

AUG 14 2008

**OCD-ARTESIA**

**OCD-ARTESIA**

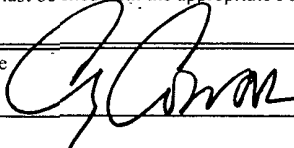
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

FORM APPROVED  
OMB NO. 1004-0137  
Expires: July 31, 2010

1a. Type of Work. <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>NM-0559535</b>
1b. Type of Well. <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator <b>Yates Petroleum Corporation 025575</b>		7. If Unit or CA Agreement, Name and No.
3a. Address <b>105 South Fourth Street, Artesia, NM 88210</b>		8. Lease Name and Well No <b>Federal FR #4 12261</b>
3b. Phone No. (include area code) <b>505-748-1471</b>		9. API Well No <b>30-015-36536</b>
4. Location of well (Report location clearly and in accordance with any State requirements. *) At surface <b>2600 FSL &amp; 850 FEL</b> <b>Roswell Controlled Water Basin</b> At proposed prod. zone <b>2170' FSL and 670' FEL PERSON</b> <b>Same</b>		10. Field and Pool, or Exploratory <b>Wildcat Devonian</b>
14. Distance in miles and direction from the nearest town or post office* <b>Approximately 7 miles north of Loco Hills, New Mexico</b>		11. Sec., T., R., M., or Blk And Survey or Area <b>Section 21, T16S-R30E</b>
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drlg unit line, if any) <b>670'</b>		12. County or Parish <b>Eddy County</b>
16. No. of acres in lease <b>1753.05</b>		13. State <b>New Mexico</b>
17. Spacing Unit dedicated to this well <b>NE/SE/4 40 acres.</b>		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft <b>.6 of a mile.</b>		20. BLM/ BIA Bond No. on file <b>NATIONWIDE BOND #NMB000434</b>
19. Proposed Depth <b>12,181'</b>		
21. Elevations (Show whether DF, KDB, RT, GL, etc ) <b>3765' GL</b>		22. Aproximate date work will start* <b>ASAP</b>
		23. Estimated duration <b>60 days</b>
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.   | 4. Bond to cover the operations unless covered by existing bond on file (see item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification  |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/ or plans as may be required by the BLM          |

25. Signature 	Name (Printed/ Typed) <b>Cy Cowan</b>	Date <b>5/27/2008</b>
Title <b>Regulatory Agent</b>		
Approved By (Signature) <b>/s/ Don Peterson</b>	Name (Printed/ Typed) <b>/s/ Don Peterson</b>	Date <b>AUG 13 2008</b>
Title <b>FIELD MANAGER</b>		
Office <b>CARLSBAD FIELD OFFICE</b>		

Application approval does not warrant or certify operations thereon

Conditions of approval, if any, are attached

Title 18 U.S.C. Section 1001 and Title 43 U.S.C States any false, fictitious or fraudulent statement

\*(Instructions on page 2) C-144 Attached

**NOTE: NEW PIT RULE**  
**19-15-17 NMAC PART 17**  
**A form C-144 must be approved before starting drilling operations.**

rights in the subject lease which would entitle the applicant to co  
**APPROVAL FOR TWO YEARS**  
and wilfully to make to any department or agency of the United

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

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

## SUNDRY NOTICES AND REPORTS ON WELLS

**Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

S

**SUBMIT IN TRIPLICATE - Other instructions on page 2.**

1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other

AUG 14 2008

2. Name of Operator

OCD-ARTESIA

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 (Footage, Sec., T., R., M., or Survey Description)

2620' FSL and 850' FEL Surface Hole Location

2170' FSL and 670' FEL Bottom Hole Location

Section 21, T16S-R30E

5. Lease Serial No

NM-0559535

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/o

8. Well Name and No.

Federal FR #4

9. API Well No.

10. Field and Pool, or Exploratory Area

Wildcat Devonian

11. County or Parish, State

Eddy County, New Mexico

## 12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other location movement.
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Please note the change of location for this well as captioned in #4 above.

Please find replacement pages attached to be replace in our APD that was submitted on 5/27/08.

Thank you for your concern in this matter.

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Signature

Title

Regulatory Agent / Land Department

Date

July 15, 2008

THIS SPACE FOR FEDERAL OR STATE USE

Approved by

/s/ Don Peterson

Title

FIELD MANAGER

Date

AUG 13 2008

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001, 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.

(Instructions on reverse)

## DISTRICT I

1625 W. Frunch Dr., Hobbs, NM 88240

## DISTRICT II

1301 W. Grand Avenue, Artesia, NM 88210

## DISTRICT III

1000 Rio Brazos Rd., Artec, NM 87410

## DISTRICT IV

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

State of New Mexico  
Energy, Minerals and Natural Resources DepartmentForm 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☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name <u>Devonian</u> <u>Wildcat Wolfcamp</u>
Property Code	Property Name FEDERAL "FR"	Well Number 4
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 3765'

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	21	16 S	30 E		2620	SOUTH	850	EAST	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
1	21	16 S	30 E		2170	SOUTH	670	EAST	EDDY
Dedicated Acres 40	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

<p><b>Project Area</b></p> <p><b>Producing Area</b></p> <p>● Penetration Point 2170' FSL + 670' FEL</p> <p><b>SURFACE LOCATION</b> Lat - N32°54'25.35" Long - W103°58'16.18" SPC- N.: 693895.393 E.: 652490.079 (NAD-83)</p> <p><b>BOTTOM HOLE LOCATION</b> Lat - N32°54'20.78" Long - W103°58'14.04" SPC- N.: 693445.945 E.: 652672.022 (NAD-83)</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>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.</p> <p><u>Gy Cowan</u> 7/16/08 Signature Date</p> <p>Gy Cowan Printed Name</p>	
	<p><b>SURVEYOR CERTIFICATION</b></p> <p>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.</p> <p>JULY 09, 2008 Date Surveyed</p> <p><u>Gary L. Jones</u> Signature of State Professional Surveyor</p> <p>7977 Certificate No. 7977</p>	
	<p>7977 Certificate No. 7977</p>	
	<p><b>Basin Surveys</b></p>	

# YATES PETROLEUM CORPORATION

## Federal FR #4

2620' FSL and 850' FEL Surface Hole Location

2170' FSL and 670' FEL Bottom Hole Location

Section 21, T16S R30E

Eddy County, New Mexico

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

Yates	1350'	No Pay	Atoka	10501'	Gas Pay
San Andres	2900'	No Pay	Morrow Clastic	10621'	Gas Pay
Glorieta	4350'	No Pay	Morrow Lower	10558'	Gas Pay
Abo	6330'	No Pay	Chester /LM/	10721'	Gas Pay
Wolfcamp	7700'	No Pay	Woodford /SH/	10781'	Gas Pay
Pennsylvanian Upper	8700'	Gas Pay	Devonian	11531'	Oil Pay
Strawn	10150'	Gas Pay	TD	12181'	Oil Pay

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

Water: 110'  
Oil or Gas: Yates-Devonian

### 3. Pressure Control Equipment:

BOPE will be installed on the 9 5/8" casing and rated for 3000 BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout Preventor controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventors 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.

#### 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)

Hole Size	Casing Size	Wt./Ft	Grade	Thread	Interval	Length
17 1/2"	13 3/8"	48#	H-40	ST&C	0-400'	400'
12 1/4"	9 5/8"	36#	J-55	ST&C	0-3000'	3000'
8 3/4"	7"	26#	L-80	LT&C	0-3000'	3000'
8 3/4"	7"	26#	J-55	LT&C	3000-7300'	4300'
8 3/4"	7"	26#	HCP-110	LT&C	7300-12181'	4881'

Yates Petroleum Corporation requests a variance to install a rotating head on the surface casing strings when intermediate casing will be set. If a BOP system is required then we wish to install a 2M system and receive a variance to test the system to 500# using the rig pumps. The test will be held for 30 minutes on each system component. Components to be tested include pipe rams, blind rams, and annular preventer.

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

**B. CEMENTING PROGRAM:**

Surface Casing: 425 sx "C" (YLD 1.34 WT 14.8) w/ 2% CaCl<sub>2</sub>. Cement to surface.

Intermediate Casing: 850 sx Lite "C" (YLD 1.95 WT 12.5) Tail in w/200 sx Class "C" +2% CaCl<sub>2</sub> (YLD 1.34 WT 14.8). Cement to surface.

Production Casing: TOC-2500' Lead w/575 sx 50/50 Poz. (YLD 2.51 WT 11.5)  
Tail in w/ 1025sx Super "C" (YLD 1.52 WT 13.5)

*see replacement*

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

Interval	Type	Weight	Viscosity	Fluid Loss
Spud to 400'	Fresh Water Gel	8.6-9.0	28-32	N/C
400'-3000'	Brine Water	10.0-10.20	28-29	N/C
3000'-6300'	Cut Brine	9.1-9.3	28-30	N/C
6300'-10080'	SW Gel/Starch	9.3-9.8	30-32	N/C
10080'-12141'	SW Gel/Starch/4-6% KCL	9.8-10.0	34-40	10.0-12.0

ALL DEPTHS ARE MEASURED

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. Mud will be checked hourly by rig personnel.

**6. EVALUATION PROGRAM:**

Samples: 10' out from under intermediate casing to TD.

Logging: Platform Express/C NL/LDT/NGRT TD to intermediate casing.  
CNL/GR TD-surface, DLL-MSFL TD to surface casing. BHC/Sonic  
TD to Surface Casing.

Coring: None anticipated

DST's: None anticipated

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

**Anticipated BHP:**

From: 0 TO 400' TVD Anticipated Max. BHP: 190 PSI  
From: 400' TO 3000' Anticipated Max. BHP: 1600 PSI  
From: 3000' TO 12100' TVD Anticipated Max. BHP: 6300 PSI

Abnormal Pressures Anticipated: None

Lost Circulation Zones Anticipated: None

H<sub>2</sub>S Zones Anticipated: None

Maximum Bottom Hole Temperature: 193° F

**8. ANTICIPATED STARTING DATE:**

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 30 days to drill the well with completion taking another 15 days.

## Federal FR #4 Production Casing & Cement Design

0 ft to 4,500 ft				Make up Torque ft-lbs			Total ft = 4,500
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
5.5 inches	17 #/ft	HCP-110	LT&C	4620	3470	5780	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
8,580 psi	10,640 psi	445,000 #		546,000 #		4.767	

4,500 ft to 9,900 ft				Make up Torque ft-lbs			Total ft = 5,400
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
5.5 inches	17 #/ft	L-80	LT&C	3410	2560	4260	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
6,290	7,740 psi	338,000 #		397,000 #		4.767	

9,900 ft to 12,181 ft				Make up Torque ft-lbs			Total ft = 2,281
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
5.5 inches	17 #/ft	HCP-110	LT&C	4620	3470	5780	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
8,580 psi	10,640 psi	445,000 #		546,000 #		4.767	

DV tool placed at 8500'.

**Stage I:** Cement w/1225sx of Super C (YLD 1.52 Wt 13.5) TOC = 8,500'

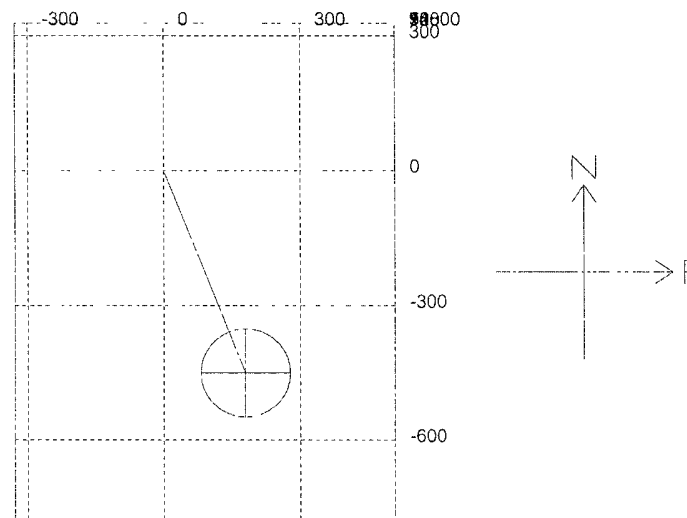
**Stage II:** Lead w/1150sx 50/50 Poz. (YLD 2.51 WT 11.5) and tail w/100sx Class C (YLD 1.32 Wt 14.8) TOC = 2500'.

M.D.	Inclination	Azimuth	T.V.D.	N+S	E+W	D.L.S.	ToolFace	T.F. Ref.	HS/GN	Formation-Tops
1,350	0	0	1,350	0	0	0				YATES
2,900	0	0	2,900	0	0	0				SAN ANDRES
4,350	0	0	4,350	0	0	0				GLORIETA
6,330	0	0	6,330	0	0	0				ABO
7,700	0	0	7,700	0	0	0				WOLFCAMP
8540	0	0	8540	0	0	3	158		GN	KOP
8550	0.3	158.2	8550	-0.02	0.01	3	0		HS	
8575	1.05	158.2	8575	-0.3	0.12	3	360		HS	
8600	1.8	158.2	8599.99	-0.88	0.35	3	360		HS	
8625	2.55	158.2	8624.97	-1.76	0.7	3	360		HS	
8650	3.3	158.2	8649.94	-2.94	1.18	3	360		HS	
8675	4.05	158.2	8674.89	-4.43	1.77	3	0		HS	
8700	4.8	158.2	8700	-6.22	2.49	3	360		HS	PENNSYLVANIAN UPPER
8725	5.55	158.2	8724.71	-8.31	3.33	3	0		HS	
8750	6.3	158.2	8749.58	-10.71	4.28	3	360		HS	
8775	7.05	158.2	8774.41	-13.41	5.36	3	360		HS	
8800	7.8	158.2	8799.2	-16.41	6.56	3	0		HS	
8825	8.55	158.2	8823.94	-19.71	7.88	3	360		HS	
8850	9.3	158.2	8848.64	-23.31	9.32	3	0		HS	
8875	10.05	158.2	8873.28	-27.21	10.88	3	360		HS	
8900	10.8	158.2	8897.87	-31.41	12.56	3	360		HS	
8925	11.55	158.2	8922.4	-35.91	14.36	3	0		HS	
8950	12.3	158.2	8946.86	-40.7	16.28	3	0		HS	
8975	13.05	158.2	8971.25	-45.8	18.32	3	360		HS	
9000	13.8	158.2	8995.56	-51.19	20.47	3	0		HS	
9025	14.55	158.2	9019.8	-56.87	22.75	3	360		HS	
9050	15.3	158.2	9043.96	-62.85	25.14	3	360		HS	
9075	16.05	158.2	9068.03	-69.12	27.65	3	0		HS	
9100	16.8	158.2	9092.01	-75.68	30.27	3	360		HS	
9125	17.55	158.2	9115.9	-82.54	33.02	3	360		HS	
9150	18.3	158.2	9139.68	-89.68	35.87	3	360		HS	
9175	19.05	158.2	9163.37	-97.11	38.85	3	0		HS	
9200	19.8	158.2	9186.94	-104.83	41.93	3	360		HS	
9225	20.55	158.2	9210.41	-112.84	45.14	3	0		HS	
9250	21.3	158.2	9233.76	-121.13	48.45	3	360		HS	
9275	22.05	158.2	9256.99	-129.7	51.88	3	0		HS	
9300	22.8	158.2	9280.1	-138.56	55.42	3	0		HS	
9325	23.55	158.2	9303.08	-147.69	59.08	3	360		HS	
9350	24.3	158.2	9325.93	-157.11	62.84	3	360		HS	
9375	25.05	158.2	9348.65	-166.8	66.72	3	360		HS	
9391.37	25.54	158.2	9363.46	-173.29	69.32	0				
9649.71	25.54	158.2	9596.55	-276.71	110.68	0				
9650	25.53	158.2	9596.81	-276.82	110.73	3	180		HS	
9675	24.78	158.2	9619.44	-286.69	114.68	3	180		HS	
9700	24.03	158.2	9642.2	-296.28	118.51	3	180		HS	
9725	23.28	158.2	9665.1	-305.6	122.24	3	180		HS	
9750	22.53	158.2	9688.13	-314.63	125.85	3	180		HS	
9775	21.78	158.2	9711.28	-323.39	129.36	3	180		HS	
9800	21.03	158.2	9734.56	-331.86	132.74	3	180		HS	
9825	20.28	158.2	9757.95	-340.05	136.02	3	180		HS	
9850	19.53	158.2	9781.45	-347.95	139.18	3	180		HS	
9875	18.78	158.2	9805.07	-355.57	142.23	3	180		HS	
9900	18.03	158.2	9828.79	-362.9	145.16	3	180		HS	
9925	17.28	158.2	9852.61	-369.94	147.98	3	180		HS	
9950	16.53	158.2	9876.53	-376.69	150.68	3	180		HS	
9975	15.78	158.2	9900.54	-383.15	153.26	3	180		HS	
10000	15.03	158.2	9924.65	-389.32	155.73	3	180		HS	
10025	14.28	158.2	9948.83	-395.19	158.08	3	180		HS	
10050	13.53	158.2	9973.1	-400.77	160.31	3	180		HS	
10075	12.78	158.2	9997.44	-406.05	162.42	3	180		HS	
10100	12.03	158.2	10021.86	-411.04	164.42	3	180		HS	
10125	11.28	158.2	10046.34	-415.73	166.29	3	180		HS	
10150	10.53	158.2	10070.89	-420.12	168.05	3	180		HS	STRAWN
10175	9.78	158.2	10095.5	-424.22	169.69	3	180		HS	
10200	9.03	158.2	10120.16	-428.01	171.2	3	180		HS	
10225	8.28	158.2	10144.88	-431.51	172.6	3	180		HS	
10250	7.53	158.2	10169.64	-434.7	173.88	3	180		HS	
10275	6.78	158.2	10194.44	-437.59	175.04	3	180		HS	
10300	6.03	158.2	10219.29	-440.18	176.07	3	180		HS	
10325	5.28	158.2	10244.17	-442.47	176.99	3	180		HS	
10350	4.53	158.2	10269.07	-444.46	177.78	3	180		HS	
10375	3.78	158.2	10294.01	-446.14	178.46	3	180		HS	
10400	3.03	158.2	10318.96	-447.52	179.01	3	180		HS	
10425	2.28	158.2	10343.94	-448.59	179.44	3	180		HS	
10450	1.53	158.2	10368.92	-449.37	179.75	3	180		HS	
10475	0.79	158.2	10393.92	-449.84	179.93	3	180		HS	
10500	0.08	158.21	10418.92	-450	180	3	338		GN	
10501.08	0.07	162.27	10420	-450	180	0				ATOKA
10621.08	0	180	10540	-450	180	0				MORROW CLASTIC
10721.08	0	180	10640	-450	180	0				MORROW LOWER
10781.08	0	180	10700	-450	180	0				CHESTER /LM/
11491.08	0	180	11410	-450	180	0				WOODFORD /SH/
11531.08	0	180	11450	-450	180	0				DEVONIAN
12181.08	0	180	12100	-450	180	0				TD

Penetration point for potential producing zone will be 2170' FSL & 670' FEL, Section 21, 16S-30E

### 3D<sup>3</sup> Directional Drilling Planner - 3D View

Company: **Yates Petroleum Corporation**  
Well: **Federal FR #4**





## **Yates Petroleum Corporation**

### **Design Requirements For Temporary Reserve Pit**

Sign posted on site / location or on the fence of reserve pit identifying the operator, listing their phone #, location of site by  $\frac{1}{4}$  /  $\frac{1}{4}$  or unit letter, and S- T- R.

Pit must be fenced to prevent unauthorized access. Fence must remain in good repair. Fence to be barbed wire, space at 1 foot intervals from 1' to 4' off ground.

Slope of the pit walls is no greater than two vertical feet to one horizontal foot.

Welded liner seams must run up & down the banks of the pit, not horizontally across them.

Field seams must be welded.

Edges of the liner must be anchored in trenches at least 18 inches deep.  
Edge of liner will protrude from the outside edge of the trench.

Pit shall be designed to prevent to run on of surface water.

Federal FR #4  
2620 FSL and 850 FEL  
Section 21, T16S-R30E  
Eddy County, New Mexico  
Exhibit "D"

## **Yates Petroleum Corporation Drilling Operations Requirements For Temporary Reserve Pit.**

While the drilling rig is onsite, Operator's representative will inspect the temporary pit daily to ensure that the liner is intact, and that no releases are occurring. Thereafter, the operator shall inspect at least once weekly as long as liquids remain in the temporary pit.

Operator will maintain a log of such inspections and make the log available to the appropriate NMOCD District office upon request.

A copy of the inspection log shall be filed with the NMOCD when operator closes the pit.

Operator must notify NMOCD if liner is damaged, and must repair or replace the damaged liner. Operator has 48 hours to notify NMOCD and make repairs.

NO HOLES in pit liners – not even in the part of the liner that is not in the reserve pit .

All drilling fluids to be removed from temporary pit within 30 days of rig release date

Hydrocarbon based drilling fluids will be stored in steel pits.

Liner –will be 20mil.,string reinforced with welded seams.

Fluids to be added to pit through a header, diverter, or other hardware that prevents damage to liner by erosion, fluid jets, or impacts from installations and removal of hoses or pipes.

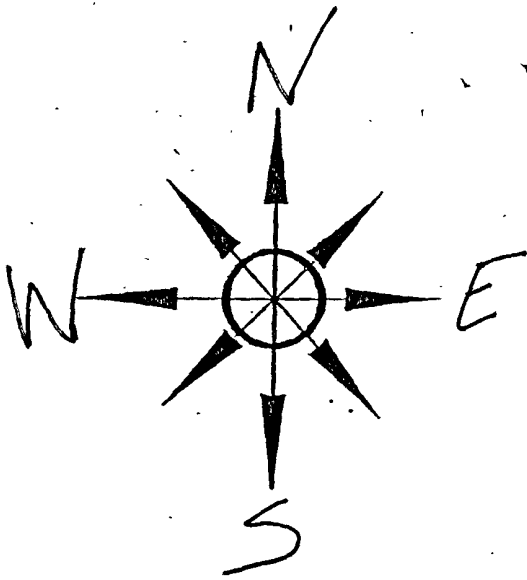
Operator shall have onsite an oil absorbent boom or other device to contain and remove oil from a pits surface.

Operator must maintain a freeboard of at least two feet for a temporary pit.

Pit will be bermed to prevent run on of water into the pit.

Federal FR #4  
2620 FSL and 850 FEL  
Section 21, T16S-R30E  
Eddy County, New Mexico  
Exhibit "E"

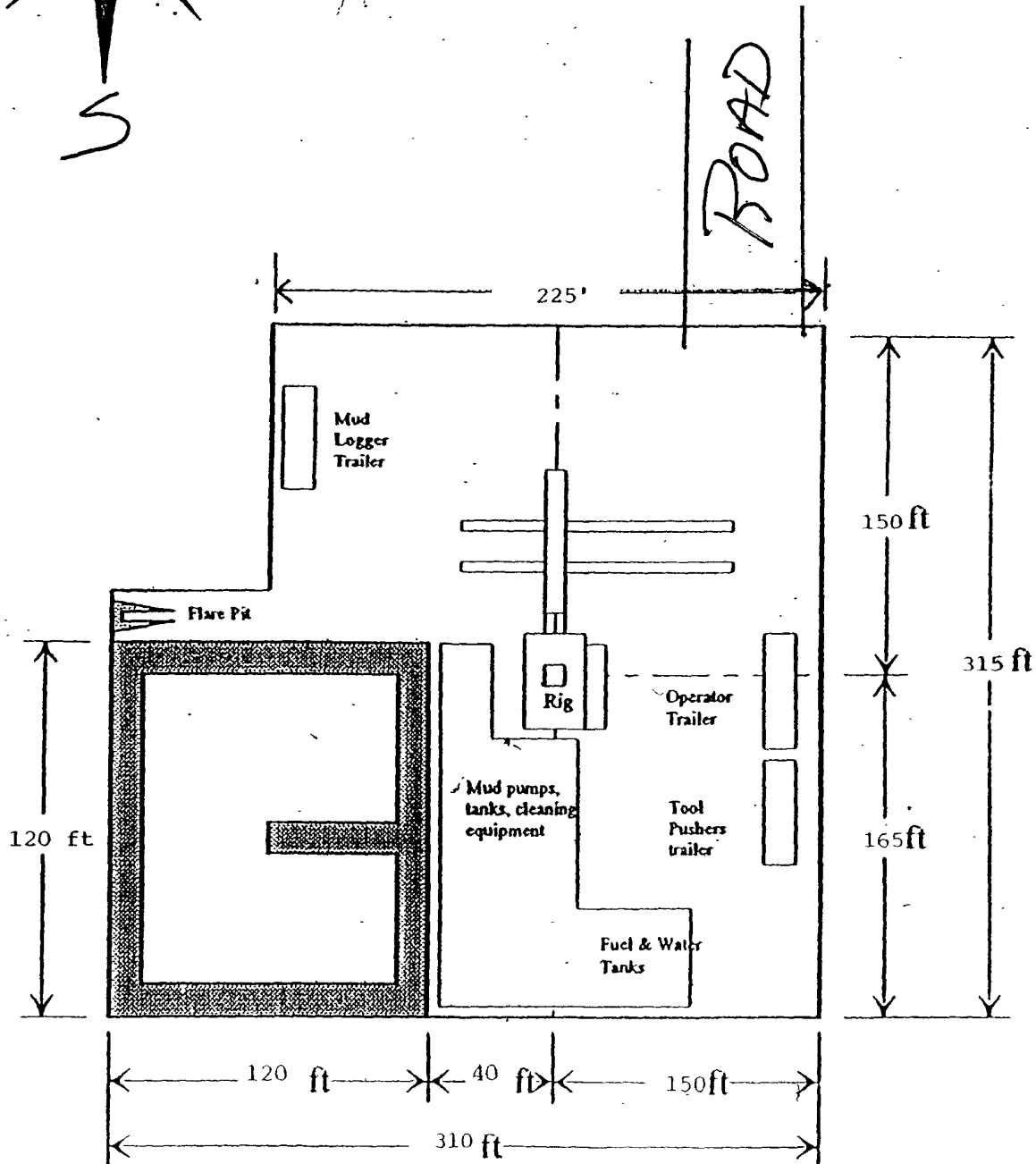
9. When analysis indicates that the soils within the pit area are within the recommended actions levels backfilling will begin.
10. Backfill material will consist of non-waste containing earthen material. The cleaned out drilling pit will be filled with such material to a level which shall allow space for the addition of topsoil which will be equal to the thickness of the background topsoil or one foot whichever is greater as directed in 19.15.17.13, H (1) NMAC.
11. The topsoil cover will be placed on to the drilling pit area in a manner of existing grade and will prevent ponding of water and erosion of the cover material.
12. Within 60 days of closure completion a closure report on form C-144 will be submitted to the appropriate district office. The report will contain detailed information on the backfilling, capping. The closure report will also include a plat of the closed pit location on a form C-105.
13. Within the first growing season after the approved pit closure seeding of the pit area shall occur. The seeding will be performed in accordance with 19.15.17.13, I, (2) (3) (4) (5).



**Yates Petroleum Corporation**  
Location Layout for Permian Basin  
Up to 12,500'

PB - L1

YATES PETROLEUM CORPORATION  
Federal FR 4  
2170' FSL and 760' FEL  
Section 21, T16 S Range 30E  
Eddy County, New Mexico



Distance from Well  
Head to Reserve Pit  
will vary between rigs

The above dimension  
should be a maximum

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

**Yates Petroleum Corporation**

**Federal FR #4**

2620' FSL and 850' FEL Surface Hole Location

2170' FSL and 670' FEL Bottom Hole Location

Section 21, T16S R30E

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 7 miles north of Loco Hills, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

## **DIRECTIONS:**

Go east of Artesia from the intersection of 82 & 285 on Highway 82 for approximately 25 miles to Loco Hills, New Mexico. From Loco Hills turn left on Hagerman Cut Off (CR-217) and go approximately 7 miles to Shell Road (CR-283). Turn right on Shell Road and go approximately .9 of a mile. The new road will start here going south for approximately .5 of a mile to the northwest corner of the proposed well location.

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

- A. The proposed new access will be approximately 0.5 of a mile in length from the point of origin the northwest corner of the well location. The road will lie in an north to south direction.
- B. The new road will be 14 feet in width (driving surface) and will be adequately drained to control runoff and soil erosion.
- C. The new road will be bladed with drainage on one side. Traffic turnouts may be built.
- D. The route of the road is visible.
- E. Existing roads will be maintained in the same or better condition.
- F. One cattle guard will be needed.

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

- A. There is drilling activity within a one-mile radius of the well site.
- B. Exhibit D 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.
- B. In the event that the well is productive, the necessary production facilities will be installed on the drilling pad. However at this time it has not been determined what type of equipment will be used to supply power for the well.

## **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:**

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. Drill cuttings will be disposed of in the reserve pits.
- B. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.
- 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. Exhibit C shows the relative location and dimensions of the well pad, the reserve pits, the location of the drilling equipment, rig orientation and access road approach.
- B. The temporary drilling pit 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. Form C-144 attached.
- C. 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 wellsite in as aesthetically pleasing a condition as possible.
- B. Unguarded pits, if any, containing fluids will be fenced until they have dried and been leveled.
- C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible.
- D. The reserve pits will be reclaimed to meet the standards set by OCD Rule 50.

**11. SURFACE OWNERSHIP: Bureau of Land Management, Carlsbad, New Mexico.**

**12. OTHER INFORMATION:**

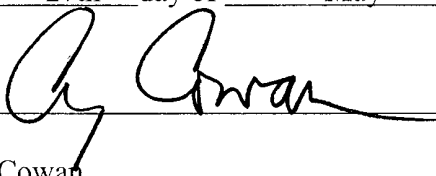
- A. Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.
- B. The primary surface use is for grazing.

CERTIFICATION  
YATES PETROLEUM CORPORATION

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; and an someone under employment of Yates Petroleum Corporation has 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 I, or the company I represent, am 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 27th day of May 20 08

Signature



Name Cy Cowan

Position Title Regulatory Agent

Address 105 South Fourth Street, Artesia, New Mexico 88210

Telephone (505) 748-4372

Field Representative (if not above signatory) Tim Bussell, Drilling Supervisor

Address (if different from above) Same as above.

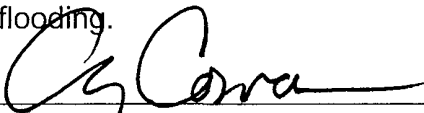
Telephone (if different from above) (505) 748-4221

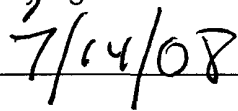
E-mail (optional) \_\_\_\_\_

Exhibit "A"

Federal FR #4  
2620 FSL & 850 FEL  
Section 21, T16S-R30E  
Eddy County, New Mexico

Our Regulatory Agent has been on site and location shows no sign to be prone to flooding.

  
\_\_\_\_\_  
Regulatory Agent

  
\_\_\_\_\_  
Date



*New Mexico Office of the State Engineer*  
**POD Reports and Downloads**

Township  Range  Sections

NAD27 X  Y  Zone  Search Radius

County  Basin  Number  Suffix

Owner Name (First)  (Last)  ☐ Non-Domestic ☐ Domestic ☒ All

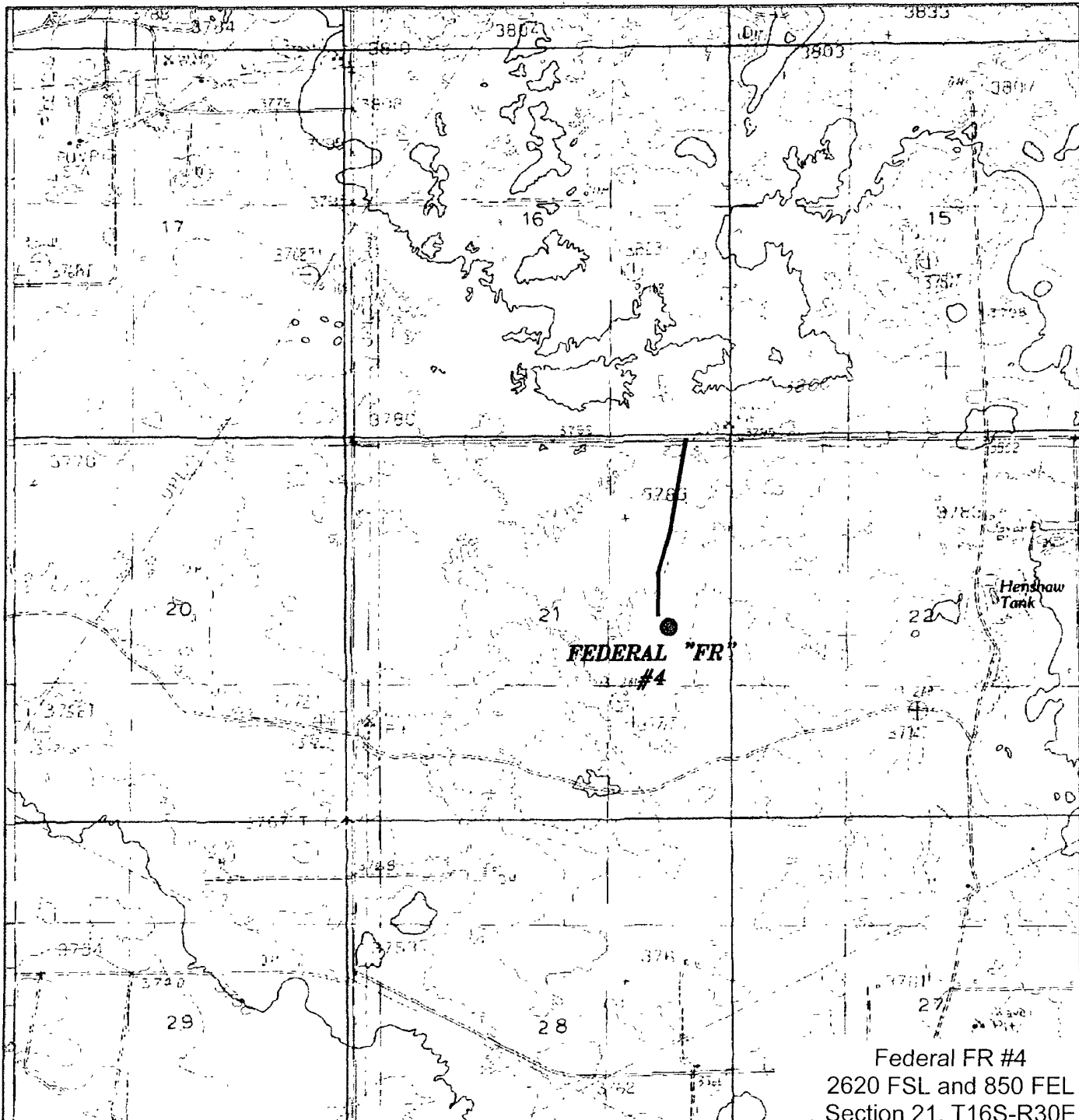
POD / Surface Data Report Avg Depth to Water Report Water Column Report

POD / SURFACE DATA REPORT 07/14/2008

(acre ft per annum)										(quarters are 1=NW 2=NE 3=SW 4=SE)									
										(quarters are biggest to smallest X Y are in Feet)									
UTM are in Meters)	DB File Nbr	Use	Diversion	Start	Owner	Finish	Depth	Depth (in feet)	POD Number	Source	Tws	Rng	Sec	q	q	q	Zone	X	Y
UTM_Zone	Easting	Northing	Date	Date	Well	Water													
RA 09342	DOM	3	RUSTY AND JOSIE VAN CUREN	05/02/1998	05/03/1998	220	110	RA 09342	Shallow	16S	29E	19	3	4	4				

Record Count: 1

Federal FR #4  
 2620 FSL and 850 FEL  
 Section 21, T16S-R30E  
 Eddy County, New Mexico  
 Exhibit "B"



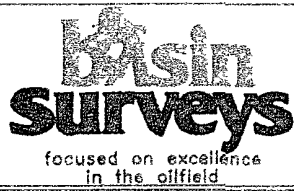
Henshaw Tank

**FEDERAL "FR" #4**

Federal FR #4  
 2620 FSL and 850' FEL  
 Section 21, T16S-R30E  
 Eddy County, New Mexico  
 Exhibit "C"

**FEDERAL "FR" #4**

Located at 2620' FSL AND 850' FEL  
 Section 21, Township 16 South, Range 30 East,  
 N.M.P.M., Eddy County, New Mexico.

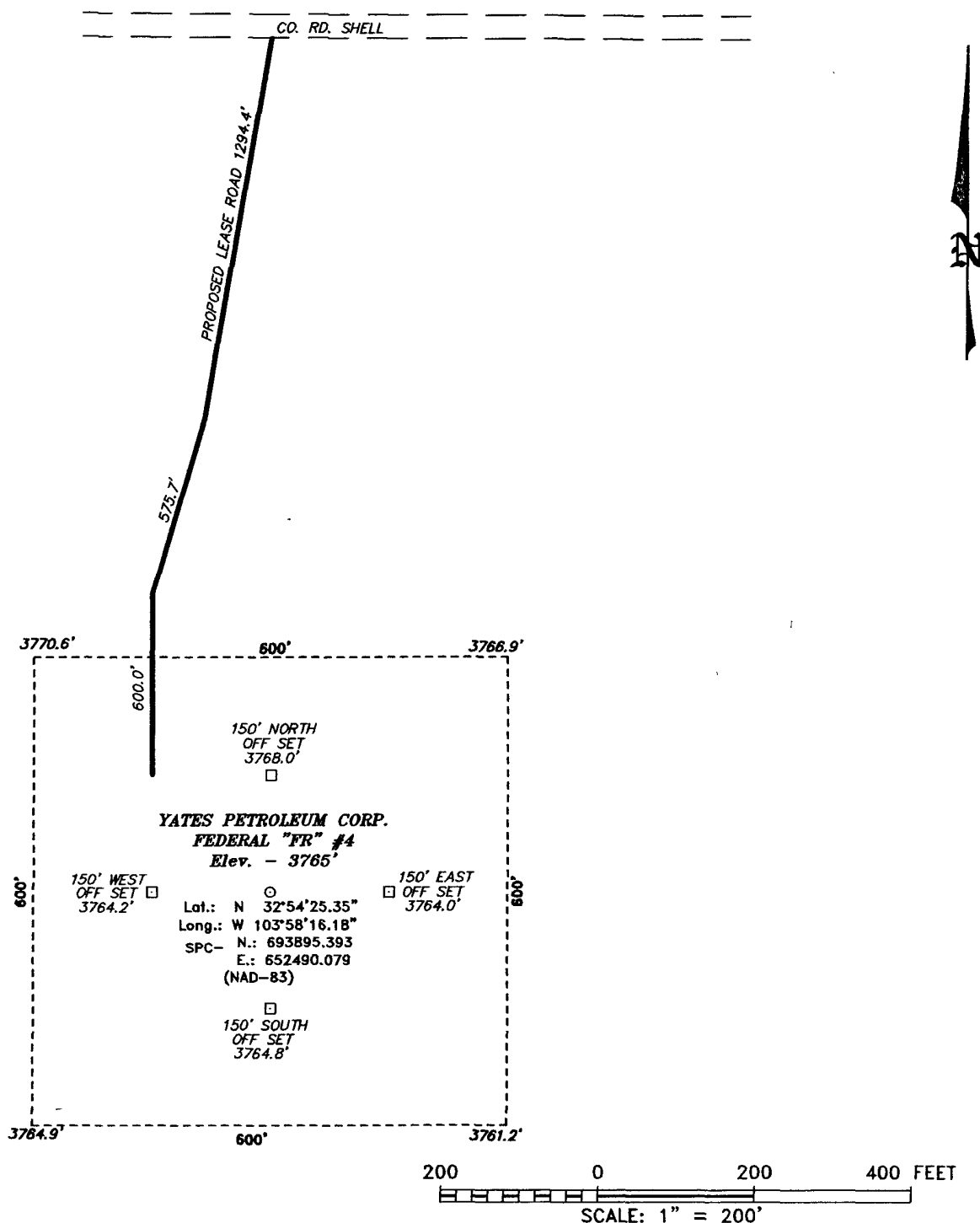


P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
[basinsurveys.com](http://basinsurveys.com)

W.O. Number	18952
Survey Date.	07-08-2006
Scale:	1" = 2000'
Date:	07-09-2008

**YATES  
 PETROLEUM  
 CORP.**

SECTION 21, TOWNSHIP 16 SOUTH, RANGE 30 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



**YATES PETROLEUM CORP.**

REF: FEDERAL "FR" #4 / WELL PAD TOPO

THE FEDERAL "FR" #4 LOCATED 2620'  
FROM THE SOUTH LINE AND 850' FROM THE EAST LINE OF  
SECTION 21, TOWNSHIP 16 SOUTH, RANGE 30 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

**BASIN SURVEYS** P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 19393

Drawn By: J. M. SMALL

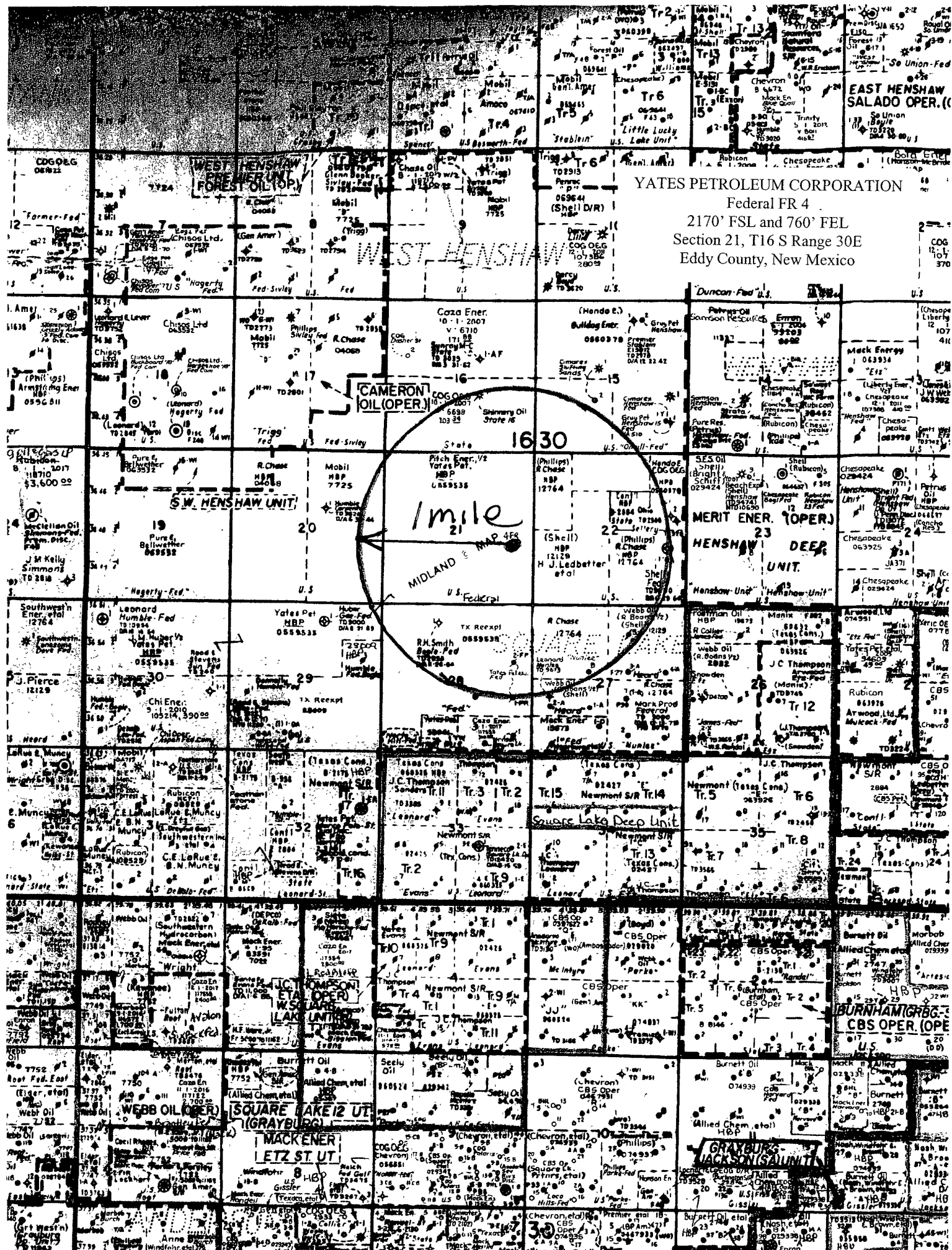
Date: 05-23-2008

Disk: 19393W JMS

Survey Date: 05-22-2008

Sheet 1 of 1 Sheets





## PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	YATES PETROLEUM CORPORATION
LEASE NO.:	NM-0559535
WELL NAME & NO.:	Federal FR #4
SURFACE HOLE FOOTAGE:	2620' FSL & 850' FEL
BOTTOM HOLE FOOTAGE:	2170' FSL & 670' FEL
LOCATION:	Section 21, T. 16 S., R 30 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**
  - Lesser Prairie Chicken
- ☐ **Construction**
  - Notification
  - Topsoil
  - Reserve Pit
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
- ☐ **Production (Post Drilling)**
  - Well Structures & Facilities
- ☐ **Reserve Pit Closure/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. SPECIAL REQUIREMENT(S)**

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.



## **VI. 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) 234-5972 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 stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 8 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

### **C. RESERVE PITS**

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

The reserve pit shall be constructed 120' X 120' on the West side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

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

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. 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. 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 thirty (30) 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.

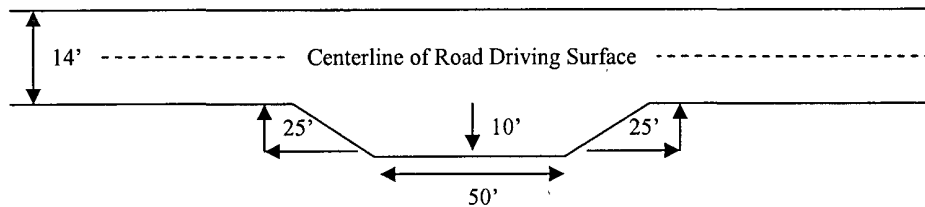
##### **Ditching**

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 be constructed on all blind curves. Turnouts shall conform to the following diagram:

**Standard Turnout – Plan View**

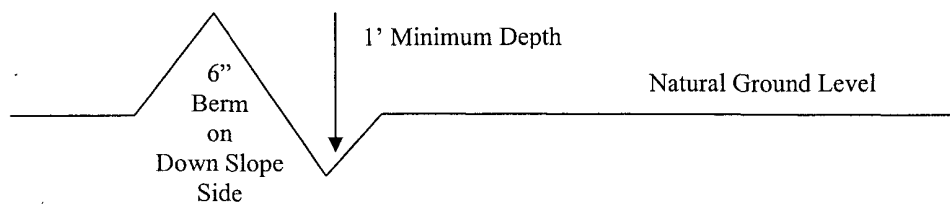


### Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping 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 culvert(s) shall be installed at the deep waterway channel flow crossing.

### **Cattleguards**

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road 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 cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

### **Fence Requirement**

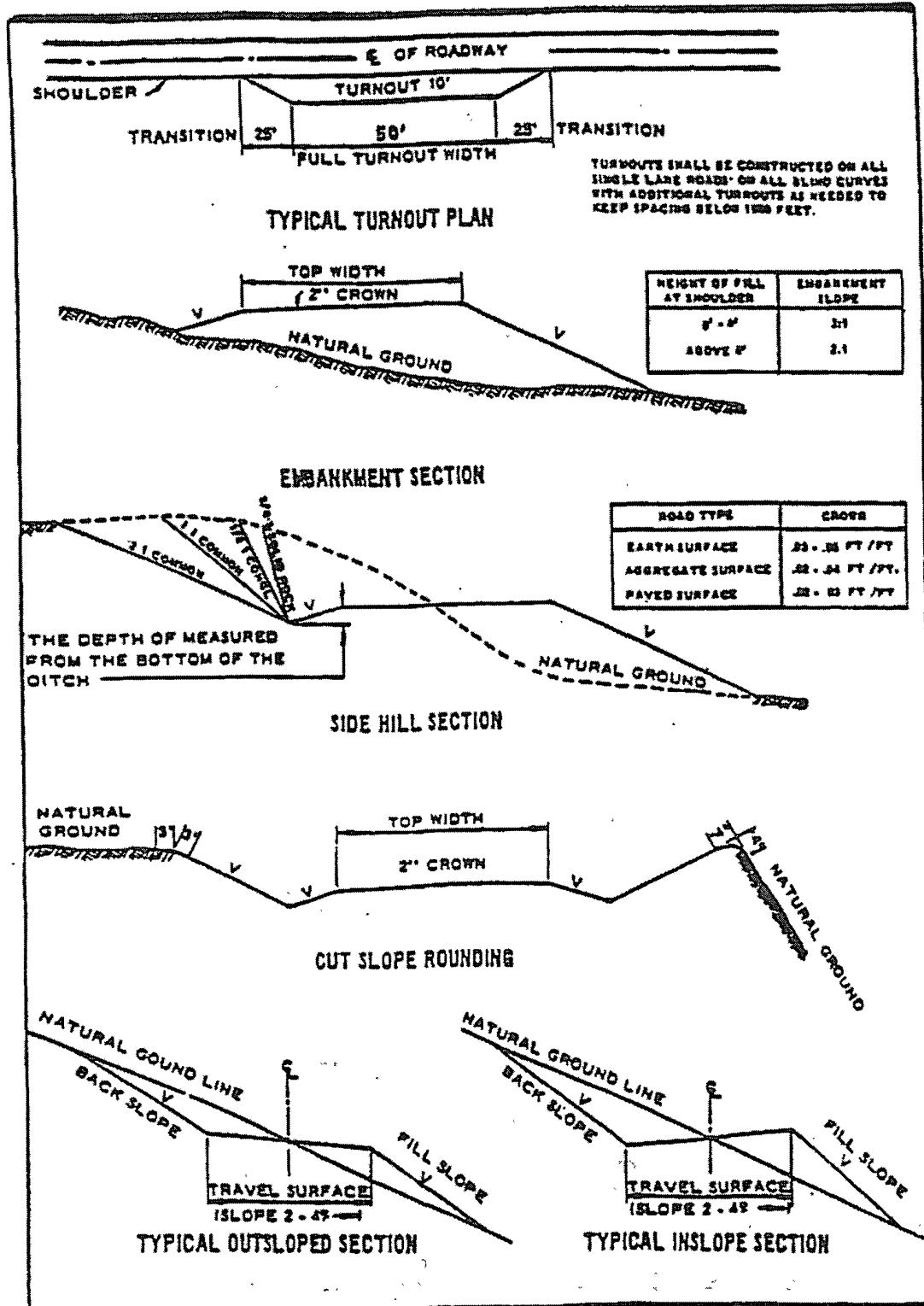
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

### **Public Access**

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



## **VII. DRILLING**

### **A. DRILLING OPERATIONS REQUIREMENTS**

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **Eddy County**

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

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts 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.
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 are located, this does not include the dog house or stairway area.

### **B. CASING**

**Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.**

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

**Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string.**

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

**Possible lost circulation in the Grayburg and San Andres formations.  
Possible brine/water flows in the Salado and Artesia Groups.  
Possible high pressure gas bursts in the Wolfcamp, highly over pressured in the  
Atoka Clastics and Morrow.**

1. The 13-3/8 inch surface casing shall be set at **approximately 375 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **BLM geologist information indicates that 400' could be in the salt.**
  - 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 a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater.
  - 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 is:  
☒ Cement to surface. If cement does not circulate see B.1.a-d above. **Casing to be set at approximately 3050' in the San Andres Dolomite.**

**Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i.  
If formation fails test, an additional casing string will be required.**

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
  - a. First stage to DV tool, cement shall:  
☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with second stage cement job.
  - b. Second stage above DV tool, cement shall:  
☒ 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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.
3. 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.
4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. The tests shall be done by an independent service company.
  - b. The results of the test shall be reported to the appropriate BLM office.
  - c. 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.
  - d. 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.
  - e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation **if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days**. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.
  - f. A variance to test the surface casing and BOP/BOPE (**entire system**) to the reduced pressure of **1000** psi with the rig pumps is approved.



**D. DRILLING MUD**

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

**E. DRILL STEM TEST**

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

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## **VIII. 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.

#### **Containment Structures**

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

#### **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, Munsell Soil Color Chart # 5Y 4/2

## **IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE**

### **A. INTERIM RECLAMATION**

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting 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.

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions 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 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.

### **B. RESERVE PIT CLOSURE**

The reserve pit, when dried and closed, shall be recontoured, all trash removed, and reseeded as follows:

## Seed Mixture for LPC Sand/Shinnery 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>
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

\*\*Four-winged Saltbush 5lbs/A

\* This can be used around well pads and other areas where caliche cannot be removed.

\*Pounds of pure live seed:

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

(Insert Seed Mixture Here)

## **X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS**

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.