to the state of

WF

FEB 27 2009

Form 3160-3					FORM APP	ROVED
(August 2007)					OMB NO. 10	
	UNITED STATI			<u> </u>	Expires. July	31, 2010
	RTMENT OF THE			1	5. Lease Serial No)
BUREA	NM-102					
APPLICATION F	OR PERMIT TO I	DRILL OR F	REENTER	1	5. If Indian, Allottee or Tri	
					N/A	
1a. Type of Work: x DRILL		REENTER			7. If Unit or CA Agreemen N/A	
15 Town of Wall	Gas Well Other			. 1	B. Lease Name and Well N	
1b. Type of Well: X Oil Well 2. Name of Operator	Gas Well Other	Single	Zone Multiple		Milton BMF Fede	eral Com. #1H 3760
2. Name of Operator			,			
Yate	s Petroleum Corporatio	on 025575 /	/		30-015-	
3a. Address		3b. Phone No.	(include area code)]1	0. Field and Pool, or Explo	oratory
105 South Fourth Street, Arte	sia. NM 88210		505-748-1471		Wildcat Wo	alfeama
4. Location of well (Report location cle		with any State re		i i	1. Sec, T, R., M., or Blk	
At surface	,				, . , , ,	,
	4590' FNL & 100' FE	L, Sec.4-16S-29	E, Lot 16	İ	Section 4-T1	6S-R29E
At proposed prod. zone	4240' FNL & 330	OUTOWAT Coo. 4	160 200 Lat 12	{		
14. Name of Operator -	4240 FNL & 330	0 FWL, Sec. 4-	103-29E,E01 13		2 County or Parish	13 State
	Roswell Cont	rolled We	tor Doois	1	2 County of Larish	15 State
(NOSWEII COIII				Eddy	NM
15. Distance from proposed*		16. No	of acres in lease	17 Spac	ing Unit dedicated to this w	vell
location to nearest		Į	-			
property or lease line, ft (Also to nearest drlg. unit line, if any	/) 100'		324.03	1	Lots 13 - Lot 16, Sec.4-	T168-D20F
18. Distance from proposed location*	, 100	19. Pr	oposed Depth	20. BLM	/ BIA Bond No on file	1103-1027E
to nearest well, drilling, completed,			- F F			
applied for, on this lease, ft	None	VI	D-7346' MD-11785'		NATIONWIDE BOND #	¥NMB000434
21. Elevations (Show whether DF, KDB	, RT, GL, etc)	22. A ₁	oroximate date work w	vill ⁱ start*	23 Estimated duration	n
3716' GL		ĺ	ASAP		45.	days
3,70 33		24 At	tachments		43	dujs
The following, completed in accordance	with the requirements of			Il ha attacha	d to this form	
The following, completed in accordance	with the requirements of	Olishore Oli ani	u das Oldei No. 1 sila	ni de anache	1 to this 101111	
1. Well plat certified by a registered su	лгеуог.		4. Bond to cover th	ne operations	unless covered by existing	s bond on file(see
2. A Drilling Plan.			item 20 above)	1		
3. A Surface Use Plan (if the location	•		5. Operator certific			
SUPO must be filed with the approp	riate Forest Service Offic	ce).	1	specific info	mation and/ or plans as ma	y be required by the
			BLM	1		
25. Signature		Name (Printed	l/ Typed)		Date	/4/07
	ron_			· Cy Cov	an /	/11/08
Title				,	' /	7
Regulatory	•				_	•
Approved By (Signature)		Name (Printed	'ISP'Sames S	tovall	Date /	1
Janel			757 0411100 0	(O ₁ V GIII	1//	15/2009
Title ELELD MANAGE	ER	Office CA	RLSBAD F	TELD	OFFICE	
Application approval does not warrant or	certify that the applican	t holds legal or e	equitable title to those	rights in the	subject lease which would	entitle the applicant to cc
operations thereon	contray that the approach		4			
Conditions of approval, if any, are attach	ied.			Ar	PROVAL FOR T	WO YEARS
Title 18 U.S.C Section 1001 and Title 43	USC Section 1212, m	ake it a crime fo	r any person knowingl	ly and wilful	ly to make to any departmen	nt or agency of the United
States any false, fictitious or fraudulent s						
* (Instructions on page 2)	2. Hodox (?				APPROV	AL SUBJECT TO
				^	- CENIERA	A REQUIREMENTS
CEE ATTACHEDED A	not to	1. C	2002 W	. o V	SANDENER	JE HEGOMEN
SEE HITAKETELLOWN	rioce u	rw K	work W		C/V- KAND-SR	ECIAL STIPULATIO
CONDITIÓNS OF APPR	OVAI - 1	1-1			ATTACH	IFN
OOHDITIONS OF WILLY	UVAL /	28/C	リブ ノムノ	9nK	UAU TITOII	
		, —		,	•	

DISTRICT I 1625 N. French Dr., Hobbs, NM 88240 DISTRICT II 1301 W. Grand Avenue, Artesia, NM 88210

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

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

DISTRICT IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, New Mexico 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

30-015-3	ASS Pool Code	Pool Wildcat Wolfe	Name Camp
Property Code 37 605	•	perty Name " FEDERAL COM	Well Number 1 H
0GRID No. 025575	•	rator Name ROLEUM CORP.	Elevation 3716'

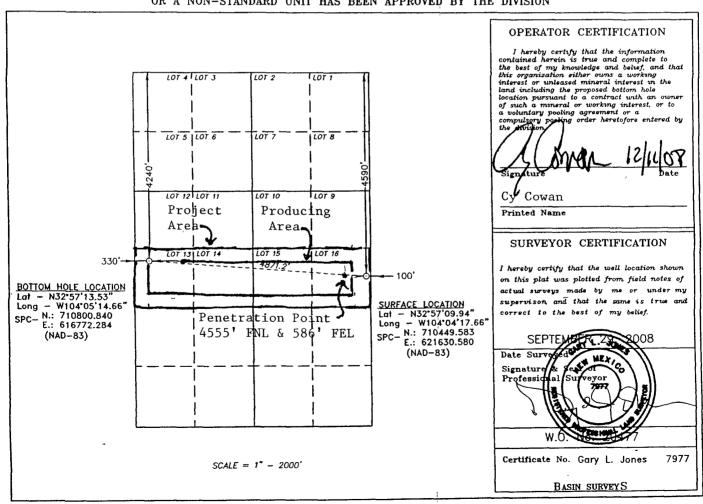
Surface Location

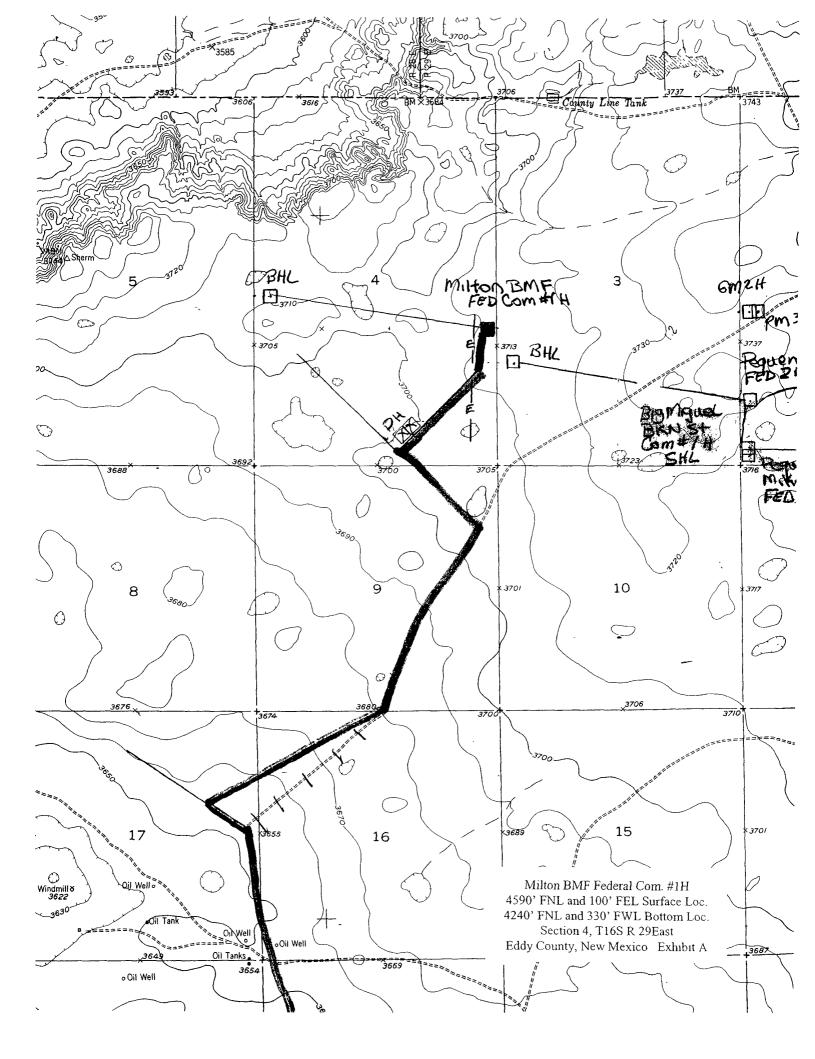
1	UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	LOT 16	4	16 S	29 E	,	4590	NORTH	100	EAST	EDDY

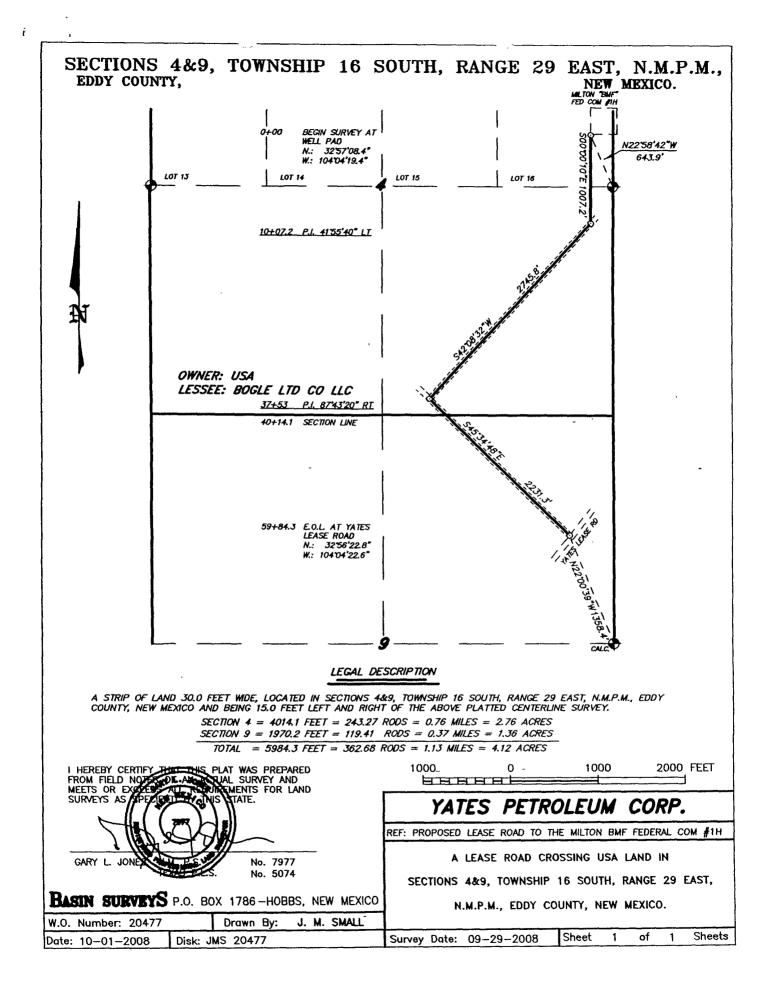
Bottom Hole Location If Different From Surface

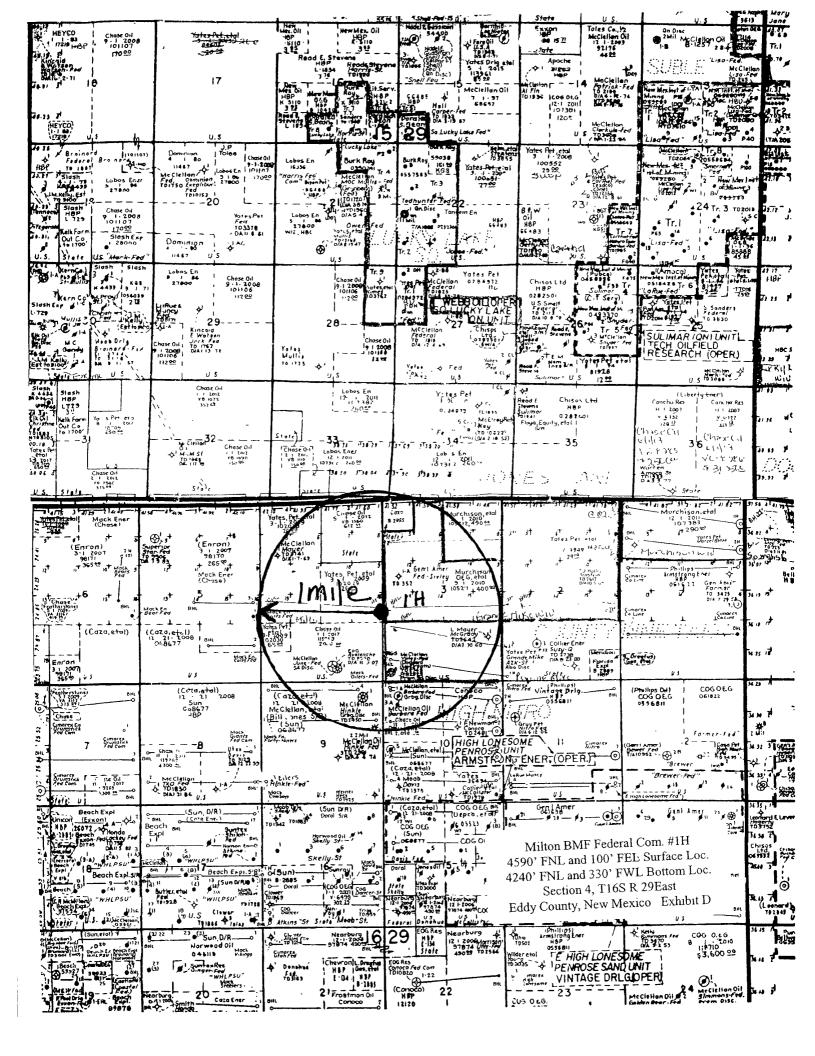
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 13	4	16 S	29 E		4240	NORTH	330	WEST	EDDY
Dedicated Acre	s Joint o	r Infill Co	nsolidation	Code Or	der No.				
160									

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









YATES PETROLEUM CORPORATION Milton BMF Federal Com. #1H

4590' FNL and 100' FEL, Section 4-16S-29E (Surface Hole Location) 4240' FNL and 330' FWL, Section 4-16S-29E (Bottom Hole Location) Eddy County, New Mexico

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

Yates	862'	Glorieta	3875'
Seven Rivers	1080'	Tubb	5075'
Queen	1615' Oil/Gas	ABO	5860' Gas
Grayburg	2035' Oil	Wolfcamp	7186' Oil
San Andres	2370' Oil	TVD	7346'
		TMD	11785'

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

Water:

110'

Oil or Gas: Wolfcamp Oil

Pressure Control Equipment: BOPE will be installed on the 8 5/8" casing and rated for 3. 3000 psi 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:

- 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.
- THE PROPOSED CASING AND CEMENTING PROGRAM: 4.
 - Casing Program: (All New) Α.

<u>Hole Size</u>	Casing Size	Wt./Ft	<u>Grade</u>	<u>Thread</u>	<u>Interval</u> /	<u>Length</u>
14 3/4"	11 3/4"	42#	H-40	ST&C	0-400	400
7(11"	8 5/8"	32#	J-55	ST&C	0-100'	100'
11"-	8 5/8"	24#	_ J-55	ST&C	100-2200'	_ 2100'
11"	8 5/8"	32#	J-55	ST&C	2200-2450'	250'
7 7/8"	5 1/2"	17#	L-80	LT&C	0-7600'	7600'
7 7/8"	5 1/2"	17#	HCP-110	LT&C	7600-11785' MD	4185'

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

CEMENTING PROGRAM: B.

Surface Casing: 275 sx "C" w/CaCl2 (WT 14.80 YLD 1.34). TOC at surface.

Intermediate Casing: 500 sx C Lite (Wt. 12.50 YLD 2.04). Tail in with 200 sx C w/CaCl2 (Wt 14.80 YLD 1.33). TOC at surface.

Milton BMF Federal Com. #1H Page Two

Production Casing: TOC 1950', Lead w/ 600 sx 50:50:10C (WT 11.60 YLD 2.43). Tail in with 1350 Sx 50:50:4C (WT 13.50 YLD 1.46)

5. Mud Program and Auxiliary Equipment:

Interval 🗸	CoType	Weight	Viscosity	Fluid Loss
Spud to 400'	Fresh Water Gel	8.60-9.00	32-34	N/C
400'-2450'	Brine Water	10.00-10.20	28-28	N/C
2450'-5800'	Cut Brine	8.70-9.20	28-28	N/C
5800'-7346'	Cut Brine	8.70-9.20	28-28	10-15
6649'-11785'	Cut Brine (Lateral Section)	8.70-9.20	28-28	10-12

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; CNL/LDT/NGT TD to intermediate casing, DLL-MSFL TD to surface casing, BHC-Sonic TD to surface casing, CNL/GR TD to surface & Horizontal MWD / GR.

Coring: None anticipated. DST's: None anticipated.

MUDLOGGING: Yes H2S: None anticipated.

7. ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURE AND POTENTAL HAZARDS:

Anticipated BHP:

From:		TO	400' TVD	Anticipated Max. BHP: 190	PSI
From:	400'	TO	2450' TVD	Anticipated Max. BHP: 1300	PSI
From:	2450'	to	7346' TVD	Anticipated Max. BHP. 3515	PSI

Pilot hole will be drilled to 7346'. Well will then be plugged back and kicked off at approx. 6649' at 12 degrees per 100' to 11785' MD with a TVD of 7039' at TD. The penetration point of producing formation will be encountered at 4555' FNL & 586' FEL, 4-16S-29E. Deepest TVD of the well will be in the pilot hole @ 7346'. The deepest TVD in the lateral will be 7126.46'.

Abnormal Pressures Anticipated: None

Lost Circulation Zones Anticipated: None

H2S Zones Anticipated: None

Maximum Bottom Hole Temperature: 120° F

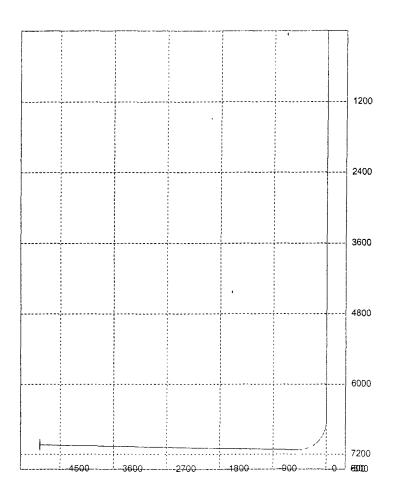
8. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 45 days to drill the well with completion taking another 30 days.

(V) (6)	(nellariton)	- Avaliable -	TV(b)	NEWS THE	BH/W	DESERTE	EURO Hace	THE REMIES/GNI	
0	0	0	0	0	0	0			
862	0	0	862	0	0	0			YATES
1,080	0	0	1,080	0	0	0			SEVEN RIVERS
1,615	0	0	1,615	0	0	0			QUEEN
2,035	0	0	2,035	0	0	0			GRAYBURG
2,380	0	0	2,380	0	0	0			SAN ANDRES
3,885	0	0	3,885	0	0	0			GLORIETA
5,085	0	0	5,085	0	0	0			TUBB
5,870	0	0	5,870	0	0	0			ABO
6649	, (°C 0 °C ′	3.0.3	6649	0	, 0	12	- 274	GN.	KOP
6650	0.12	274.13	6650	0	0	12	0	HS	
6675	3.12	274.13	6674.99	0.05	-0.71	12	0	HS	
6700	6.12	274.13	6699.9	0.2	-2 71	12	0	HS	
6725	9.12	274.13	6724.68	0 43	-6.02	12	0	HS	
6750	12.12	274.13	6749.25	0.77	-10 61	12	0	HS	
6775	15.12	274.13	6773.54	1.19	-16.49	12	360	HS	
6800	18.12	274.13	6797.5	1.7	-23 62	12	0	HS	
6825	21.12	274.13	6821.04	2.31	-31 99	12	360	HS	
6850	24.12	274.13	6844.12	3	-41.58	12	360	HS	
6875	27.12	274.13	6866.66	3.78	-52.36	12	0	HS	
6900	30.12	274.13	6888.6	4 64	-64.3	12	360	HS	
6925	33.12	274.13	6909.88	5 58	-77.37	12	0	HS	
6950	36.12	274.13	6930,46	6.61	-91.54	12	360	HS	
6975	39.12	274.13	6950.26	7.7	-106 76	12	360	HS	
7000	42 12	274.13	6969.23	8 88	-122.99	12	0	HS	
7025	45 12	274 13	6987 33	10 12	-140 19	12	0	HS	
7050	48.12	274.13	7004.49	11 42	-158 31	12	0	HS	
7075 ~	51.12	274.13	7020.69	12.8	-177.3	12	360 -	HS	
7100	54.12	274.13	7035.86	14 22	-197 12	12	0	HS	
7125	57.12	274.13	7049,98	15 71	-217 69	12	0	HS	
7150	60 12	274.13	7063	17 25	-238.98	12	360	HS	
7175	63.12	274 13	7974.88	18 83	-260 91	12	0	HS	
7200	66 12	274 13	7085.59	20.45	-283 44	12	360	HS	
7225	69.12	274.13	7095.11	22.12	-306 49	12	0	HS	
7250	72.12	274.13	7103.4	23 82	-330.01	12	0	HS	
7275	75.12	274.13	7110.45	25.54	-353 93	12	360	HS	
7300	78.12	274 13	7116.24	27 29	-378 19	12	360	HS	
7325	81 12	274.13	7120 74	29 06	-402 71	12	0	HS	
7350	84.12	274.13	7123.95	30 85	-427.44	12	0	HS	
7375	87.12	274.13	7125 86	32 64	-452 3	12	360	HS	
7400	90.12	274.13	7126 46	34 44	-477 22	12	0	HS	
7408.53	91.14	274.13	7126.37	35.05	-485.73	12	0	- HS	Producing Zone
11785.02	91.14	274.13	7039	350	-4850	0	``:	1 1 3 5 T	Lateral TD

Pilot hole will be drilled to 7346'. Well will then be plugged back and kicked off at approx. 6649' at 12 degrees per 100' to 11,785' MD with a TVD of 7,039'. Penetration point of producing formation encountered at 4555' FNL and 586' FEL, 4-16S-29E. Deepest TVD of the well will be in the pilot hole @ 7,346'. Deepest TVD in the lateral will be 7126.46'.

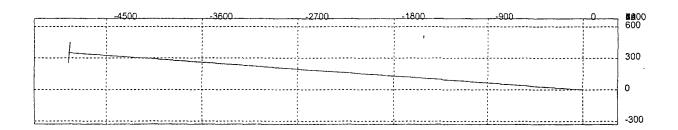
Company: Yates Petroleum Corporation Vell: Milton BMF Federal Com. #1H



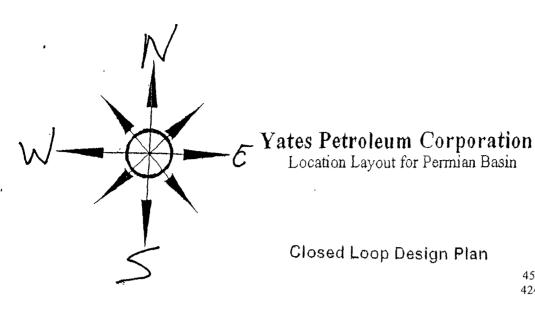
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3D³ Directional Drilling Planner - 3D View

Company: Yates Petroleum Corporation Nell: Milton BMF Federal Com. #1H

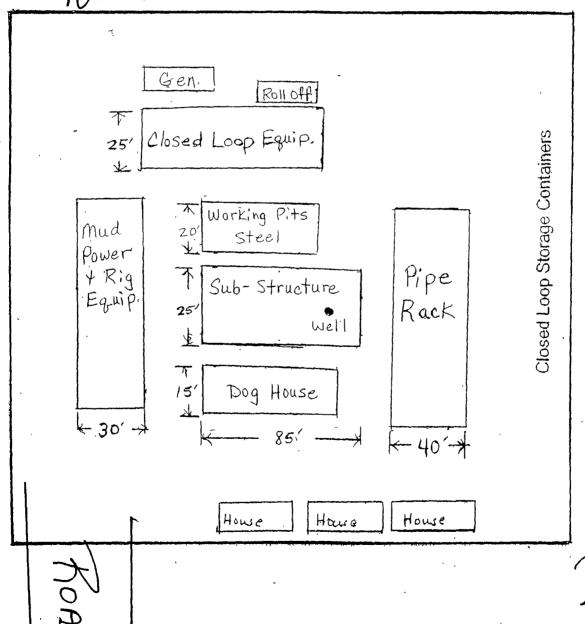


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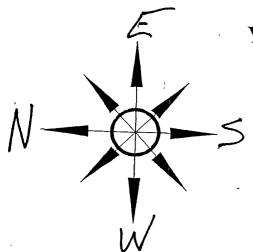


Milton BMF Federal Com. #1H
4590' FNL and 100' FEL Surface Loc.
4240' FNL and 330' FWL Bottom Loc.
Section 4, T16S R 29East
Eddy County, New Mexico Exhibit B-1

1/otto Scale



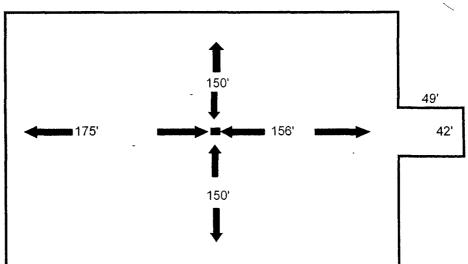
Realselt To 1/8/09



Yates Petroleum Corporation Location Layout for Permian Basin

Horizontal Drill Site

Milton BMF Federal Com. #1H 4590' FNL and 100' FEL Surface Loc. 4240' FNL and 330' FWL Bottom Loc. Section 4, T16S R 29East Eddy County, New Mexico Exhibit B



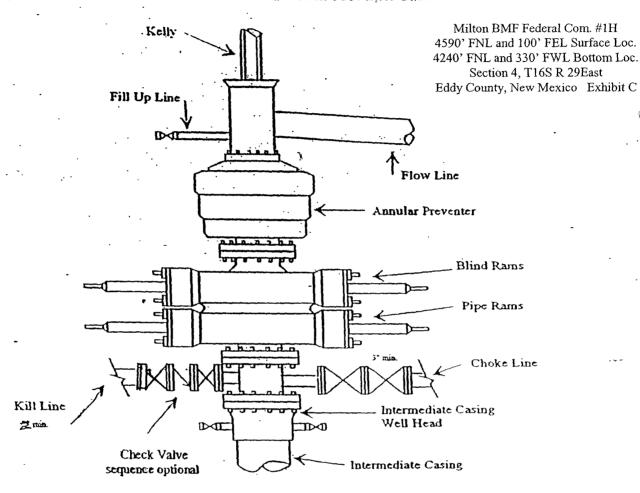
Revised to 18/09



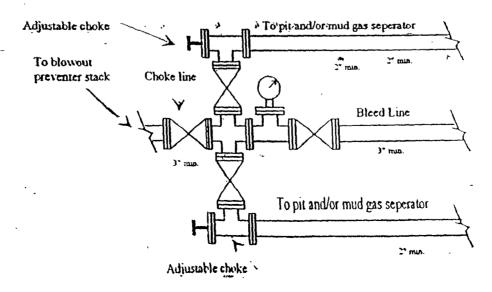


Yates Petroleum Corporation

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



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



MULTI-POINT SURFACE USE AND OPERATIONS PLAN Yates Petroleum Corporation Milton BMF Federal Com. #1H

4590' FNL and 100' FWL, 4-16S-29E (Surface Hole Location) 4240' FNL and 330' FWL, 4-16S-29E (Bottom Hole Location) 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 34 miles east of Artesia, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

Go east pf Artesia, NM on Highway 82 for approximately 23 miles to Barnaval Draw road, CR-214 (Across from the Arrow Gas Storage Site). Turn left on Barnaval Draw and go north for approximately 6.3 miles. At this point the road will fork. Take right fork and go approximately 0.6 of a mile. Turn left and go approximately 0.2 of a mile. Turn right here and go approximately 0.2 of a mile on the lease road to a reclaimed road and a pipeline on the left. Turn left here and follow the pipeline and reclaimed road for approximately 0.5 of a mile. Turn right here on reclaimed road passing two dry holes on the left. Continue on the trail road for approximately 0.5 of a mile to just past a powerline. The new road will start here going to the left for approximately 0.2 of a mile to the southwest corner of the proposed well location.

2. PLANNED ACCESS ROAD:

- A. The proposed new road will go in a northeasterly direction for about 1.3 mile to the southwest corner of the drilling pad.
- B. The new road will be 14' 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. Four traffic turnouts may be built as needed.
- D. The route of the road is visible.
- E. 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. 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 no 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. 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.

Milton BMF Federal Com. #1H Page Two

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. 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.
- 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, and 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 well site 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. All pits will be filled level within 90 days after abandonment.

11. SURFACE OWNERSHIP: Federal Surface leased for grazing.

Milton BMF Federal Com. #1H Page Three

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.

CERTIFICATION YATES PETROLEUM CORPORATION Milton BMF Federal Com. #1H

I hereby certify that I or the company I represent, have inspected the drill site and access route proposed herein; that the company I represent is familiar with the conditions which currently exist; that 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
Printed Name Cy Cowan
Signature CK Chron
Position Title Regulatory Agent
Address 105 South Fourth Street, Artesia, NM 88210
Telephone <u>575-748-4372</u>
E-mail (optional) cy@yatespetroleum.com
Field Representative (if not above signatory) Tim Bussell
Address (if different from above) Same
Telephone (if different from above) 575-748-4221
F-mail (optional)

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME: YATES PETROLEUM CORPORATION
LEASE NO.: NM102028
WELL NAME & NO.: MILTON BMF Federal Com # 1H
SURFACE HOLE FOOTAGE: 4590' FNL & 100' FEL
BOTTOM HOLE FOOTAGE 4240' FNL & 330' FWL
LOCATION: Section 4, T. 16 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
Closed loop required
Communitization Agreement
◯ Construction
V-Door change and Pad Restrictions
Notification
Topsoil
Reserve Pit
Federal Mineral Material Pits
Well Pads
Roads
Road Section Diagram
☑ Drilling
BOP/BOPE
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. SPECIAL REQUIREMENT(S)

DUE TO THE CLOSE PROXIMÍTY OF TWO PLAYAS, TO THE SOUTH AND WEST, THERE WILL BE NO RESERVE PITS. A CLOSED LOOP SYSTEM WITH STEEL TANKS WILL BE REQUIRED.

CONSTRUCT A BERM OFF OF THE SOUTH AND WEST EDGE OF THE WELL PAD TO PREVENT ANY SPILLAGE IN THOSE DIRECTIONS.

Communitization Agreement

A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

VI. CONSTRUCTION

V-DOOR SOUTH. RESTRICT PAD SIZE TO 150 FT. TO THE SOUTH AND WEST.

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 4 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

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

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.

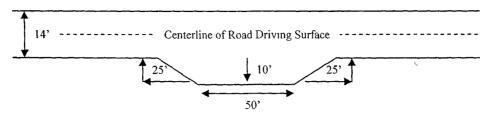
Ditching

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

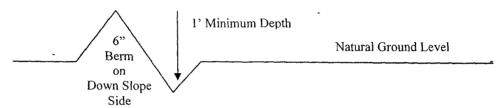


Drainage

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 foot road with 4% road slope:
$$\frac{400'}{4\%} + 100' = 200'$$
 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

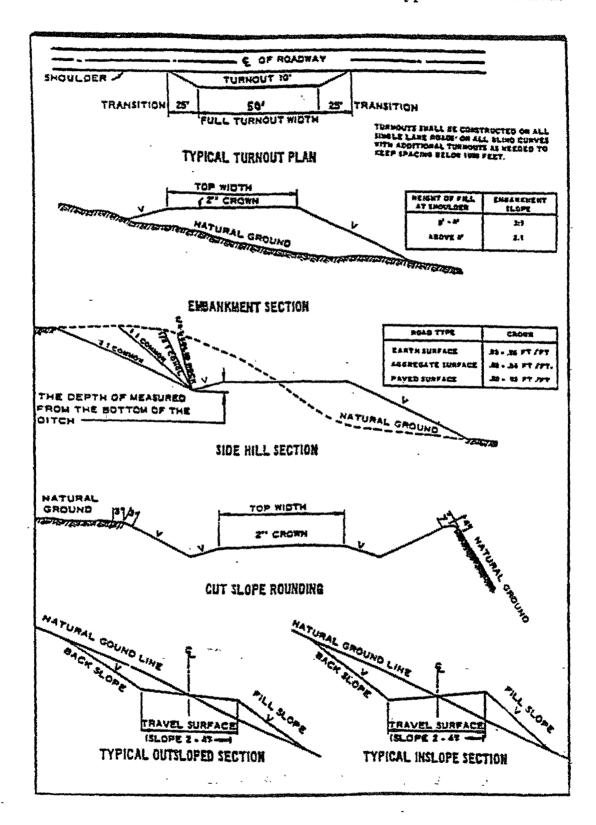
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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.

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 for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

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 in the Wolfcamp.

- 1. The 11-3/4 inch surface casing shall be set at approximately 330 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - 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 is to include the lead cement slurry. Not applicable if proposed cementing program is followed.
 - 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 8-5/8 inch intermediate casing is:
 - ☐ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Pilot hole plug to be set from bottom of pilot hole.

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

- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - 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 8-5/8" intermediate casing shoe shall be 3000 (3M) 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.

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.

WWI 011009

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.

The 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.

Seed Mixture 1, for Loamy 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 <u>no</u> 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 regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/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:

Species	<u>lb/acre</u>
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0

^{*}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.