

OCD Artesia

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: ☒ DRILL ☐ REENTER
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone
2. Name of Operator

Yates Petroleum Corporation 025575

3a. Address 105 South Fourth Street, Artesia, NM 88210
3b. Phone No. (include area code) 505-748-1471

4. Location of well (Report location clearly and in accordance with any State requirements. *)
At surface SESE
330' FSL & 660' FEL, SENE Sec. 8-26S-30E
At proposed prod. zone 330' FSL & 660' FEL NENE
660' FSL & 330' FWL, SWSW Sec. 8-26S-30E

14. Distance in miles and direction from the nearest town or post office*

5. Lease Serial No. NM-31649
6. If Indian, Allottee or Tribe Name N/A
7. If Unit or CA Agreement, Name and No. N/A

8. Lease Name and Well No. Melson "ZS" Federal #2H (12554)
9. API Well No. 30-015-38665

10. Field and Pool, or Exploratory Undesignated
11. Sec., T., R., M., or Blk. And Survey or Area Bone Springs

Section 8-T26S-R30E

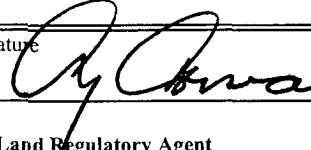
12. County or Parish Eddy
13. State NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any) 330'
16. No. of acres in lease 1280.81
17. Spacing Unit dedicated to this well S2S2, Section 8 T26S-R30E
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 8850' TVD BHL
19. Proposed Depth 7850' TVD, 12,265' TMD
20. BLM/ BIA Bond No. on file NATIONWIDE BOND #NMB000434
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 2956' GL
22. Approximate date work will start* November 1, 2010
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:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by existing bond on file (see item 20 above).
- Operator certification.
- Such other site specific information and/ or plans as may be required by the BLM

25. Signature  Name (Printed/ Typed) Date 1/19/2011

Title Land Regulatory Agent

Approved By (Signature) /s/ James A. Amos Name (Printed/ Typed) Date MAR 23 2011

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 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)

Approval Subject to General Requirements
& Special Stipulations Attached

K204/04/11

Carlsbad Controlled Water Basin
SEE ATTACHED FOR
CONDITIONS OF APPROVAL

YATES PETROLEUM CORPORATION
Melson "ZS" Federal #2-H
330' FSL and 660' FEL Surface Hole Location
330' FNL & 660' FEL Bottom Hole Location
Section 8-T26S-R30E
Eddy County, New Mexico

DRILLING INFORMATION

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

Rustler	770'	Bone Spring	7260'-Oil
Top of Salt	940'	Avalon Shale Target	7850'-Oil
Base of Salt	2940'	Bone Spring	8460'-Oil
Bell Canyon	3500'	TVD	8850'
Cherry Canyon	4420' Oil	TMD	11977'
Brushy Canyon	5700'-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: 4200', 5700', 7260', 7850' & 8460'.
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	0-800'	800'
12 1/4"	9 5/8"	40#	J-55	LT&C	0-100'	100'
12 1/4"	9 5/8"	36#	K-55	LT&C	100-3300'	3200'
12 1/4"	9 5/8"	40#	HCK-55	LT&C	3300- 3600' ^{3500'}	300'
8 3/4"	5 1/2"	17#	HCP- 110	LT&C	0'-12265'	12265'

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

Pilot hole drilled vertically to 8850'. Well will be plugged back with a 400'-500' kick off plug cemented with 280 sacks Class H (YLD .94 WT 17.5), TOC=7175' designed using 25 % excess. Kick off will be approximately at 7373' and directionally drilled at 12 degrees per 100' with a 8 3/4" to 8200' MD (7850' TVD). If hole conditions dictate, 7" casing will be set. A 6 1/8" hole will then be drilled to 12265MD (7850' 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 12265 MD (7850' TVD) where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 807' FSL and 660' FEL, 8-26S-30E. Deepest TVD in the well is 8850' in the pilot hole. Deepest TVD in the lateral is 7850'.

B. CEMENTING PROGRAM: *See COA*

Surface Casing: Lead with 425 sacks C Lite + 2% CaCL₂ (Wt. 12.90 Yld 1.97). Tail in 210 sacks C w/CaCl₂ (Wt 14.80 Yld 1.34) +2% CaCL₂. TOC surface using 100% excess.

Intermediate Casing: 960 sacks of C50-50 poz. w/ 2% CaCL₂ (Wt 12.60 Yld 1.96). 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 4700' & 7300'. Designed using 100% excess,

Stage One: 1270 sacks Pecos ViLt (Wt 13.00 Yld 1.83). TOC. 7300'.

Stage Two: Lead with 950 sacks Pecos ViLt (Wt 13.00 Yld 1.41). TOC 4700'

Stage Three: Lead 250 sacks of LiteCrete (Wt 9.90 Yld 2.66). Tail in 100 sacks of Pecos ViLt (Wt 13.0 Yld 1.41). TOC 3100'.

6. MUD PROGRAM AND AUXILIARY EQUIPMENT:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-800'	Fresh Water	8.60-9.20	29-32	N/C
800'-3600', ³⁵⁰⁰	Brine Water	10.00-10.20	28-28	N/C
3600'-8850'	Cut Brine	8.90-9.60	28-31	N/C
7373'-12265'	Cut Brine (Lateral Section)	8.90-9.30	28-30	<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; CMR;

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'-800' 390 PSI

800'-3600' 1910 PSI

3600'-8850' 4370 PSI

Abnormal Pressures Anticipated: None

Lost Circulation Zones Anticipated: None.

H₂S Zones Anticipated: None Anticipated

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 30 days.

Melson ZS Federal #2H

Contingency Casing Design

If hole conditions dictate, 7" casing will be set at 8,200' MD (7,850' TVD). A 6 1/8" hole will then be drilled to 12,265' MD (7850' 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 7300'.

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
4320 psi	4980 psi	367,000 #		415,000 #		6.151

100 ft to 5,600 ft		Make up Torque ft-lbs			Total ft = 5,500	
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	4,360 psi	313,000 #	366,000 #	6.25		

5,600 ft to 7,300 ft		Make up Torque ft-lbs			Total ft = 1,700	
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		

7,300 ft to 8,200 ft		Make up Torque ft-lbs			Total ft = 900	
O.D.	Weight	Grade	Threads	opt.	min.	mx.
7 inches	26 #/ft	L-80	LT&C	5110	3830	6390
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift		
5,410 psi	7,240 psi	511,000 #	604,000 #	6.151		

DV tool placed at 7500' and 5200'.

Stage I: Cemented w/200sx PVL (YLD 1.41 Wt 13) TOC= 7300'

Stage II: Cemented w/555sx PVL (YLD 1.41 Wt 13) TOC= 4700'

Stage III: Lead w/500sx Lite Crete (YLD 2.66 Wt 9.9), tail w/100sx PVL (YLD 1.41 Wt 13) TOC= 0'

Production

0 ft to 12,265 ft		Make up Torque ft-lbs			Total ft = 12,265	
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. 7300' and cemented with one stage up to dv tool. After completion procedures, the 4 1/2" casing will be cut and pulled at 7300'.

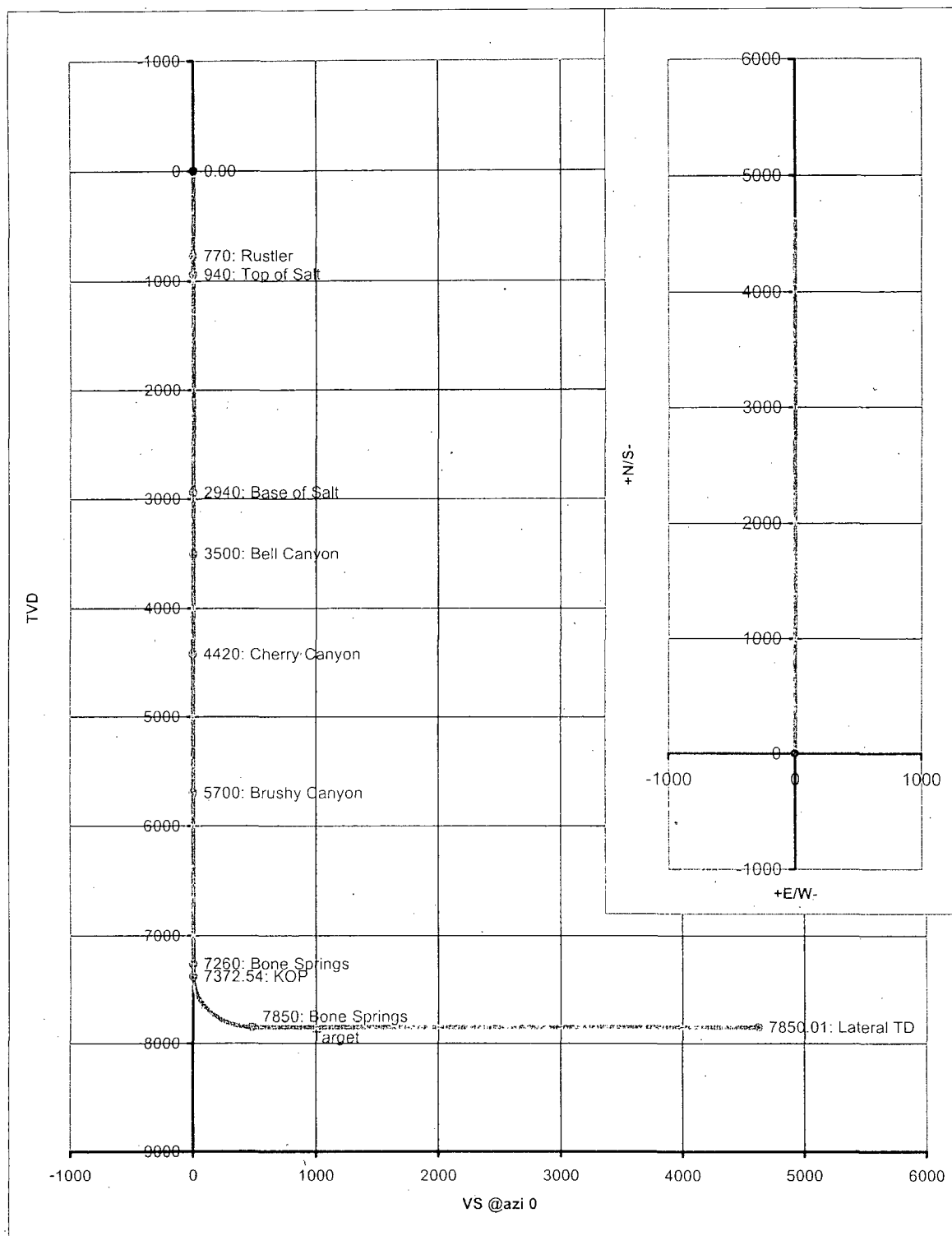
Cemented w/515sx PVL (YLD 1.83 Wt 13) TOC= 7300'

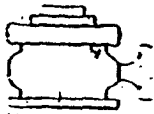
Co: Yates Petroleum Corporation
 Drillers: 0
 Well Name: Melson ZS Federal #2H
 Location: Sect. 8, 26S-30E

Units: Feet, ° 7100ft
 Elevation:
 Northing:
 Easting:

VS Az: 273.92
 Tgt Radius: 0.00
 Tgt N/S: 4620.00
 Tgt E/W: 0.00
 Tgt TVD: 7850.00
 Tgt MD: 0.00
 Tgt Displ.: 0.00
 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	770.00	770.00	0.00	0.00	770.00	0.00	0.00	0.00	0.00	0.00	0.00	Rustler
2	940.00	170.00	0.00	0.00	940.00	0.00	0.00	0.00	0.00	0.00	0.00	Top of Salt
3	2940.00	2000.00	0.00	0.00	2940.00	0.00	0.00	0.00	0.00	0.00	0.00	Base of Salt
4	3500.00	560.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	0.00	0.00	Bell Canyon
5	4420.00	920.00	0.00	0.00	4420.00	0.00	0.00	0.00	0.00	0.00	0.00	Cherry Canyon
6	5700.00	1280.00	0.00	0.00	5700.00	0.00	0.01	0.00	0.00	0.00	0.00	Brushy Canyon
7	7260.00	1560.00	0.00	0.00	7260.00	0.00	0.01	0.00	0.00	0.00	0.00	Bone Springs
8	7372.54	7372.54	0.00	0.00	7372.54	0.00	0.01	0.00	0.00	0.00	0.00	KOP
9	7400.00	27.46	3.30	0.00	7399.98	0.05	0.80	0.00	12.00	0.00	12.00	
10	7500.00	100.00	15.30	0.00	7498.49	1.16	16.92	0.00	12.00	0.00	12.00	
11	7600.00	100.00	27.30	0.00	7591.49	3.63	53.17	0.00	12.00	0.00	12.00	
12	7700.00	100.00	39.30	0.00	7674.93	7.38	107.97	0.00	12.00	0.00	12.00	
13	7800.00	100.00	51.30	0.00	7745.14	12.23	178.91	0.00	12.00	0.00	12.00	
14	7900.00	100.00	63.30	0.00	7799.07	17.97	262.91	0.00	12.00	0.00	12.00	
15	8000.00	100.00	75.30	0.00	7834.36	24.36	356.28	0.00	12.00	0.00	12.00	
16	8100.00	100.00	87.30	0.00	7849.47	31.10	454.94	0.00	12.00	0.00	12.00	
17	8122.53	750.00	90.00	0.00	7850.00	32.64	477.47	0.00	12.00	0.00	12.00	Bone Springs Target
18	12265.07	4142.54	90.00	0.00	7850.01	315.84	4620.01	0.00	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

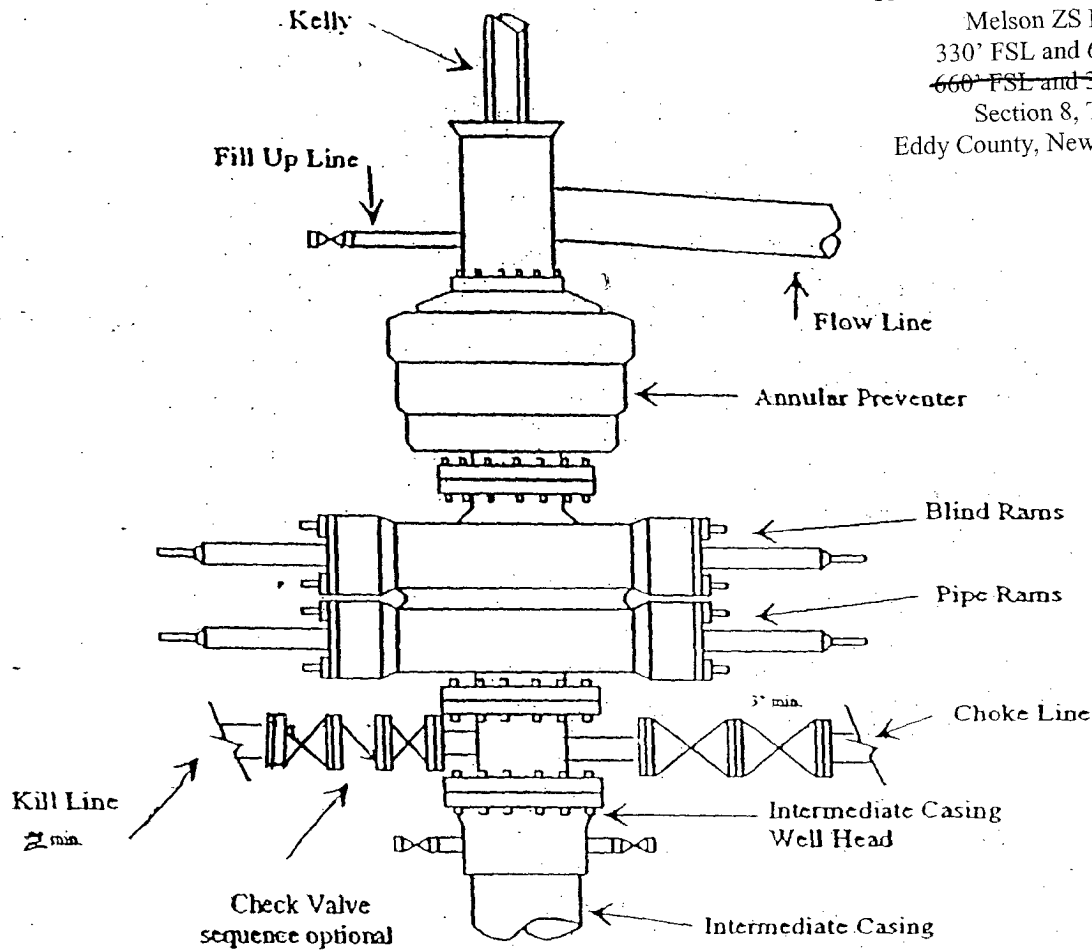
Melson ZS Federal #2H

330' FSL and 660' FEL SHL

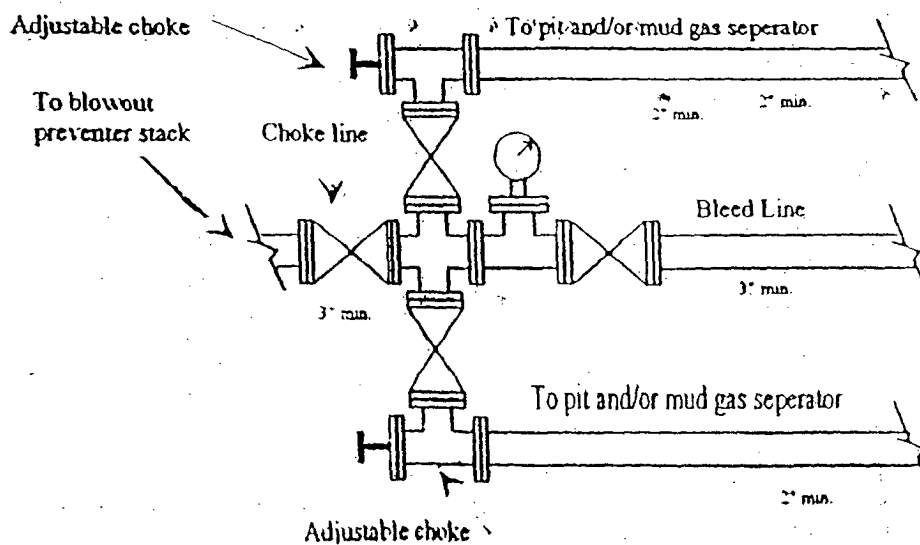
~~660' FSL and 330' FWL BHL~~

Section 8, T26S-R30E

Eddy County, New Mexico Exhibit C



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



DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

Operator YATES PETROLEUM CORP OGRID # 25575
 12554 Well Name & # MELSON ZS FED # 2H Surface Type (F) (S) (P)
 Location: UL A, Sect 8, Twnship 26s, RNG 30e, Sub-surface Type (F) (S) (P)
A 8 - 26 - 30

A. Date C101 rec'd 1/1/11 C101 reviewed 1/1/11

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

OGRID X BONDING FED PROP CODE , WELL # , SIGNATURE

2. Inactive Well list as of: 4/4/11 # wells 2302 # Inactive wells 3

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

No letter required X; Sent Letter to Operator , to Santa Fe

3. Additional Bonding as of: 4/4/11

a. District Denial because operator needs addition bonding:

No Letter required X; Sent Letter to Operator , To Santa Fe

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

No Letter required X; Sent Letter to Operator , To Santa Fe

C. C102 YES X NO , Signature

1. Pool WILDCAT 262016E; BS, Code 96403

a. Dedicated acreage 160, What Units AHP

b. SUR. Location Standard X; Non-Standard Location

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

2. 2nd. Operator in same acreage, Yes , No X

Agreement Letter , Disagreement letter

3. Intent to Directional Drill Yes , No

a. Dedicated acreage 160, What Units AHP

b. Bottomhole Location Standard X, Non-Standard Bottomhole

4. Downhole Commingle: Yes , No X

a. Pool #2 , Code , Acres

Pool #3 , Code , Acres

Pool #4 , Code , Acres

5. POTASH Area Yes , No FED

D. Blowout Preventer Yes X No

E. H2S Yes , No need

F. C144 Pit Registration Yes , No need

G. Does APD require Santa Fe Approval:

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

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

3. Simultaneous Dedication: Yes , No X, SD #

Number of wells Plus #

4. Injection order Yes , No X; PMX # or WFX #

5. SWD order Yes , NO X; SWD #

6. DHC from SF ; DHC-HOB ; Holding

7. OCD Approval Date 04/04/11

API #30-0 15-38665

8. Reviewers