

OCD Artesia

13-1019

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

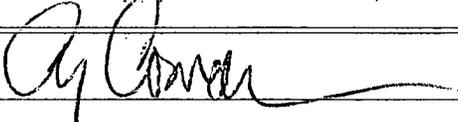
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-105213	
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	
2. Name of Operator YATES PETROLEUM CORPORATION		7. If Unit or CA Agreement, Name and No.	
3a. Address 105 South Fourth Street, Artesia, NM 88210		8. Lease Name and Well No. Jester BFJ Federal #9H	
3b. Phone No. (include area code) 575-748-4372		9. API Well No. <b>30-015-43143</b>	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 460' FNL and 710' FWL At proposed prod. zone 330' FSL and 660' FWL		10. Field and Pool, or Exploratory Undesignated Wolfcamp	
14. Distance in miles and direction from nearest town or post office* Approximately 37 miles east of Malaga, NM.		11. Sec., T. R. M. or Blk. and Survey or Area Section 12, T24S-R29E	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 460'	16. No. of acres in lease 320	17. Spacing Unit dedicated to this well W/2W/2	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1800'	19. Proposed Depth 8170' TVD 12,482' MD	20. BLM/BIA Bond No. on file Nationwide Bond NM-B000434 NMB-000920	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3096' GL	22. Approximate date work will start* 10/25/2015	23. Estimated duration 60 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:

- 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 an 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) Cy Cowan	Date 08/22/2014
---	----------------------------------	--------------------

Title  
Land Regulatory Agent

Approved by (Signature) <b>Steve Caffey</b>	Name (Printed/Typed)	Date <b>MAY 14 2015</b>
--	----------------------	----------------------------

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)

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

\*(Instructions on page 2)

**MAY 18 2015**

Carlsbad Controlled Water Basin

**RECEIVED**

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

Approval Subject to General Requirements  
& Special Stipulations Attached

 5/27/2015

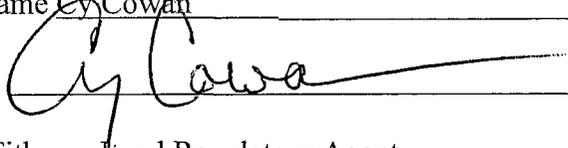
API cancels and supersedes 30-015-37188

CERTIFICATION  
YATES PETROLEUM CORPORATION  
Jester BFJ Federal #9H

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently 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 the company I represent, is 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 15<sup>th</sup> day of July, 2013.

Printed Name Cy Cowan

Signature 

Position Title Land Regulatory Agent

Address 105 South Fourth Street, Artesia, NM 88210

Telephone 575-748-4372

E-mail (optional) cy@ypcnm.com

Field Representative (if not above signatory) Tim Bussell

Address (if different from above) Same

Telephone (if different from above) 575-748-4221

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II  
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised October 12, 2005

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

API Num 30-015-43143	Pool Code 47545	Pool Name NASH Draw - Dekwar <del>Undesignated Wolf Camp</del>
Property Code 35031	Property Name JESTER "BFJ" FEDERAL	Well Number 9H
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 3096'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	12	24 S	29 E		460	NORTH	710	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	12	24 S	29 E		330	SOUTH	660	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
-----------------	-----------------	--------------------	-----------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

**SURFACE LOCATION**  
Lat - N32°14'17.43"  
Long - W103°56'39.57"  
SPC- N.: 450597.863  
E.: 661614.647  
(NAD-83)

**BOTTOM HOLE LOCATION**  
Lat - N32°13'32.73"  
Long - W103°56'40.42"  
SPC- N.: 446080.641  
E.: 661582.210  
(NAD-83)

Penetration Point:  
937' FNL & 707' FWL

Project Area

Producing Area

**OPERATOR CERTIFICATION**

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement, or a compulsory pooling order heretofore entered by the division.

*Cy Cowan* 10/1/14  
Signature Date

Cy Cowan  
Printed Name

---

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

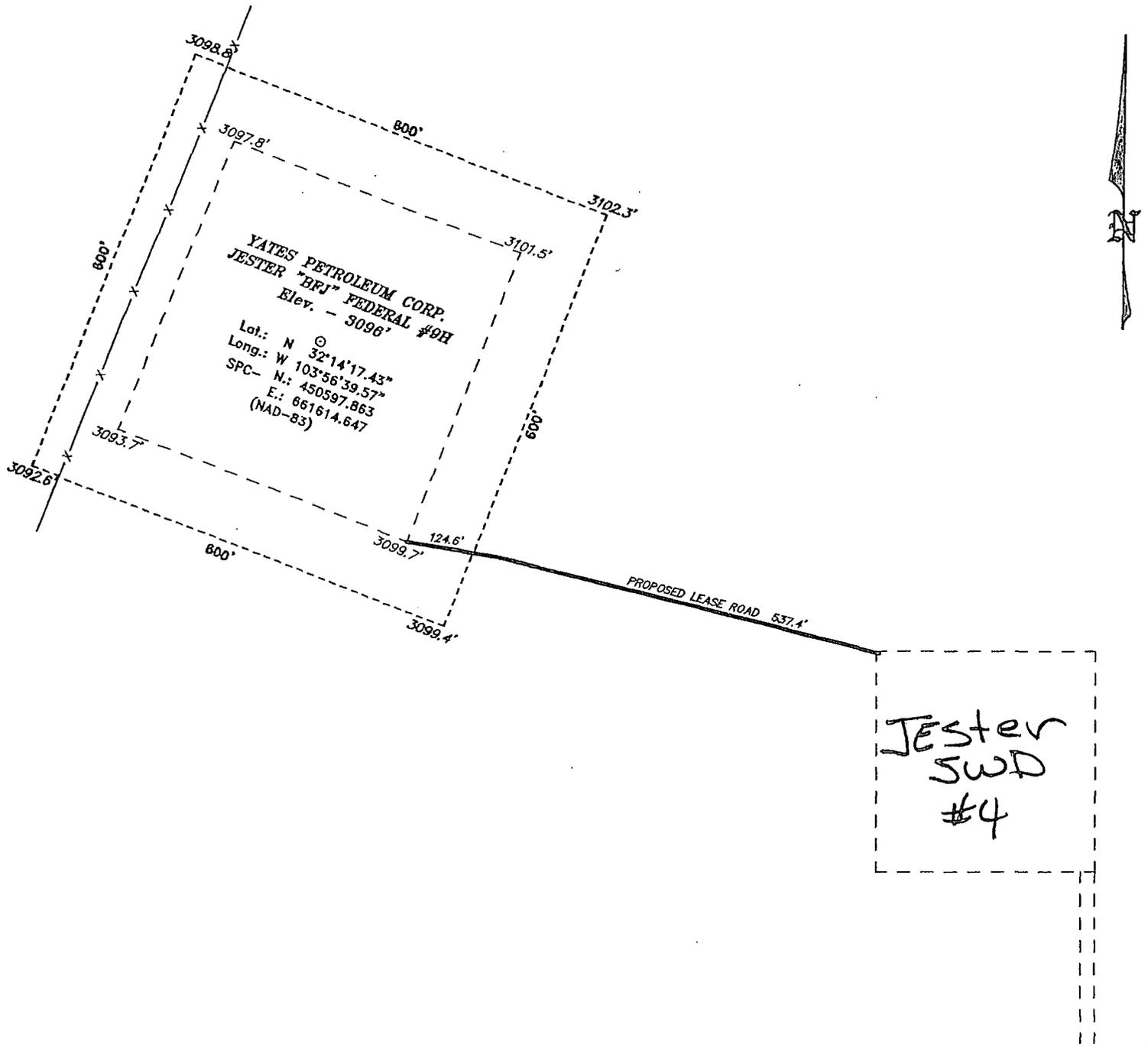
FEBRUARY 2009  
Date Surveyed

*[Signature]*  
Signature & Professional Surveyor

W. Gary L. Jones 7977  
Certificate No. Gary L. Jones 7977

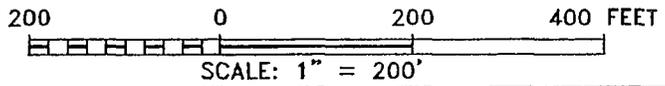
BASIN SURVEYS

SECTION 12, TOWNSHIP 24 SOUTH, RANGE 29 EAST, N.M.P.M.,  
 EDDY COUNTY, NEW MEXICO.



YATES PETROLEUM CORP.  
 JESTER "BFJ" FEDERAL #9H  
 Elev. - 3098'  
 Lot: N  $32^{\circ}14'17.43''$   
 Long.: W  $103^{\circ}56'39.57''$   
 SPC- N.: 450597.863  
 E.: 661614.647  
 (NAD-83)

Jester  
 SWD  
 #4



<b>YATES PETROLEUM CORP.</b>	
REF: JESTER "BFJ" FEDERAL #9H / WELL PAD TOPO	
THE JESTER "BFJ" FEDERAL #9H LOCATED 460' FROM THE NORTH LINE AND 710' FROM THE WEST LINE OF SECTION 12, TOWNSHIP 24 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.	
Survey Date: 02-27-2009	Sheet 1 of 1 Sheets

# Remuda Basin

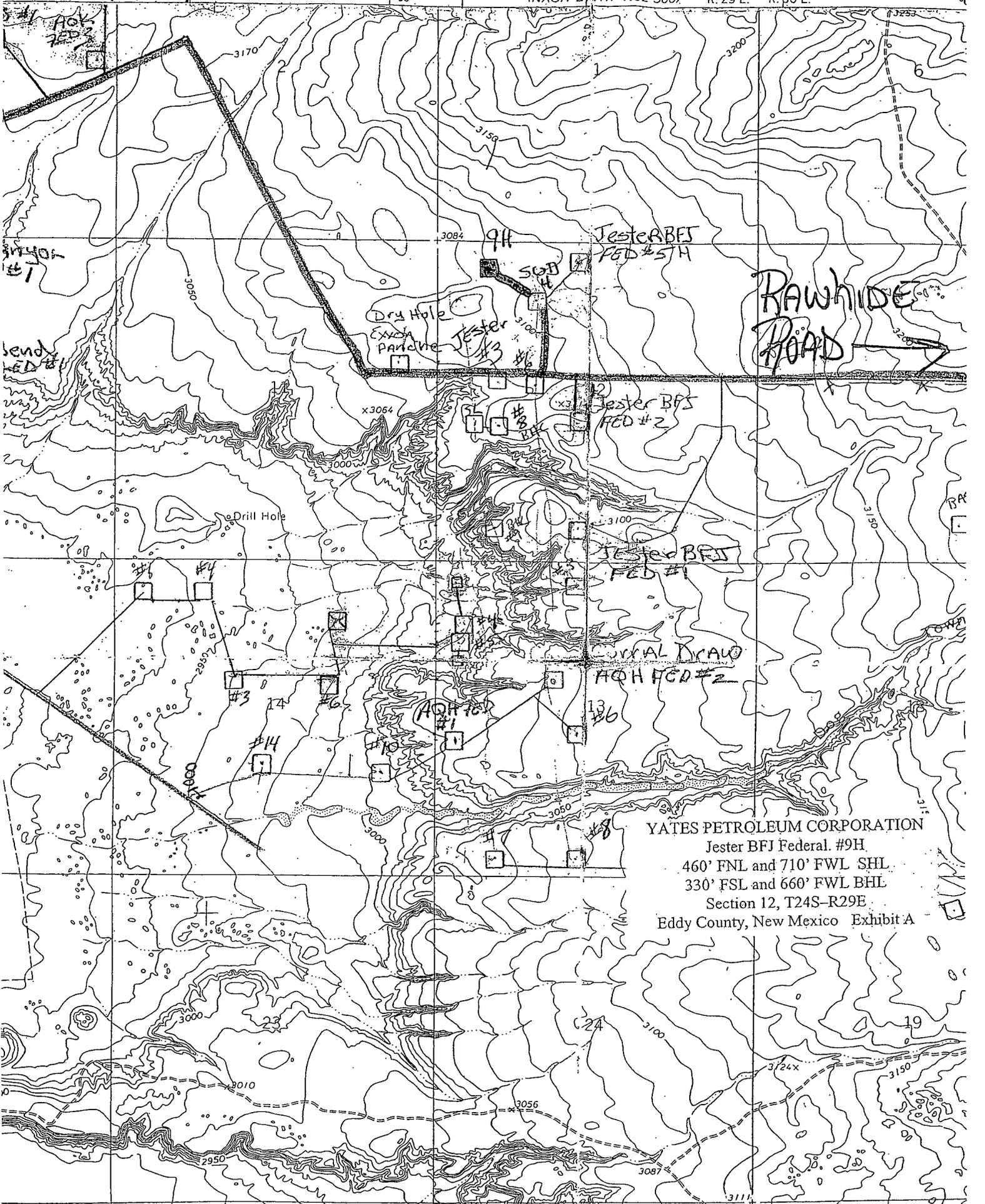
5:48 IV

WASH DRAW 1-02-5001

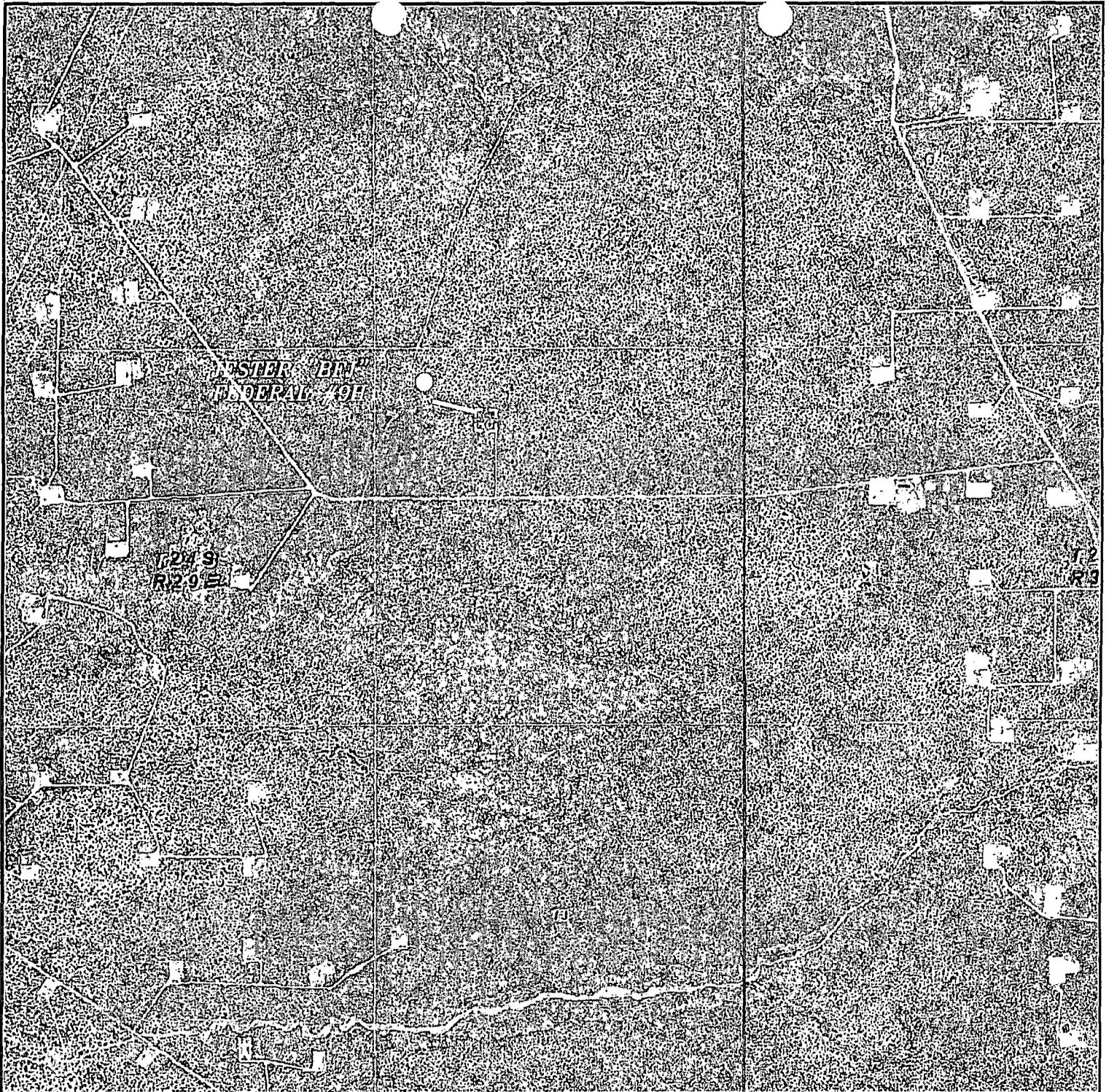
R. 29 E. R. 30 E.

598 57'30"

599



YATES PETROLEUM CORPORATION  
Jester BFI Federal. #9H  
460' FNL and 710' FWL SHL  
330' FSL and 660' FWL BHL  
Section 12, T24S-R29E  
Eddy County, New Mexico Exhibit A



**JESTER "BFJ" FEDERAL #9H**  
 Located at 460' FNL AND 710' FWL  
 Section 12, Township 24 South, Range 29 East,  
 N.M.P.M., Eddy County, New Mexico.

**basin**  
**surveys**  
 focused on excellence  
 in the oilfield

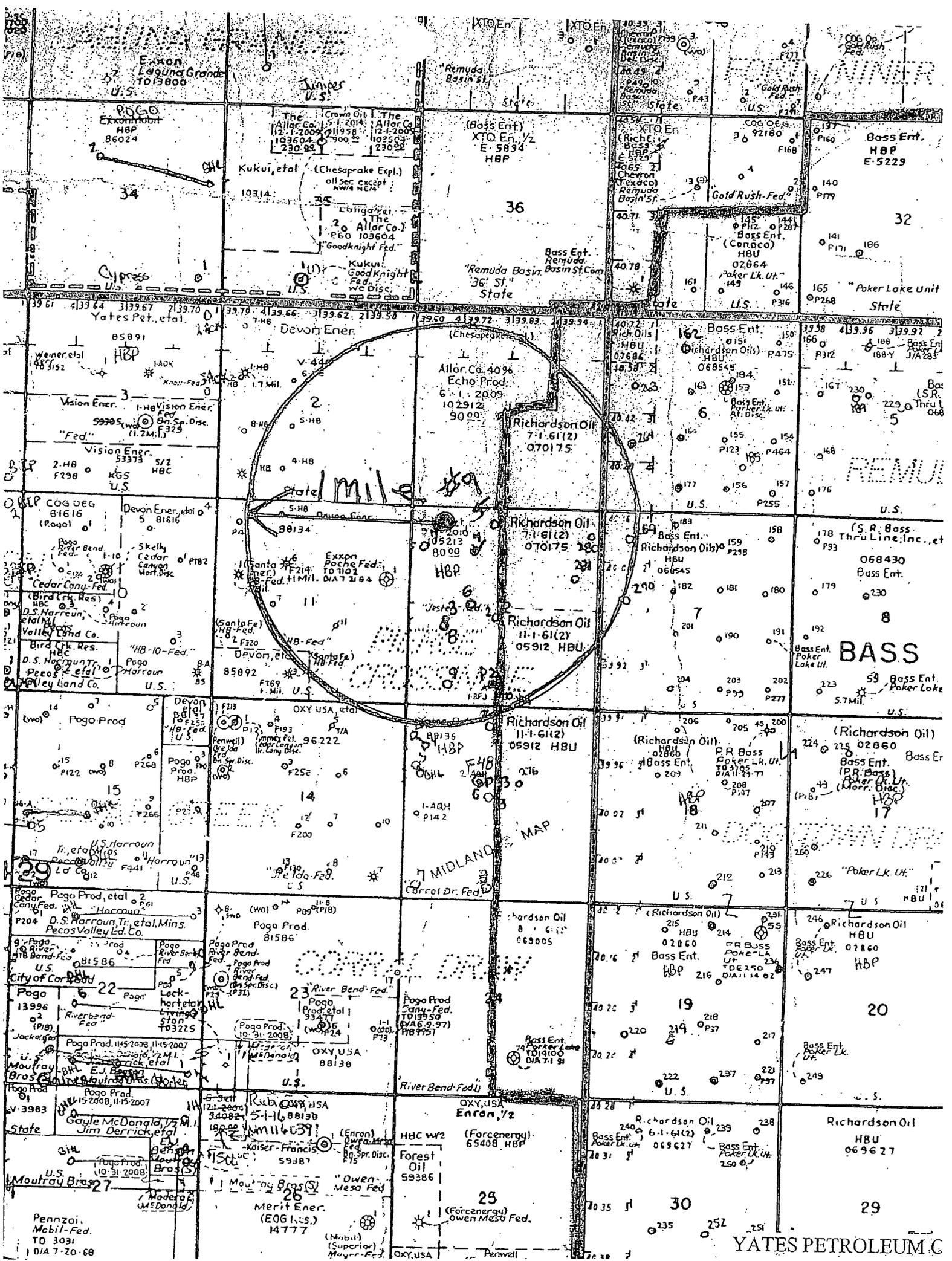
P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (575) 393-7316 - Office  
 (575) 392-2206 - Fax  
 basinsurveys.com

W.O. Number: 21193

Scale: 1" = 2000'

YELLOW TINT - USA LAND  
 BLUE TINT - STATE LAND  
 NATURAL COLOR - FEE LAND

**YATES**  
**PETROLEUM**  
**CORP.**



State Mile 49

MIDLAND MAP



**YATES PETROLEUM CORPORATION**

**Jester BFJ Federal #9H**

460' FNL & 710' FWL

330' FSL & 660' FWL

Section 12-T24S-R29E

Eddy County, New Mexico

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

Rustler	330'	Bone Spring 1/SD	8050'	OIL
Top of Salt	450'	Bone Springs 1/SD/ Target	8170'	OIL
Base of Salt	3015'	Bone Springs 2/SD	8880'	OIL
Bell Canyon	3220'	Bone Spring 3/SD	9790'	
Cherry Canyon	4090'	Wolfcamp	10240'	
Brushy Canyon	5360'	TD Pilot Hole	10600'	
Brushy Canyon MKR	6700'	TVD	8170'	
Bone Spring	6970'	MD	12482'	

**2. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:**

Water: Approx 35'  
Oil or Gas: See above.

**3. PRESSURE CONTROL EQUIPMENT:** 3000 PSI BOPE with a 13.625" opening will be installed on the 13 3/8" and a 5000# BOP with a minimum opening of 11.0 opening on the 9 5/8" casing. A variance is requested for the use of a flex hose between the well head and manifold if Cactus Rig #124 is used to drill this well. The certification and specs are attached. Test will be conducted by an independent tester, utilizing a test plug in the well head. BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes on each segment of the system tested if test is done with a test plug and 30 minutes without a test plug. Blind rams and pipe rams will be tested to the rated pressure of the BOP. Any leaks will be repaired at the time of the test. Annular preventers will be tested to 50% of rated pressure. Accumulator system will be inspected for correct pre charge pressures, and proper functionality, prior to connection to the BOP system. Tests 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 Exhibits.

*see COA*

**Auxiliary Equipment:**

A. 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.

**4. THE PROPOSED CASING AND CEMENTING PROGRAM:**

A. Casing Program: (All New)

<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	0-355'	355'
12 1/4"	9 5/8"	36#	J-55	LT&C	0-3300'	3300'
8 3/4"	5 1/2"	17#	P-110	BUTTRESS	0-8170'	8170'
8 1/2"	5 1/2"	17#	P-110	BUTTRESS	8170'-12482'	4312'

*see COA*

Pilot hole will be drilled vertically to 10600'. The well will be plugged back at 8170' with a 200' isolation plug of 100 sacks Class H with Fresh Water 3.352 gal/sack, D080 Dispersant .030 gal/sack, D-197 Retarder Acc 0.060 gal/sack, D206 Antifoam 0.200 gal/sack. (Wt 17.5 Yld 0.94). Excess 10%.

A 500' kick off plug will be placed set at from approximately 7800' to 7300' with 300 sacks Class H with Fresh Water 3.352 gal/sack, D080 Dispersant .030 gal/sack, D-197 Retarder Acc 0.060 gal/sack, D206 Antifoam 0.200 gal/sack. (Wt 17.5 Yld 0.94). Excess 35%. Cement designed with 35% excess. The well will then be kicked off at approximately 7693' and directionally drilled at 12 degrees per 100' with a 8 3/4"

*see COA*

hole to 8442' MD (8170 TVD) where 5 1/2" casing will be set and cemented 500' into the previous casing string in a single stage. Penetration point of producing zone will be encountered at 937' FNL and 707' FWL of Section 12, T24S-R29E. Deepest TVD in the pilot hole will be 10600' and 8170' in the lateral.

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

**B. CEMENTING PROGRAM:**

Surface casing: 0 to 355': TOC surface: Lead with 370 sx Class "C" with 2 % CaCl<sub>2</sub> (WT 14.80 YLD 1.34); WTR 6.20 gal/sack. Cement designed with 100% excess.

Intermediate Casing: 0 to 3300': TOC surface: Lead with 895 sx 35:65:6 PzC (WT 12.50 YLD 2.00) WTR 11.00 gal/sack; Tail in with 210 sacks 50/50 PozC (WT 14.20 YLD.1.34) WTR 6.20 gal/sack. Cement designed with 100% excess.

*See COA*  
Production Casing: 2800' to 12482': TOC 2800'. DV Tool at 6400'. Lead with 650 sx LiteCrete D177 Retarder .03 gal/sack; D046 Anti Foam .2%; D065 Dispersant .1%; D124 Extender 39 lb/sack. (WT 9.70 YLD 2.46) WTR 8.98 gal/sack. Tail in with 1165 sacks PecosVILt with D112 fluid loss 0.4%, D151-Calcium Carbonate 22.5 lbs/sack, D174-Extender 1.5 lb/sack, D177-Retarder 0.01 lb/sack, D800-Retarder 0.6 lb/sack, D46-antifoam agent 0.15 lb/sack, D042 LCM Extender lb/sack, D044 Salt 1%, D130 Lost Circulation Material.125 lb/sack, D167 Fluid Loss Material 2.0%. (WT 13.50 YLD1.35) WTR 6.10 gal/sack. Cement designed with 35% excess.

**5. Mud Program and Auxiliary Equipment:**

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-	Fresh Water	8.60-9.20	32-34	N/C
355'-3300'	Brine Water	10.00-10.20	28-29	N/C
3300'-10600'	Cut Brine (pilot hole)	8.80-9.20	28-32	N/C
7693'-12482'	Cut Brine(lateral section)	8.80-9.10	28-32	<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. The slow pump speed will be recorded on the daily drilling report after mudding up. A mud test will be performed every 24 hours after mudding up to determine, as applicable, viscosity, gel strength, filtration and pH. After surface casing is set an electronic PVT system will be installed as our primary mud level monitoring system. A secondary system will also be implemented as to insure the PVT system is functioning properly. The secondary system will be comprised of the derrick hand visually checking the fluid level in the pits periodically using a nut on the end of a rope hanging just above the fluid level in the pit.

**6. EVALUATION PROGRAM:**

Samples: 30' samples to 3000'; 10' samples 3000'-TD.

Logging: Platform HALS; CMR, Full Wave Sonic.

Coring: None Anticipated.

DST's: As warranted.

Mudlogger On from surface casing to TD. *— See COA*

**7. Abnormal Conditions, Bottom hole pressure and potential hazards:**

Anticipated BHP:

From: 0	TO: 355'	Anticipated Max.	BHP: 170	PSI
From: 355'	TO: 3300'	Anticipated Max.	BHP: 1750	PSI
From: 3300'	TO: 10600'	Anticipated Max.	BHP: 5071	PSI Pilot Hole
From: 7693'	TO: 8170'	Anticipated Max.	BHP: 3909	PSI Lateral

**Jester BFJ Federal #9H**  
**Page Three**

No abnormal pressures or temperatures are anticipated.  
Lost Circulation Zones Anticipated: None.  
H2S Zones Anticipated: None  
Maximum Bottom Hole Temperature: 168 F

8. **ANTICIPATED STARTING DATE:**

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 60 days to drill the well with completion taking another 30 days.

## Jester BFJ Federal #9H Cement Contingency

Yates Petroleum Corporation requests the use of a contingency cement plan if hole conditions warrant for the production interval as follows:

**DV/Packer stage tool at approx. 6000'-6500' (cement volumes will be adjusted per tool placement)**

Stage I: Lead w/170sx 35/65 Poz C (YLD 2.0, WT 12.5, 11 gal/sk) Tail w/1165sx PVL (YLD 1.35, WT 13.5, 6.1 gal/sk) TOC approx. 6500'

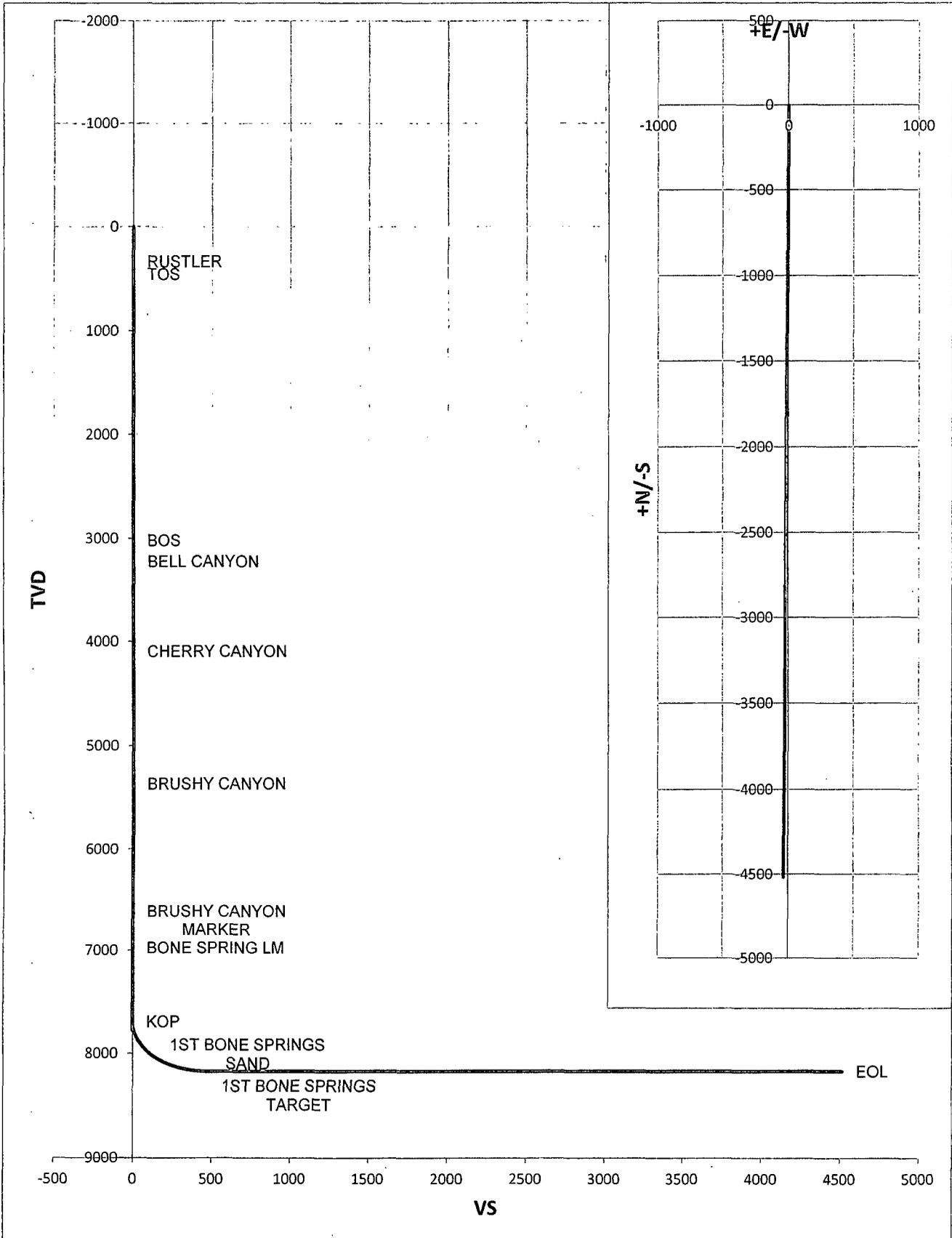
Stage II: Lead w/495sx 35/65 Poz C (YLD 2.0, WT 12.5, 11 gal/sk) Tail w/205 50/50 Poz C (YLD 1.34, WT 14.2, 6.2 gal/sk) TOC approx. 2800'

All volumes are calculated at 35% excess. Casing weight and grade will remain the same.

Well Name: Jester BFJ Federal #9H		Tgt N/S: -4517.22	EOC TVD/MD: 8170.00 / 8442.54
Surface Location: Section 12 , Township 24S Range 29E		Tgt E/W: -32.44	VS: 4517.34
Bottom Hole Location: Section 12 , Township 24S Range 29E		VS Az: 180.41	EOL TVD/MD: 8170.00 / 12482.41

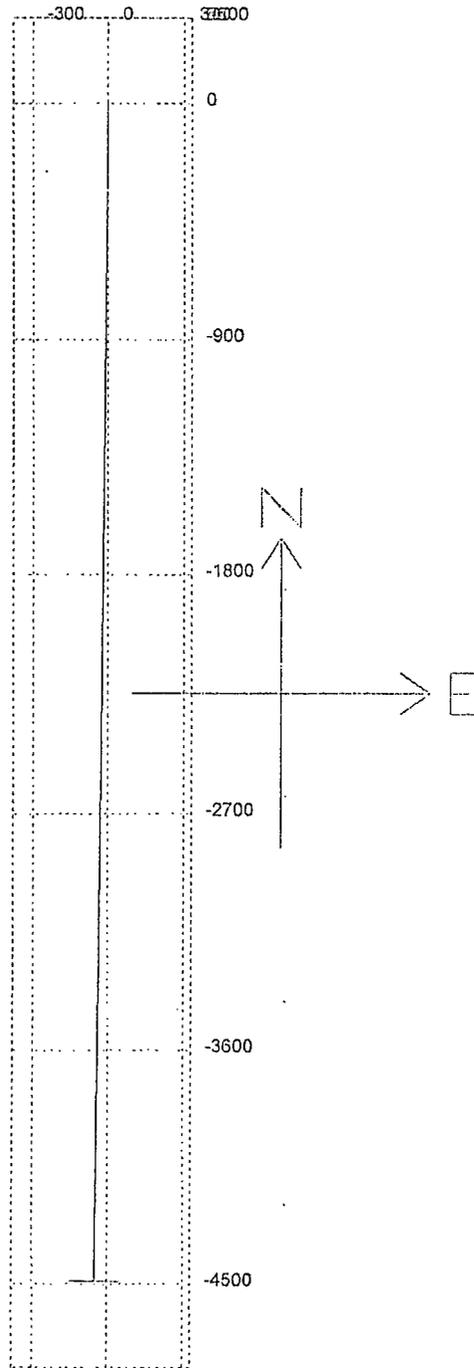
TVD	Incl.	Azi	TVD	N/S	E/W	VS	DLS	Comments
0	0	0	0	0	0	0	0	
330.00	0.00	0.00	330.00	0.00	0.00	0.00	0.00	RUSTLER
450.00	0.00	0.00	450.00	0.00	0.00	0.00	0.00	TOS
3015.00	0.00	0.00	3015.00	0.00	0.00	0.00	0.00	BOS
3220.00	0.00	0.00	3220.00	0.00	0.00	0.00	0.00	BELL CANYON
4090.00	0.00	0.00	4090.00	0.00	0.00	0.00	0.00	CHERRY CANYON
5360.00	0.00	0.00	5360.00	0.00	0.00	0.00	0.00	BRUSHY CANYON
6700.00	0.00	0.00	6700.00	0.00	0.00	0.00	0.00	BRUSHY CANYON MARKER
6970.00	0.00	0.00	6970.00	0.00	0.00	0.00	0.00	BONE SPRING LM
7692.54	0.00	0.00	7692.54	0.00	0.00	0.00	0.00	KOP
7700.00	0.90	180.41	7700.00	-0.06	0.00	0.06	12.00	
7725.00	3.90	180.41	7724.97	-1.10	-0.01	1.10	12.00	
7750.00	6.90	180.41	7749.86	-3.45	-0.02	3.45	12.00	
7775.00	9.90	180.41	7774.59	-7.10	-0.05	7.10	12.00	
7800.00	12.90	180.41	7799.09	-12.04	-0.09	12.04	12.00	
7825.00	15.90	180.41	7823.31	-18.26	-0.13	18.26	12.00	
7850.00	18.90	180.41	7847.16	-25.73	-0.18	25.73	12.00	
7875.00	21.90	180.41	7870.59	-34.44	-0.25	34.44	12.00	
7900.00	24.90	180.41	7893.53	-44.37	-0.32	44.37	12.00	
7925.00	27.90	180.41	7915.92	-55.48	-0.40	55.48	12.00	
7950.00	30.90	180.41	7937.70	-67.75	-0.49	67.75	12.00	
7975.00	33.90	180.41	7958.81	-81.14	-0.58	81.14	12.00	
8000.00	36.90	180.41	7979.19	-95.62	-0.69	95.62	12.00	
8025.00	39.90	180.41	7998.78	-111.15	-0.80	111.15	12.00	
8050.00	42.90	180.41	8017.53	-127.67	-0.92	127.68	12.00	
8075.00	45.90	180.41	8035.39	-145.16	-1.04	145.17	12.00	
8096.49	48.47	180.41	8050.00	-160.91	-1.16	160.92	12.00	1ST BONE SPRINGS SAND
8100.00	48.90	180.41	8052.31	-163.56	-1.17	163.56	12.00	
8125.00	51.90	180.41	8068.25	-182.82	-1.31	182.82	12.00	
8150.00	54.90	180.41	8083.15	-202.89	-1.46	202.89	12.00	
8175.00	57.90	180.41	8096.99	-223.71	-1.61	223.71	12.00	
8200.00	60.90	180.41	8109.71	-245.22	-1.76	245.23	12.00	
8225.00	63.90	180.41	8121.30	-267.37	-1.92	267.38	12.00	
8250.00	66.90	180.41	8131.70	-290.10	-2.08	290.11	12.00	
8275.00	69.90	180.41	8140.91	-313.34	-2.25	313.35	12.00	
8300.00	72.90	180.41	8148.88	-337.03	-2.42	337.04	12.00	
8325.00	75.90	180.41	8155.61	-361.10	-2.59	361.11	12.00	
8350.00	78.90	180.41	8161.06	-385.50	-2.77	385.51	12.00	
8375.00	81.90	180.41	8165.23	-410.14	-2.95	410.15	12.00	
8400.00	84.90	180.41	8168.11	-434.97	-3.12	434.99	12.00	
8425.00	87.90	180.41	8169.68	-459.92	-3.30	459.93	12.00	
8442.54	90.00	180.41	8170.00	-477.45	-3.43	477.46	12.00	1ST BONE SPRINGS TARGET
12482.41	90.00	180.41	8170.00	-4517.22	-32.44	4517.34	0.00	EOL

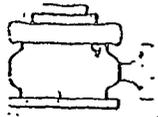
Jester BFJ Federal #9H



# 3D Directional Drilling Planner - 3D View

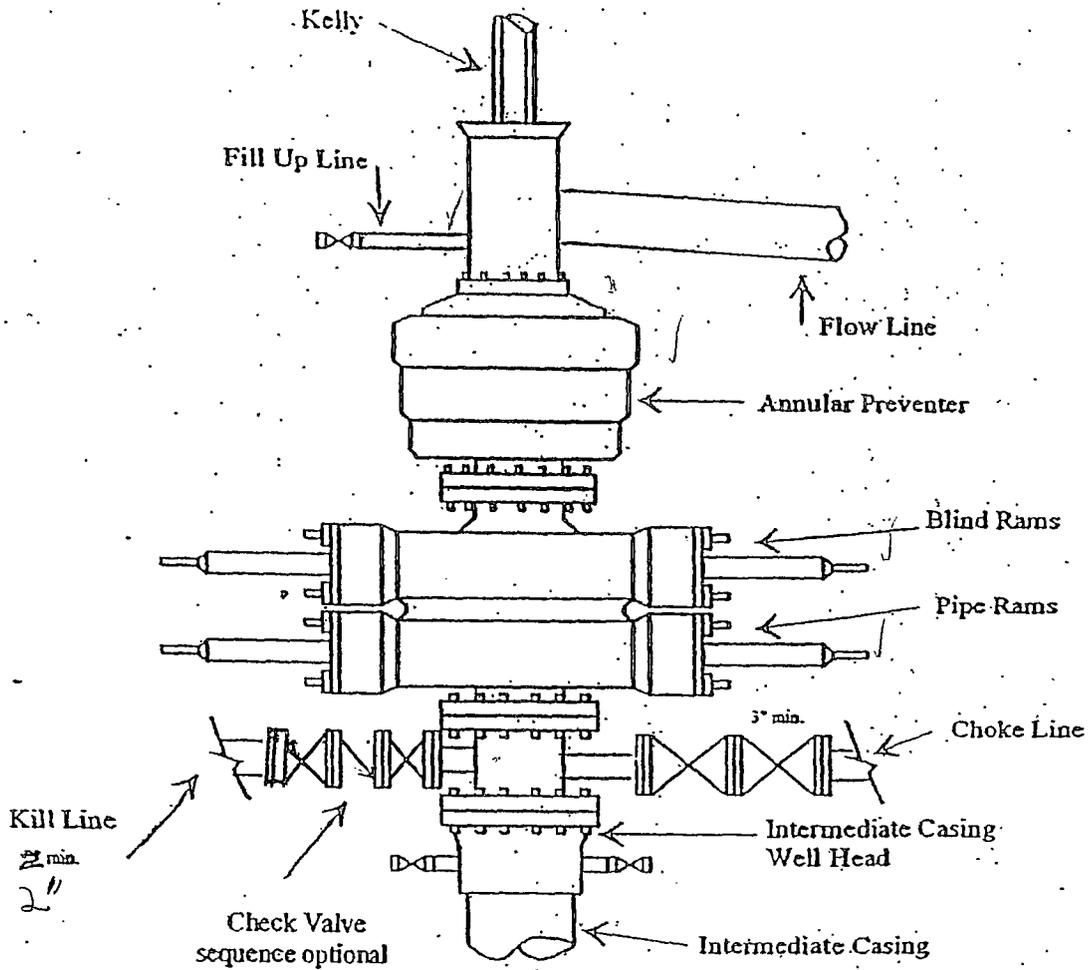
Company: Yates Petroleum Corporation  
Well: Jester BFJ Federal #9H



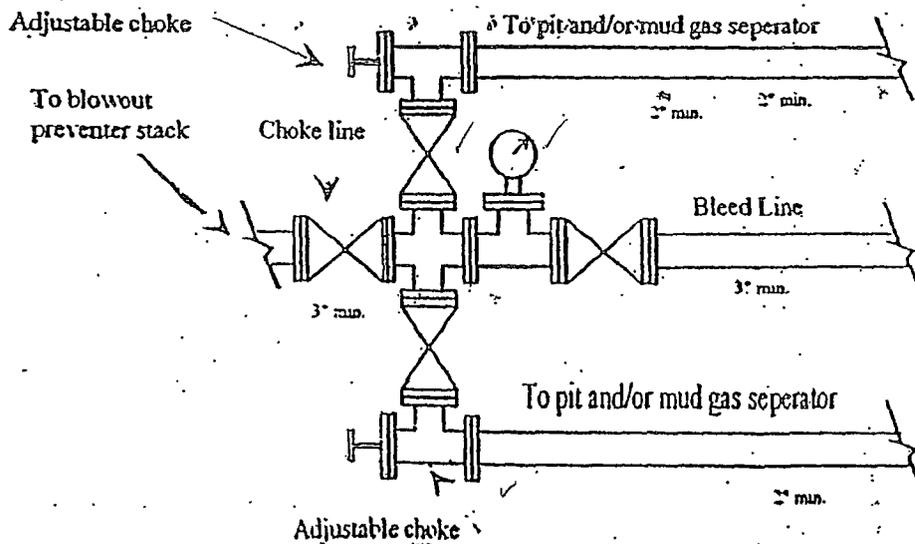


Yates Petroleum Corporation  
Typical 3,000 psi Pressure System  
Schematic  
Annular with Double Ram Preventer Stack

BOP-3

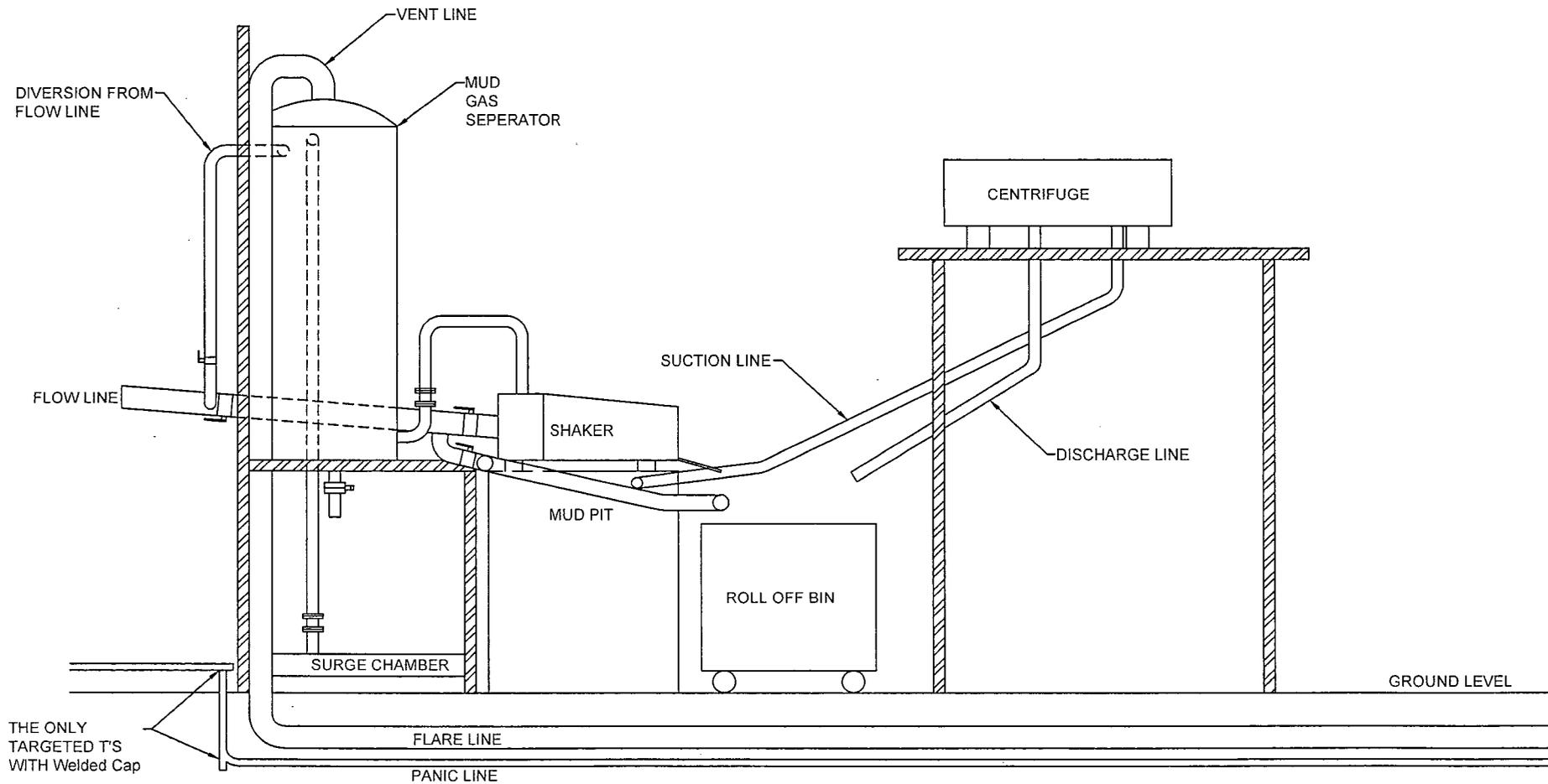


Typical 3,000 psi choke manifold assembly with at least these minimum features



# YATES PETROLEUM CORPORATION

## Piping from Choke Manifold to the Closed Loop Drilling Mud System



The flare discharge must be 100' from wellhead for non H2S wells and 150' from wellhead for wells expected to encounter H2S.



Midwest Hose  
& Specialty, Inc.

### Certificate of Conformity

Customer: **CACTUS**

Customer P.O.# **RIG#137 M12653**

Sales Order # **191672**

Date Assembled: **12/11/2013**

### Specifications

Hose Assembly Type: **Choke & Kill**

Assembly Serial # **229391**

Hose Lot # and Date Code **11060 10/13**

Hose Working Pressure (psi) **10000**

Test Pressure (psi) **15000**

*We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.*

Supplier:

**Midwest Hose & Specialty, Inc.**

**3312 S I-35 Service Rd**

**Oklahoma City, OK 73129**

Comments:

Approved By

Date

**12/11/2013**



Midwest Hose  
& Specialty, Inc.

### Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	CACTUS	Hose Assembly Type	Choke & Kill
MWH Sales Representative	EVAN SPARKMAN	Certification	API 7K
Date Assembled	12/11/2013	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	191672	Hose Lot # and Date Code	11060 10/13
Customer Purchase Order #	RIG#137 M12653	Hose I.D. (Inches)	4"
Assembly Serial # (Pick Ticket #)	229391	Hose O.D. (Inches)	6.60"
Hose Assembly Length	35 FEET	Armor (yes/no)	YES
Fittings			
End A		End B	
Stem (Part and Revision #)	R4.0X64WB	Stem (Part and Revision #)	R4.0X64WB
Stem (Heat #)	1311405220	Stem (Heat #)	1311405220
Ferrule (Part and Revision #)	RF4.0	Ferrule (Part and Revision #)	RF4.0
Ferrule (Heat #)	120368	Ferrule (Heat #)	120368
Connection (Part #)	4 1/16" 10K	Connection (Part #)	4 1/16" 10K
Connection (Heat #)		Connection (Heat #)	
Dies Used	6.62"	Dies Used	6.62"
Hydrostatic Test Requirements			
Test Pressure (psi)	15,000	Hose assembly was tested with ambient water temperature.	
Test Pressure Hold Time (minutes)	16 1/2		
Date Tested	12/11/2013	Tested By	Approved By
		<i>T. Keay</i>	<i>Phillips W. [Signature]</i>

M12653



Midwest Hose & Specialty, Inc.

### Internal Hydrostatic Test Graph

December 11, 2013

Customer: Cactus

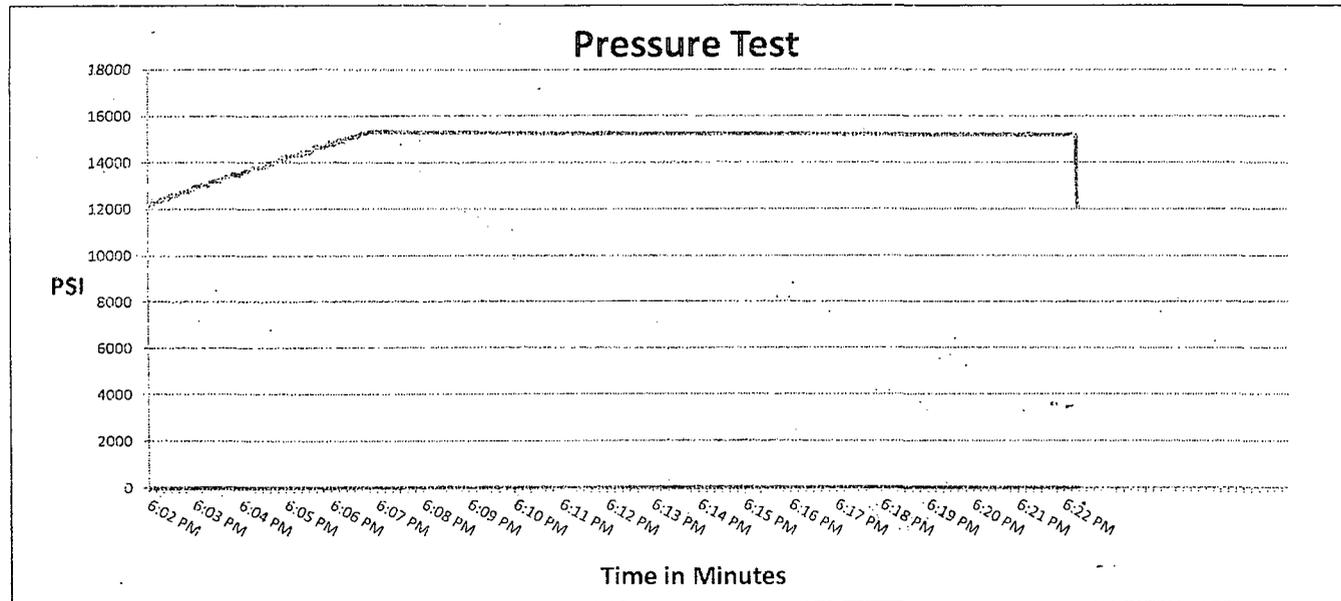
Pick Ticket #: 229391

#### Hose Specifications

Hose Type	Length
Mud	35'
I.D.	O.D.
4"	6.13"
Working Pressure	Burst Pressure
10000 PSI	Standard Safety Multiplier Applies

#### Verification

Type of Fitting	Coupling Method
4 1/16 10K	Swage
Die Size	Final O.D.
6.62"	6.66"
Hose Serial #	Hose Assembly Serial #
11060	229391



**Test Pressure**  
15000 PSI

**Time Held at Test Pressure**  
16 2/4 Minutes

**Actual Burst Pressure**

**Peak Pressure**  
15483 PSI

**Comments:** Hose assembly pressure tested with water at ambient temperature.

**Tested By:** Tony Kellington

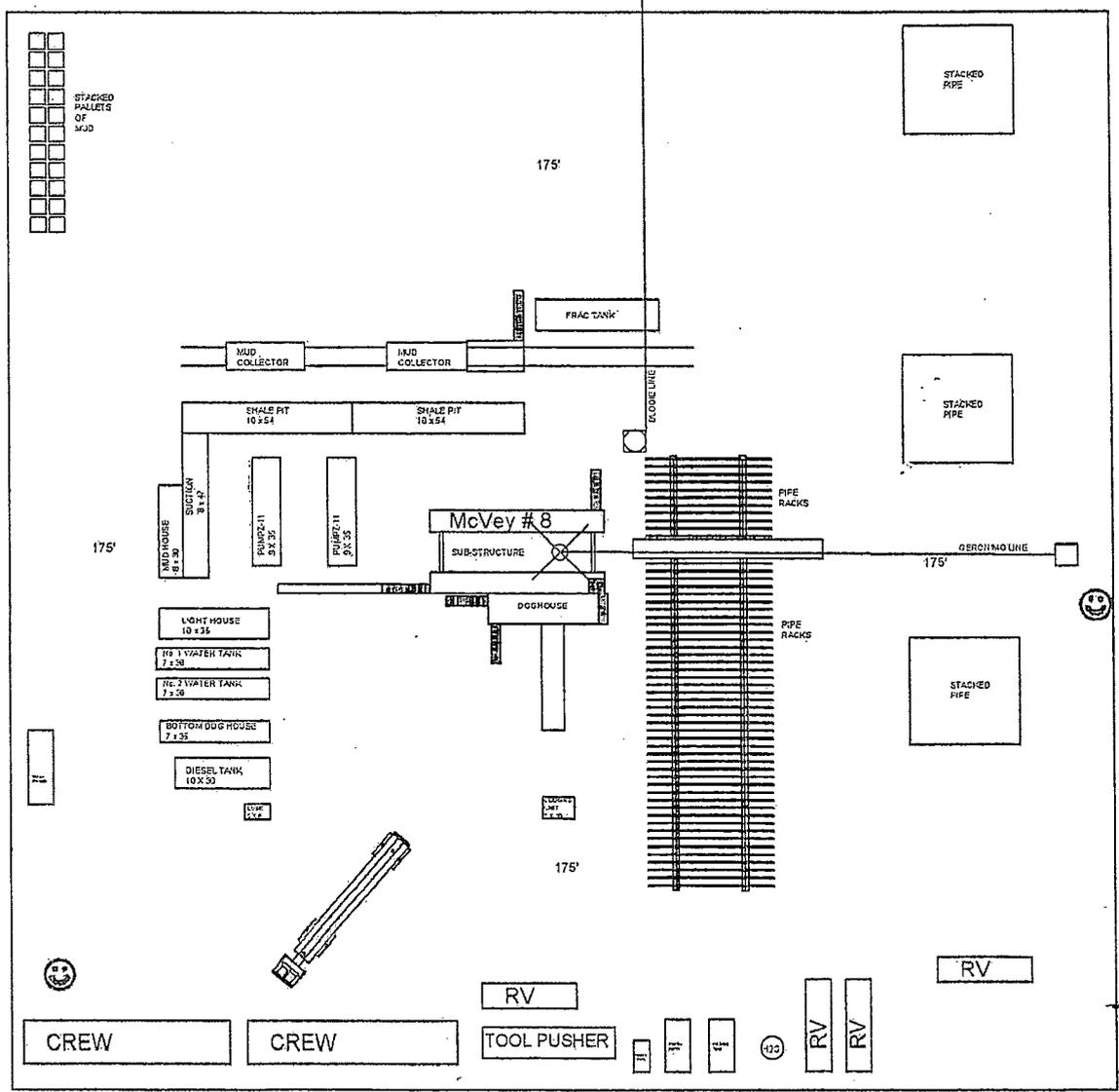
**Approved By:** Phil Maytubby

x *Tony Kellington*

x *Phil Maytubby*

YATES PETROLEUM CORPORATION *R19 Plat #1*  
 McVey # 8  
 12-16-13

350.00



350.00

- Safe Drilling Area with caution signs and breathing equipment
- Wind Direction Indicators
- H2S Monitor with alarm at the well mouth

**BOARD**  
 PAD LAYOUT  
 Scale: 1 inch = 60 feet

# YATES PETROLEUM CORPORATION

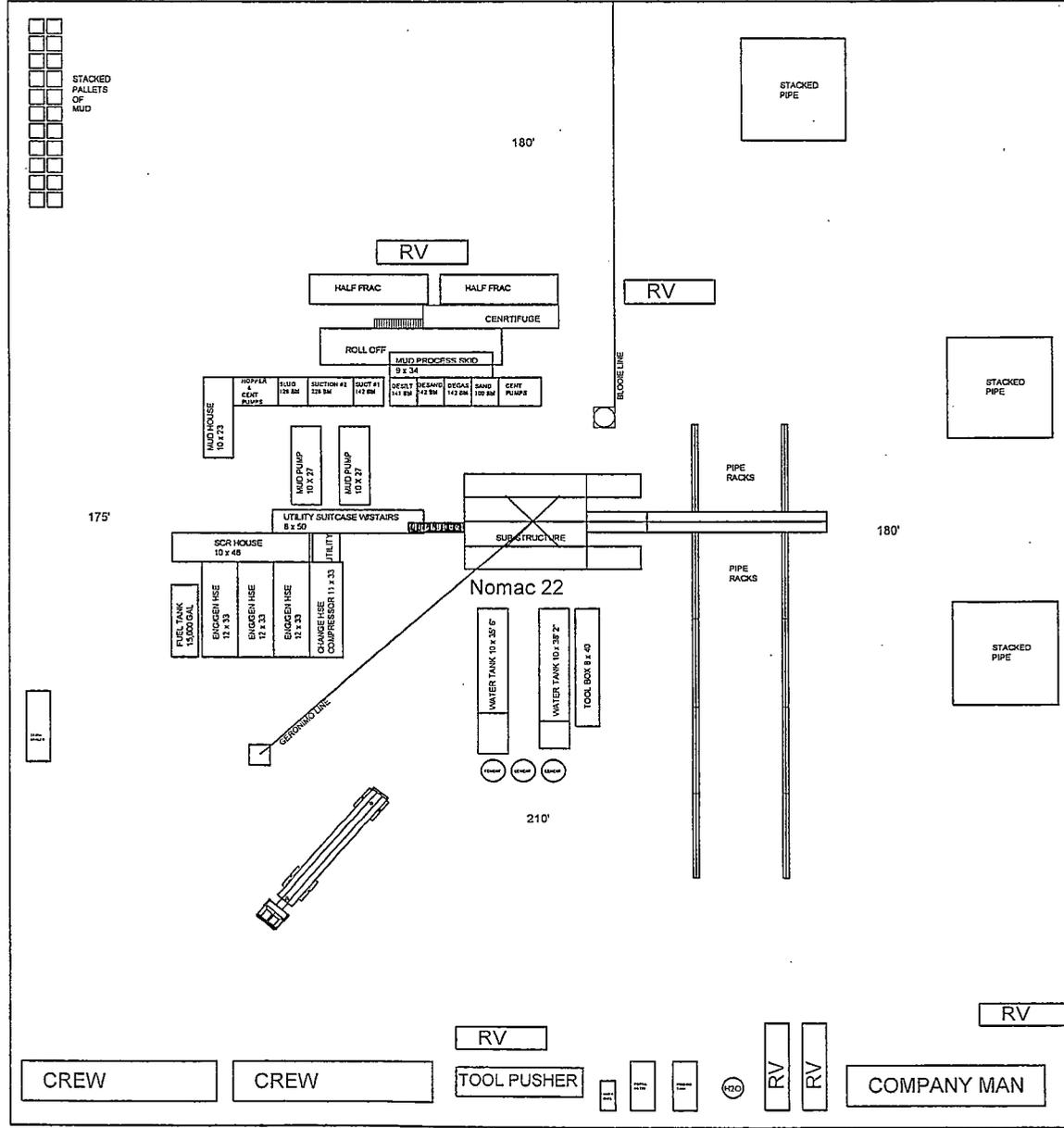
## Nomac 22

06-24-13

Big Plat #2

FLARE PIT

390.00



355.00

PAD LAYOUT  
Scale: 1 inch = 60 feet

# Yates Petroleum Corporation Closed Loop System

## Equipment Design Plan

Closed Loop System will consist of:

1 – double panel shale shaker

1 – (minimum ) Centrifuge, certain wells and flow rates may require 2 centrifuges

On certain wells, the Centrifuge will be replaced by a Clackco Settling Tank System

1 – minimum centrifugal pump to transfer fluids

2- 500 bbl. FW Tanks

1 – 500 bbl. BW Tank

1 – half round frac tank – 250 bbl. capacity as necessary to catch cement / excess mud returns generated during a cement job.

1 Set of rail cars / catch bins

Certain wells will use an ASC Auger Tank

## Operation Plan

All equipment will be inspected at least hourly by rig personnel and daily by contractors' personnel.

Any spills / leaks will be reported to YPC, NMOCD, and cleaned up without delay.

## Closure Plan

Drilling with Closed Loop System, haul off bins will be taken to Gandy Marley, Lea Land Farm, CRI or Sundance Services Inc.

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144 CLEZ  
Revised August 1, 2011

For closed-loop systems that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, submit to the appropriate NMOCD District Office.

**Closed-Loop System Permit or Closure Plan Application**

*(that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)*

Type of action:  Permit  Closure

**Instructions:** Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.  
Operator: Yates Petroleum Corporation OGRID #: 025575  
Address: 105 South Fourth Street, Artesia, NM 88210  
Facility or well name: Jester BFJ Federal #9H  
API Number: \_\_\_\_\_ OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr D Section 12 Township 24S Range 29E County: Eddy  
Center of Proposed Design: Latitude N 32.238175 Longitude W 103.944325 NAD:  1927  1983  
Surface Owner:  Federal  State  Private  Tribal Trust or Indian Allotment

2.  
 **Closed-loop System:** Subsection H of 19.15.17.11 NMAC  
Operation:  Drilling a new well  Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)  P&A  
 Above Ground Steel Tanks or  Haul-off Bins

3.  
**Signs:** Subsection C of 19.15.17.11 NMAC  
 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers  
 Signed in compliance with 19.15.16.8 NMAC

4.  
**Closed-loop Systems Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC  
**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.  
 Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
 Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
 Closure Plan (Please complete Box 5) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC  
 Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_  
 Previously Approved Operating and Maintenance Plan API Number: \_\_\_\_\_

5.  
**Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)  
**Instructions:** Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.  
Disposal Facility Name: Gandy Marley Disposal Facility Permit Number: NM-01-0019  
Disposal Facility Name: CRI Disposal Facility Permit Number: R-9166  
Disposal Facility Name: Lea Land Farm Disposal Facility Permit Number: WM-1-035  
Disposal Facility Name: Sundance Services Inc. Disposal Facility Permit Number: NM-01-0003  
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future service and operations?  
 Yes (If yes, please provide the information below)  No  
**Required for impacted areas which will not be used for future service and operations:**  
 Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
 Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  
 Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

6.

**Operator Application Certification:**

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Lori Flores

Title: Land Regulatory Technician

Signature: Lori Flores

Date: 7/23/13

e-mail address: lorif@yatespetroleum.com

Telephone: 575-748-4448

7.

**OCD Approval:**  Permit Application (including closure plan)  Closure Plan (only)

**OCD Representative Signature:** \_\_\_\_\_ **Approval Date:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **OCD Permit Number:** \_\_\_\_\_

8.

**Closure Report (required within 60 days of closure completion):** Subsection K of 19.15.17.13 NMAC

*Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.*

Closure Completion Date: \_\_\_\_\_

9.

**Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**

*Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.*

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

Yes (If yes, please demonstrate compliance to the items below)  No

*Required for impacted areas which will not be used for future service and operations:*

Site Reclamation (Photo Documentation)

Soil Backfilling and Cover Installation

Re-vegetation Application Rates and Seeding Technique

10.

**Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

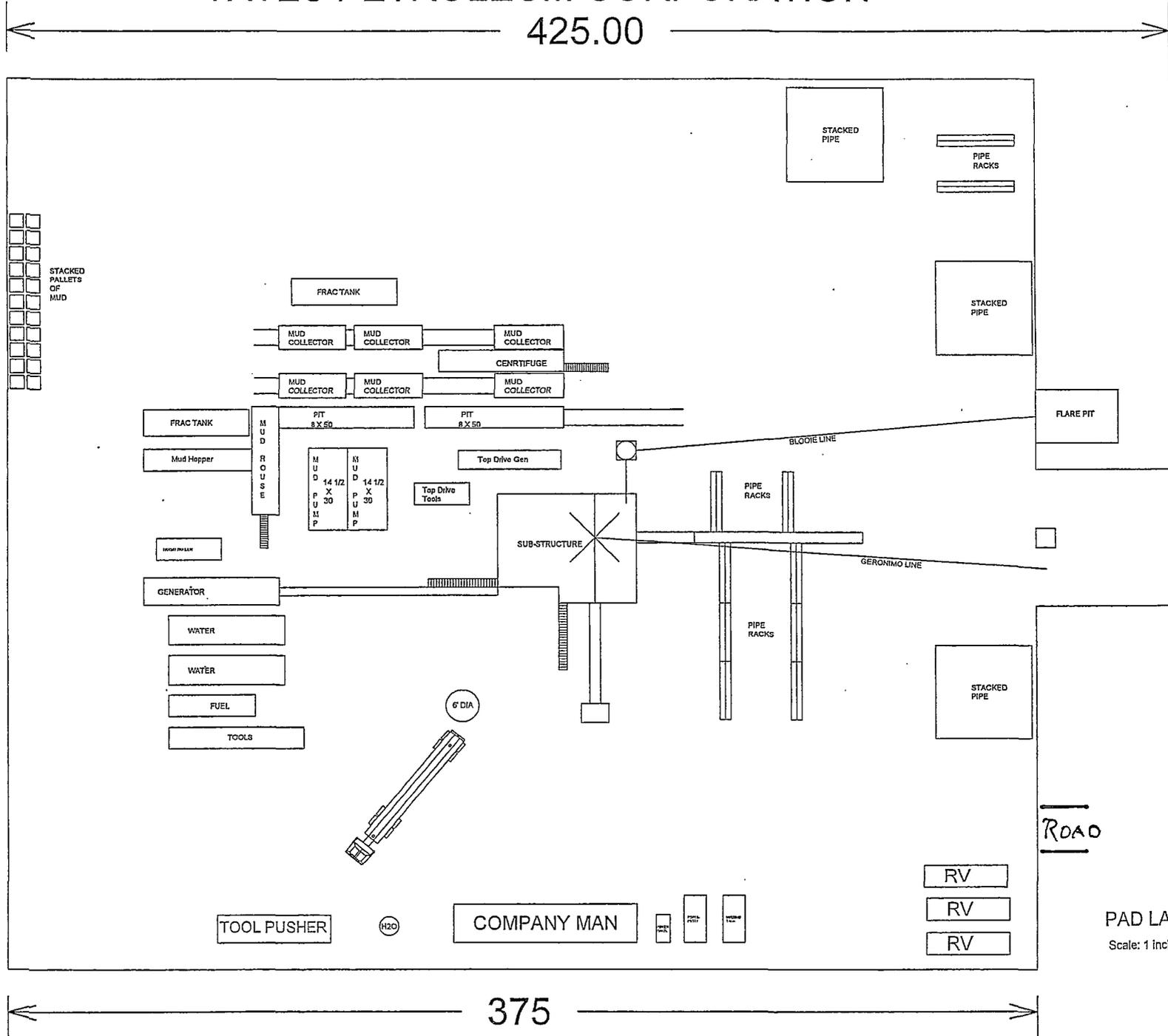
e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

# YATES PETROLEUM CORPORATION

425.00



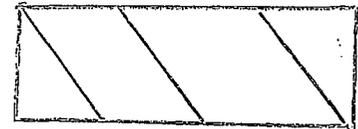
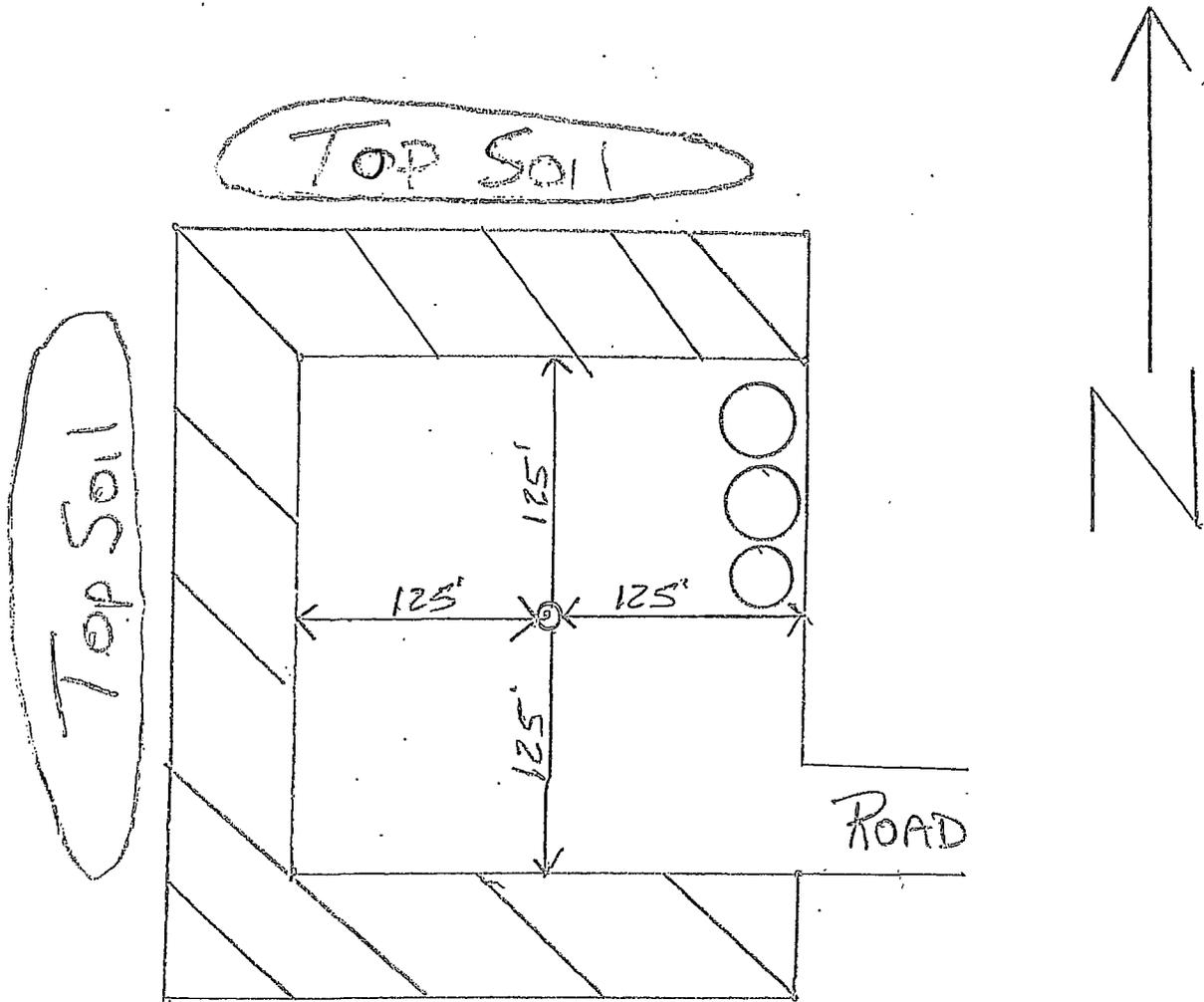
330



PAD LAYOUT  
Scale: 1 inch = 50 feet

# Reclamation PLAT

Jester B F J  
FEDERAL 9 H



Possible  
Reclaimed  
Area

## **MULTI-POINT SURFACE USE AND OPERATIONS PLAN**

Yates Petroleum Corporation  
Jester BFJ Federal #9H  
460' FNL and 710' FWL (Surface Hole Location)  
330' FSL and 660' FWL, (Bottom Hole Location)  
Section 12, T24S-R29E  
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

### **1. EXISTING ROADS:**

Exhibit A is a portion of the BLM map showing the well and roads in the vicinity of the proposed location. The proposed well site is located approximately 37 miles east of Malaga, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

#### **DIRECTIONS:**

Go east of Carlsbad on Highway 62-180 to State Road 31. Turn south on 31 and go to Highway 128 (Jal Highway). Turn left on HWY 128 and go approximately 4 miles to Rawhide Road (CR-793) Mississippi Potash Mine Shaft #5 is here. Turn south here on CR-793 and go approx. 3.4 miles. Follow County road to the left and go east for approximately 0.2 of a mile. Turn south on county road and follow it for approx. 3.5 miles. At this point there will be a tank on the left and a lease road with powerlines going west. Turn west on this lease road and go approx. 1.2 miles. Turn right here on lease road going north and go approximately 0.2 of a mile to the southeast corner of the Jester SWD #4. The new road will start from the northwest corner of the Jester SWD #4 going in a westerly direction for approximately 0.1 of a mile to the southeast corner of the well location.

### **2. PLANNED ACCESS ROAD:**

- A. The proposed new access road will start here going in a westerly direction for approximately 0.1 of a mile to the southeast corner of the proposed well location.
- B. The new road will be 14' in width (driving surface) and will be adequately drained to control runoff and soil erosion.
- C. The road will be crowned and ditched to a 2% slope from the tip of the crown to the edge of the driving surface.
- B. Ditches will be 3' wide with a 3:1 slopes.
- C. The route of the road is visible.
- D. Existing roads will be maintained in the same or better condition.

### **3. LOCATION OF EXISTING WELL**

- A. There is drilling activity within a one-mile radius of the well site.
- B. An exhibit shows existing wells within a one-mile radius of the proposed well site.

### **4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES**

- A. There are production facilities on this lease at the present time. However, if production facilities are needed for this well they will be placed on the east side of the location
- B. In the event that the well is productive, the necessary production facilities will be installed on the drilling pad. If the well is productive oil, a gas or diesel self-contained unit will be used to provide the necessary power until an electric power line can be built if needed.

- C. Should off location facilities be needed for power line, flow line right-of-ways, etc. they will be filed under a separate application by Yates or a third party if applicable. The route and placement will be determined at that time.

**5. LOCATION AND TYPE OF WATER SUPPLY:**

- A. It is planned to drill the proposed well with a fresh water system. The water will be obtained from commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in Exhibit A.

**6. SOURCE OF CONSTRUCTION MATERIALS:**

- A. The dirt contractor will acquire any materials from the closest source at the time of construction of the well pad.

**7. METHODS OF HANDLING WASTE DISPOSAL:**

- A. A closed loop system will be used to drill this well.
- B. The closed loop system will be constructed, maintained, and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division – the “Pit Rule” 19.15.17 NMAC.
- C. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.
- D. Oil produced during operations will be stored in tanks until sold.
- E. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- F. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not approved.

**8. ANCILLARY FACILITIES: None**

**9. WELLSITE LAYOUT:**

- A. Yates has staked a 420' x 420' “Pad Clearance Area.” This area can contain the regularly used rigs Yates utilizes in Southeastern New Mexico. The actual pad size to be constructed would be smaller than the “Pad Clearance Area.” This area was staked at this size with aid from the BLM, since the actual pad size/drilling rig is unknown at this time. Yates will submit a Sundry Notice with a rig layout depicting the actual size of the pad to be constructed with the dimensions from the well bore to all four sides of the pad with the same orientation as the “Pad Clearance Area.” Yates will not construct the well pad until the rig layout is approved through the Sundry Notice.
- B. The closed loop system will be constructed, maintained and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division—the “Pit Rule” 19.15.17 NMAC.
- C. Please note exhibits Rig Size #1 and Rig Size #2 show the relative location and dimensions of the well pad, location of the drilling equipment, pulling unit orientation and access road approach. The closed loop system will be constructed, maintained, and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division – the “Pit Rule” 19.15.17 NMAC.
- D. A 600' x 600' area has been staked and flagged.

**10. PLANS FOR RESTORATION**

- A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible. The location will be reduced to a 250' x 250' after completion operations have been conducted. At this point the surfacing material will be removed, topsoil will be redistributed and the area will be reseeded. Please note attached Reclamation Plat.
- B. If the proposed well is plugged and abandoned, all equipment and other material will be removed. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible. At this point the surfacing material will be removed, topsoil will be redistributed and the area will be reseeded. The location will be re-contoured as close to the original lands as possible before construction was begun.
- C. The reclamation of the pad will be done in sixty days if possible after the well is put in production.
- D. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible. The location will be reduced to a 250' x 250' after completion operations have been conducted. Please note attached Reclamation Plat.
- E. If the proposed well is plugged and abandoned, the caliche surfacing material will be removed, The topsoil will then be redistributed and the location will be reseeded. These actions will be completed and accomplished as expeditiously as possible.
- F. The reclamation of the pad will be done in sixty days if possible after the well is put in production.

**11. SURFACE OWNERSHIP:**

Surface Estate: Managed by the Bureau of Land Management, 620 East Greene Street, Carlsbad, NM 88201

Mineral Estate: Federal Mineral Lease NM-105213 Bureau of Land Management, 620 East Greene Street, Carlsbad, NM 88201

**12. OTHER INFORMATION:**

- A. Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, and dwellings, historical and cultural sites.
- B. The primary surface use is for grazing.

**11. SURFACE OWNERSHIP:**

Surface Estate: Managed by the Bureau of Land Management, 620 East  
Greene Street, Carlsbad, NM 88201

Mineral Estate: Bureau of Land Management, 620 East Greene Street,  
Carlsbad, NM 88201

**12. OTHER INFORMATION:**

- A. Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, and dwellings, historical and cultural sites.
- B. The primary surface use is for grazing.

## PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Yates Petroleum Corp
LEASE NO.:	NM105213
WELL NAME & NO.:	9H jester BFJ Federal
SURFACE HOLE FOOTAGE:	460' FNL & 710' FWL
BOTTOM HOLE FOOTAGE	330' FSL & 660' FWL
LOCATION:	Section 12, T. 24 S., R 29 E., NMPM
COUNTY:	Eddy County, New Mexico

### TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- General Provisions**
- Permit Expiration**
- Archaeology, Paleontology, and Historical Sites**
- Noxious Weeds**
- Special Requirements**
- Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- Road Section Diagram**
- Drilling**
  - Casing/Cement Requirements
  - Pilot Hole Requirements
  - H2S – Requirements
  - Logging Requirements
  - Waste Material and Fluids
- Production (Post Drilling)**
  - Well Structures & Facilities
- Interim Reclamation**
- Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.



## **V. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

### **B. TOPSOIL**

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

### **D. FEDERAL MINERAL MATERIALS PIT**

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

## **F. EXCLOSURE FENCING (CELLARS & PITS)**

### **Exclosure Fencing**

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

## **G. ON LEASE ACCESS ROADS**

### **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

### **Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

### **Crowning**

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **Ditching**

Ditching shall be required on both sides of the road.

### **Turnouts**

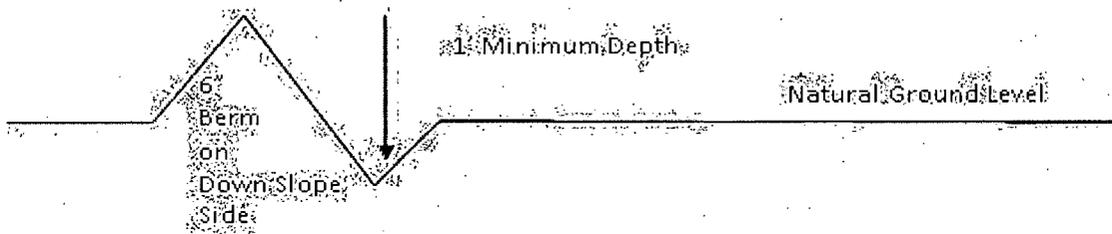
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

## Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill out sloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

### Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

### Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

## Culvert Installations

Appropriately sized culverts shall be installed at deep waterway channel flow crossings through the road.

## Cattleguards

An appropriately sized cattleguard sufficient to carry out the project shall be installed and maintained at fence/road crossings.

Any existing cattleguards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguards that are in place and are utilized during lease operations.

**Fence Requirement**

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

**Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

**Construction Steps**

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

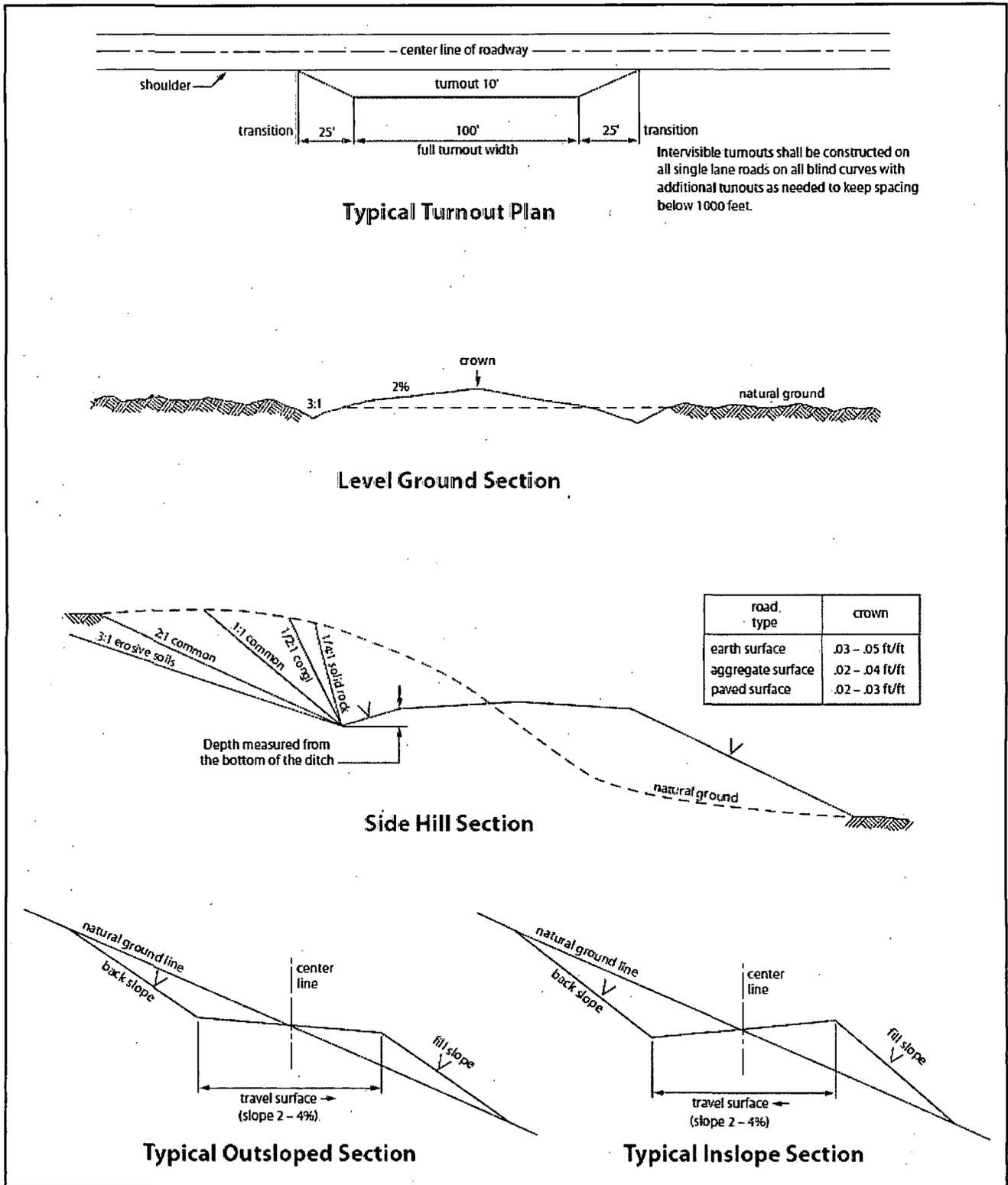


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## VI. DRILLING

### A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

**Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

1. **Hydrogen Sulfide has been reported as a hazard, but no measurements have been recorded. It is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide. If Hydrogen Sulfide is encountered, report measurements and formations to the BLM. If Hydrogen Sulfide is encountered then the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

## B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

### Wait on cement (WOC) for Potash Areas:

After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.

### Wait on cement (WOC) for Water Basin:

After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possibility of water flows in the Salado and Castile.

Possibility of lost circulation in the Rustler, Red Beds and Delaware.

1. The 13-3/8 inch surface casing shall be set at approximately 355 feet (in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt) and cemented to the surface. Fresh water mud to be used to setting depth.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run

to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing set at approx... 3300 feet is:

Cement to surface. If cement does not circulate see B.1.a, c-d above.

**Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.**

**Pilot hole is required to have a plug at the bottom of the hole. If two plugs are set, the BLM is to be contacted (575-361-2822) prior to tag of bottom plug, which shall be Class H and a minimum of 206' in length. (Bottom plug 10600 to 10364) (Top of Wolfcamp Plug 10340 to 10135). Operator can set one Class H plug from bottom of pilot hole to kick-off point and save the WOC time for tagging the first plug.**

**Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.**

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

#### **Primary Cement JOB**

Cement should tie-back at least **500** feet into previous casing string. Operator shall provide method of verification. **Additional cement shall be required as excess calculates to 0%.**

### Contingency Cement JOB:

Operator has proposed a DV tools at depths range of 6,000' to 6,500', but will adjust cement proportionately if moved. DV tool at approx.... 6250' shall be set a minimum of 50' below previous shoe. Operator shall submit sundry if DV tool depth cannot be set in this range.

a. First stage to DV tool:

- Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage. **Excess calculates to neg. 26% - Additional cement Shall be required.**

b. Second stage to DV tool:

- Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

### **C. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M) psi**.
  - a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8"** intermediate casing shoe shall be 5000 (5M) psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**
4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - a. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - b. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
  - c. The results of the test shall be reported to the appropriate BLM office.

- d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
- e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

#### **D. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

#### **E. WASTE MATERIAL AND FLUIDS**

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

**EGF 051215**

## VII. PRODUCTION (POST DRILLING)

### A. WELL STRUCTURES & FACILITIES

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

#### **Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

#### **Containment Structures**

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the

largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

#### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

**B. PIPELINES (Not applied for in APD)**

**C. ELECTRIC LINES (Not applied for in APD)**

### **VIII. INTERIM RECLAMATION**

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

### **X. FINAL ABANDONMENT & RECLAMATION**

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory

revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

## Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Sand dropseed ( <i>Sporobolus cryptandrus</i> )	1.0
Sand love grass ( <i>Eragrostis trichodes</i> )	1.0
Plains bristlegrass ( <i>Setaria macrostachya</i> )	2.0

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed