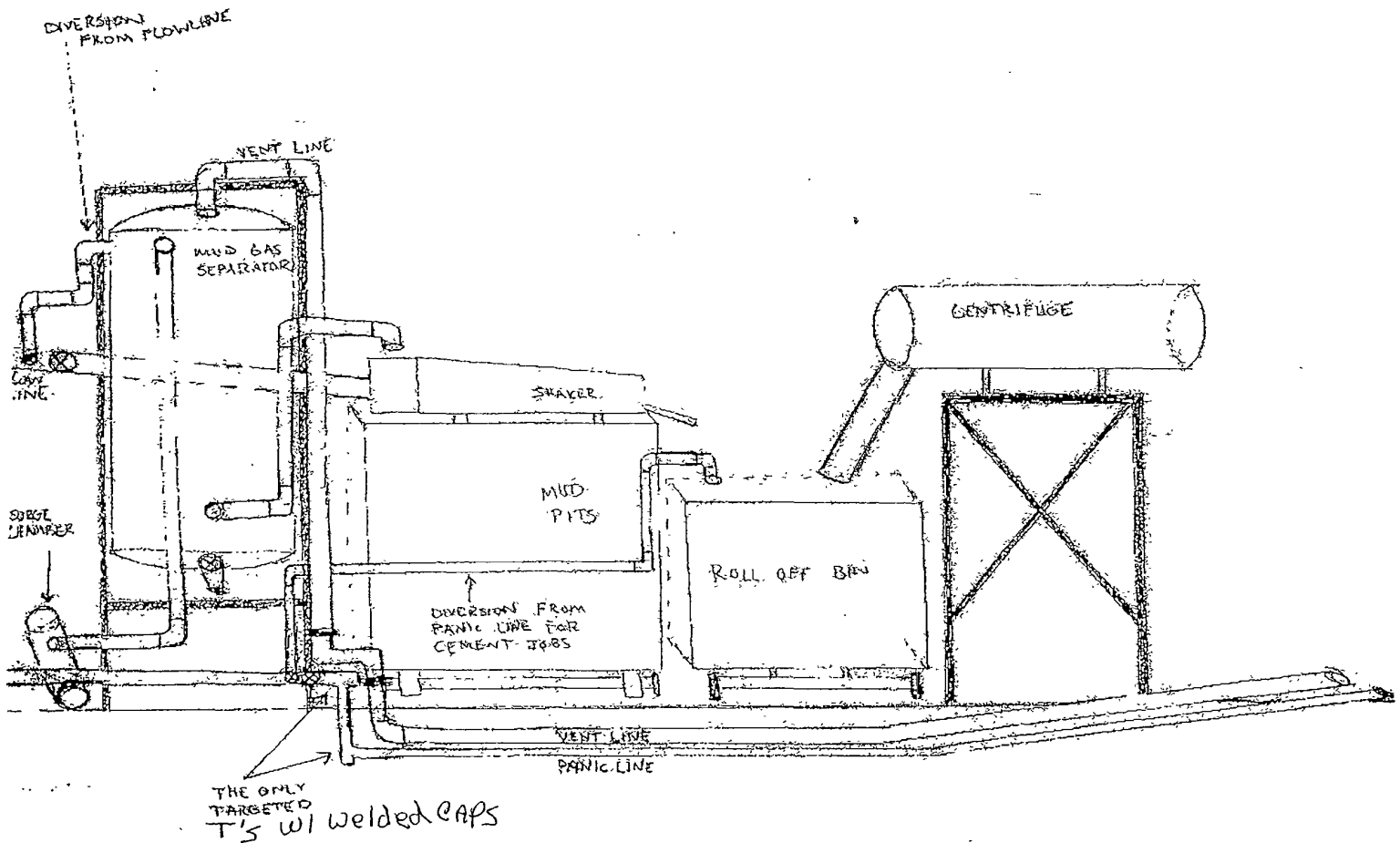


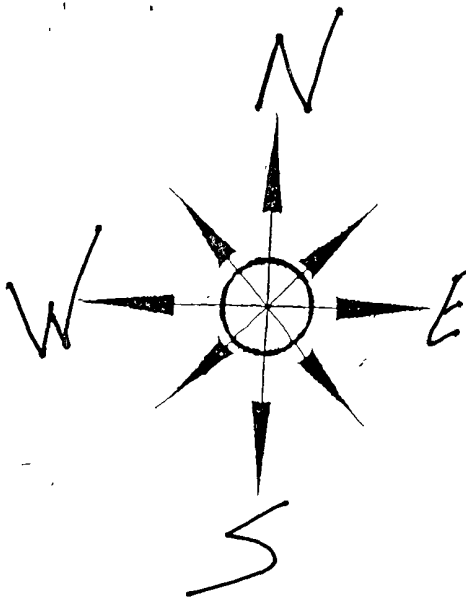
Typical 3,000 psi choke manifold assembly with at least these minimum features



YATES PETROLEUM CORPORATION
Piping from Choke Manifold
to the Closed-Loop Drilling Mud System

YATES PETROLEUM CORPORATION
Knoll AOK Federal #4H
430' FNL and 480' FEL SHL
.660' FNL and 330' FWL BHL
Section 3, T24S-R29E
Eddy County, New Mexico Exhibit E





Yates Petroleum Corporation

Location Layout for Permian Basin

YATES PETROLEUM CORPORATION

Knoll AOK Federal #4H

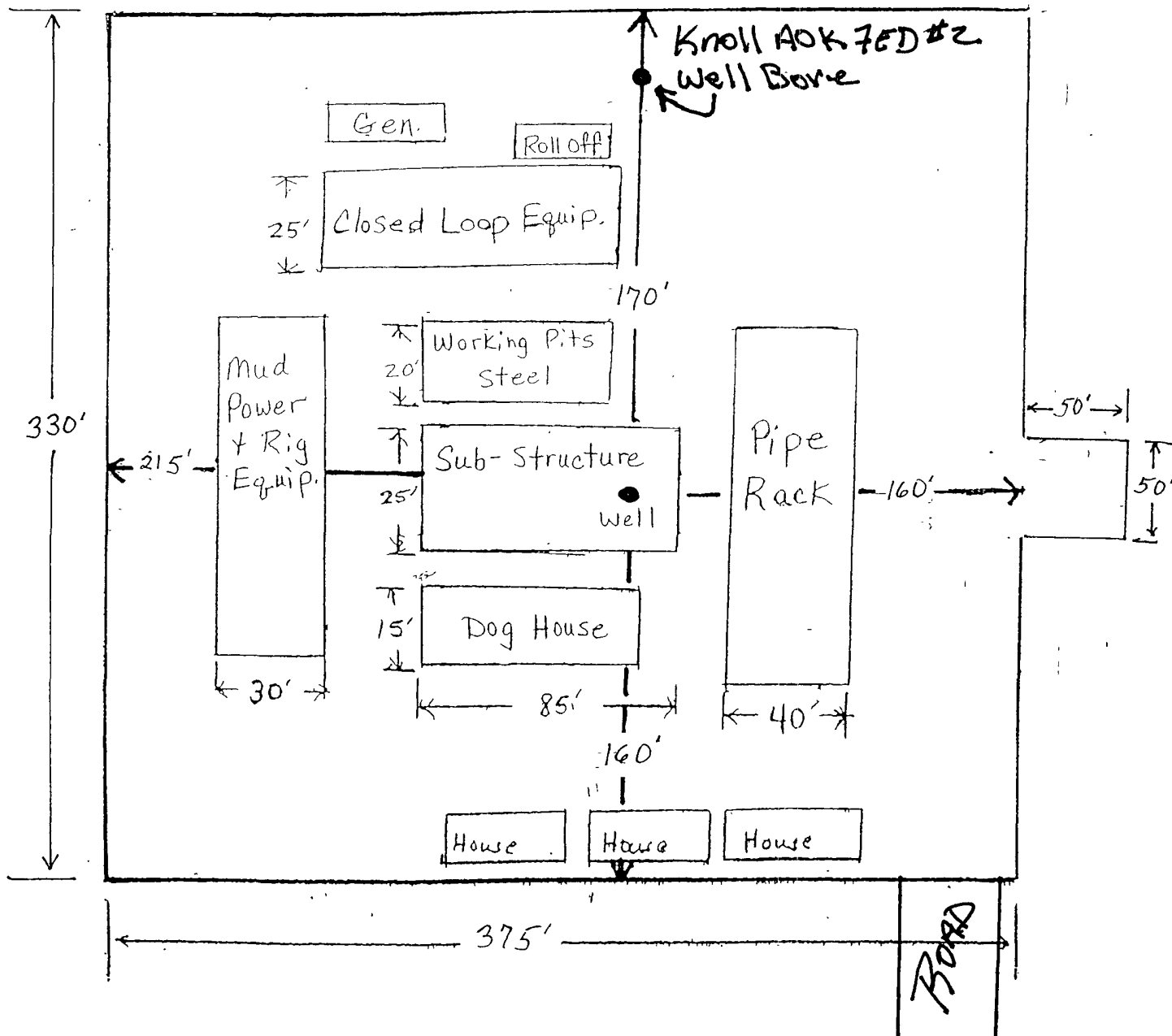
430' FNL and 480' FEL SHL

660' FNL and 330' FWL BHL

Section 3, T24S-R29E

Closed Loop Design Plan, Eddy County, New Mexico, Exhibit B

* NOT TO SCALE



DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

15751

Operator YATES PETROLEUM CORP OGRID # 25575
 Well Name & # KNOLL AOK FEDERAL #4H Surface Type (F) (S) (P)
 Location: UL A, Sect 3, Township 24s, RNG 29e, Sub-surface Type (F) (S) (P)
8 3 24 29

A. Date C101 rec'd ____/____/____ C101 reviewed ____/____/____

B. 1. Check mark, Information is OK on Forms:

OGRID ☒ BONDING FED PROP CODE ☒ WELL # ☒ SIGNATURE ____

2. Inactive Well list as of: 8/26/11 # wells 2375 # Inactive wells 4

a. District Grant APD but see number of inactive wells:

No letter required ☒; Sent Letter to Operator ____, to Santa Fe ____

3. Additional Bonding as of: 8/26/11

a. District Denial because operator needs addition bonding:

No Letter required ☒; Sent Letter to Operator ____, To Santa Fe ____

b. District Denial because of Inactive well list and Financial Assurance.

No Letter required ☒; Sent Letter to Operator ____, To Santa Fe ____

C. C102 YES ____, NO ____, Signature ____

1. Pool NASH DRAW; DELAWARE, SW Code 97188

a. Dedicated acreage 160, What Units ABCD

b. SUR. Location Standard ☒ Non-Standard Location ____

c. Well shares acres: Yes ____, No ☒ # of wells ____ plus this well # ____

2. 2nd. Operator in same acreage, Yes ____, No ☒

Agreement Letter ____, Disagreement letter ____

3. Intent to Directional Drill Yes ☒ No ____

a. Dedicated acreage 160, What Units ABCD

b. Bottomhole Location Standard ☒ Non-Standard Bottomhole ____

4. Downhole Commingle: Yes ____, No ☒

a. Pool #2 ____, Code ____, Acres ____

Pool #3 ____, Code ____, Acres ____

Pool #4 ____, Code ____, Acres ____

5. POTASH Area Yes ____, No FED

D. Blowout Preventer Yes ☒ No ____

E. H2S Yes ☒ No ____

F. C144 Pit Registration Yes ____, No need

G. Does APD require Santa Fe Approval:

1. Non-Standard Location: Yes ____, No ☒ NSL # ____

2. Non-Standard Proration: Yes ____, No ☒ NSP # ____

3. Simultaneous Dedication: Yes ____, No ☒ SD # ____

Number of wells ____ Plus # ____

4. Injection order Yes ____, No ☒ PMX # ____ or WFX # ____

5. SWD order Yes ____, NO ☒ SWD # ____

6. DHC from SF ____; DHC-HOB ____; Holding ____

7. OCD Approval Date ____/____/____

API #30-0 14-39353

8. Reviewers: ____