OCD-ARTESIA MAY 18 2009

UNITED STATES

Form 3160-3 (August 2007)

R-111-POTASH

DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT JUN - 2 2009 APPLICATION FOR PERMIT TO DRILL OR REENTER

OMB NO. 1004-0137 31, 2010

	Expires:	лшу.
T	G 1 NT -	

NM-81953

N/A

FORM APPROVED

6.	If Indian,	Allottee	or Tribe	Name

=		: 				LINIO	RTHOD	OX.	7. If Un	nit or CA Agreement, I	Name and No.	
la.	Type of Work:	x DRILI			REEN	TER UNU	CATION	u \		N/A		
	<i>31</i>	<u></u> -			•	LC		Gar,	8. Leas	se Name and Well No.		
1b.	Type of Well:	X Oil Well	Gas Well	Other		Single Zone	Multiple Z	Zone		Glow Worm ALX F	ederal #10H	<137497
2.	Name of Operator	r /	,		<u> </u>				9. API	Well No.		
		/ _Y	ates Petroleum (Corporatio	n 0255	575				30-015-	.370"	14
3a.	Address					one No. (include	e area code)		10. Field	d and Pool, or Explorat		
	105 South	Fourth Street, A	rtesia. NM 8821	0		505-7	48-1471			Los Medanos; D	lelaware C	31-1110
4.	Location of well				th any S				11. Sec	T., R., M., or Blk. An	d Survey or A	rea 9
	At surface						,,,,,			,,,,		
			200' FNL ' & 6	660' FWL, S	Sec.3-23	SS-31E, Ut D, N	NENE			Section 3-T23S	LR31E	
	At proposed prod.	. zone	330' FSI	& KKO! FV	VI. Sec	3-23S-31E, U	M SWSW					
14.	Distance in miles	and direction fron				3-235-31E, CC	. 141, 577517		12. Cour	nty or Parish	13. State	
		The well	l is about 34 mil	oa nowthoan	d of Lor	ving NM		:		Eddy /	NM	•
15	Distance from pro		I IS about 34 mm	es nortifeas	t OI LO	16. No. of acr	on in lease	17 Sno	ing I Init	dedicated to this well	1 14141	
13.	location to nearest	•				10. 110. 01 acr	es in rease	17. Spa	ing Om	dedicated to this wen		
	property or lease l											
	(Also to nearest de	-	v)	330	,	17	16.94	1	W2	2W2 of Section 3-T23	S-R31E	
18.	Distance from pro		<u> </u>			19. Proposed		20. BL		Sond No. on file	~	
	to nearest well, dr	_					•		•			
	applied for, on thi	is lease, ft.		None		VD-8100'	MD-12645'	ļ	NATIO	ONWIDE BOND #N	MB000434	
21.	Elevations (Show	whether DF, KDI	B, RT, GL, etc.)			22. Aproxima	te date work will	start*	23.	Estimated duration		
		3415' GL				1	ASAP		Ì	45 day	ys	
						24. Attachmen	nts					
The	e following, complet	ted in accordance	with the requirer	nents of Ons	shore Oi	l and Gas Order	No. 1 shall be at	ttached to	his form:			
3.			is on National Fo	•		the 5. O 6. St B	em 20 above). perator certificati uch other site spec LM	ion.		overed by existing bond d/ or plans as may be r	·	
	Signature	5 (A	Va	·	Name (Printed/Typed,)	Cy Co	/an	Date ///	80,0	
Title	e Regulatory A	Agent								Γ	/	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and wilfully to make to any department or agency of the United

NM STATE OFFICE

Name (Printed/ Typed)

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Date

States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

* (Instructions on page 2)

Approved By (Signature)

Title

SEE ATTACHED FOR CONDITIONS OF APPROVAL **APPROVAL SUBJECT TO GENERAL REQUIREMENTS** AND SPECIAL STIPULATIONS **ATTACHED**

MAY 1 3 2009

DISTRICT I DISTRICT II 1301 W. Grand Avenue, Artesia, NM 68210

1220 S. St. Francis Dr., Santa Fe, NM 87605

DISTRICT III

DISTRICT IV

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102 Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies Fee Lease - 3 Copies

OIL CONSERVATION DIVISION 1000 Rio Brazos Rd., Aztec, NM 87410

1220 South St. Francis Dr. Santa Fe. New Mexico 87505

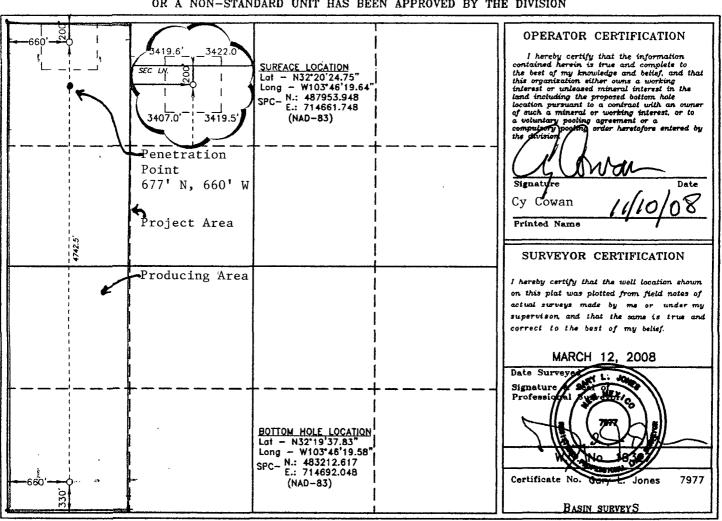
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API	Number	7074	ا م	Pool Code		Livingth Vide Pool Name Los Medanos; Delaware Sout		south		
Property 1371	Code				Property Nan					
OGRID No. Operator Name O25575 YATES PETROLEUM CORP.				Elevation 3415'						
					Surface Loc	ation				
UL or lot No.	Section	Township	Range	Lot idn	Feet from the	North/South line	Feet from the	East/West line	County	
D	3	23 S	31 E		200	NORTH	660	WEST	EDDY	
			Bottom	Hole Loc	ation If Diffe	erent From Sur	face			

UL or lot No. Lot ldn Feet from the Section Township Range North/South line Feet from the East/West line County 3 23 S 31 E 330 SOUTH 660 WEST **EDDY** Joint or Infill Consolidation Code Dedicated Acres Order No. 160 W2W2

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 Glow Worm ALX Federal #10H

200' FNL and 660' FWL, SHL 330' FSL and 660' FWL, BHL Section3-T23S-R31E Eddy County, New Mexico

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

580'
401Qʻ
4315'
5316' Oil
6910' Oil
7919' Oil
8373' Oil
12645'

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

Water: 1

170

Oil or Gas: 5316', 6910', 7919' & 8373'

3. Pressure Control Equipment: BOPE will be installed on the 13 3/8" and then the 9 5/8" casing and rated for 3000 BOP systems will be consistent with API RP 53. Yates request that a variance be given to test the BOP on the surface casing to 1000 psi using the rig pumps. 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)(DV Tool about 6300')

Hole Size	Casing Size	Wt./Ft	- Grade C	oupling	<u>Interval</u>	Length
	13 3/8"	48#	H-40	ST&C	0-550"	550'
√ 12 1/4 "	9 5/8"	40#	J-55	ST&C	0-100'	100'
. 12 1/4"	9 5/8"	36#	J-55	ST&C	100-3300'	3200'
12 1/4"	9 5/8"	40#	J-55	ST&C	3300-4050	750'
8 3/4"	5 ½"	17#	HCP-110	LT&C	0-12645'	12645'

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

BUE COA

Glow Worm ALX Federal #10H

Page 2

B. CEMENTING PROGRAM:

Surface casing: Lead with 250 sx C Lite(Wt 12.50 Yld 1.96) Tail in w/200 sx Class "C" + 2% CaCl2 (Wt 14.80 YlD 1.34). Cement circulated to surface.

Intermediate Casing: Lead in with 1100 sx C Lite (Wt 12.60 Yld 2.00). Tail in w/250 sx Class C (WT 14.80 Yld 1.34). Cement circulated to surface.

Production Casing: Stage I TOC 6300'; 2250 sx Pecos VILt (Wt 130 Yld 1.41).

Stage II Lead with 550 sx LiteCrete (Wt 9.90 Yld 2.78) Tail in with 100 sx PecosVILt (Wt 13.00 Yld 1.41) Cement circulated to surface.

secoA

**Well will be drilled vertically to about 7623'. At 7623' well will be kicked off and directionally drilled at 12 degrees per 100' with a 8 3/4" hole to 12,645' MD and 8100' TVD where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 677' FNL & 660' FWL, 3-23S-31E.

5. MUD PROGRAM AND AUXILIARY EQUIPMENT:

Interval Type Weight Viscosity Fluid Loss 0-550 Fresh Water 8.60-9.20 N/C 32-34 550'-4050' Brine Water 10.00-10.20 N/C 28 4050'-12645' **Cut Brine** 8.50-8.80 28-29 N/C

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.

EVALUATION PROGRAM:

Samples: Every 10' from surface casing to TD.

Logging: Platform HALS: CMR.

Coring: Sidewall cores as warranted.

DST's: As warranted.

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

Anticipated BHP:

From: 0 TO: 550' Anticipated Max. BHP: 265 PSI From: 550' TO: 4050' Anticipated Max. BHP: 2150 PSI From: 4050' TO: TD Anticipated Max. BHP: 3700 PSI

No abnormal pressures or temperatures are anticipated.

Lost Circulation Zones Anticipated: None

H2S Zones Anticipated: H2S water flow possible below 2800'.

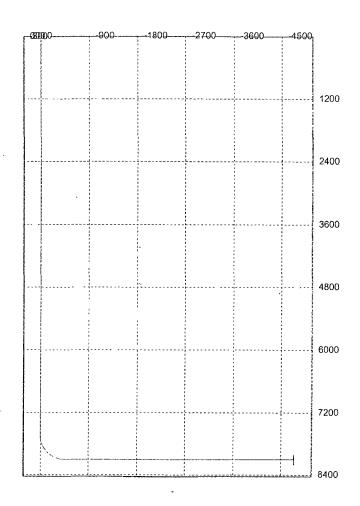
8. ANTICIPATED STARTING DATE:

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

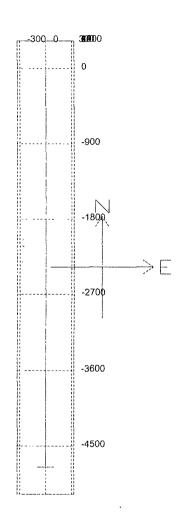
M.D.	Inclination	Azimuth #	TVD	N+/STOW	AND EXAMPLE	DES X	%ToolFace	ATTE RELIHS/GNI	**************************************
0	0	0	0	0	0	0			
580 00	0	0	580.00	0	0	0			RUSTLER
4,010 00	0	0	4,010.00	0	. 0	0			BASE OF SALT
4,315 00	0	0	4,315 00	0	0	0			BELL CANYON
5,316.00	0	0	5,316 00	0	0	0			CHERRY CANYON
6,910 00	0	0	6,910 00	0	0	0			BRUSHY CANYON
7623	0 ` .	/ · · · 0 · · ·	7623	0	0	12	180	GN.	KOP'
7625	0.24	180	7625	0	0	12	0	HS	
7650	3.24	180	7649.99	-0.76	0	12	0	HS	
7675	6 24	180	7674 9	-2.83	0	12	0	HS	
7700	9.24	180	7699 67	-6.2	0	12	0	HS	
7725	12.24	180	7724.23	-10.85	0	12	0	HS	
7750	15 24	180	7748.51	-16 79	0	12	0	HS	
7775	18.24	180	7772.45	-23 99	0	12	0	HS	
7800	21 24	180	7795.97	-32 43	0	12	0	HS	
7825	24 24	180	7819.03	-42 1	0	12	0	HS	
7850	27 24	180	7841.54	-52.95	0	12	0	HS	
7875	30.24	180	7863 46	-64.97	0	12	0	HS	
7900	33.24	180	7884 72	-78 12	0	12	0	HS	
7919	35 52	180	7900.4	-88.85	. 0	12	0	HS	BRUSHY CANYON MARKER
7925	36 24	180	7905 26	-92.37	0	12	0	HS	
7950	39 24	180	7925 03	-107 67	0	12	0	HS	
7975	42.24	180	7943 97	-123 98	0	12	0	HS	
8000	45 24	180	7962.03	-141.26	0	12	0	HS	
8025	48.24	180	7979.16	-159.47	0	12	0	HS	
8050	51 24	180	7995.31	-178.54	0	12	0	HS	
8075	54 24	180	8010 45	-198.44	0	12	0	HS	
8100	57 24	180	8024.52	-219.1	0	12	0	HS	
8125	60 24	180	8037 49	-240.47	0	12	0	HS	
8150	63.24	180	8049 33	-262 48	0	12	0	HS	
8175	66.24	180	8060	-285.09	0	12	0	HS	
8200	69.24	180	8069.46	-308.22	0	12	0	HS	
8225	72 24	180	8077 71	-331.82	0	12	0	HS	
8250	75.24	180	8084.71	-355.82	0	12	0	HS	
8275	78 24	180	8090.44	-380.15	0	12	0	HS	
8300	81.24	180	8094.9	-404 75	0	12	0	HS	
8325	84 24	180	8098.05	-429.55	0	12	0	HS	
8350	87 24	180	8099.91	-454.47	0	12	0	HS	
8373.05	90 01	180	8100 47	-477.52	0	12	0	HS .	BRUSHY SAND
12645.54	90.01	180	8100	-4750	187 .01	.0			LATERAL TD

Well will be drilled vertically to approx. 7623'. At 7623' well will be kicked off and directionally drilled at 12 degrees per 100' with a 8 3/4" hole to 12,645' MD 8,100' TVD where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 677' FNL and 660' FWL, 3-23S-31E. Deepest TVD in the well is 8100.47' in the lateral. NO PILOT HOLE.

Company: Yates Petroleum Corporation Well: Glow Worm ALX Federal #10H

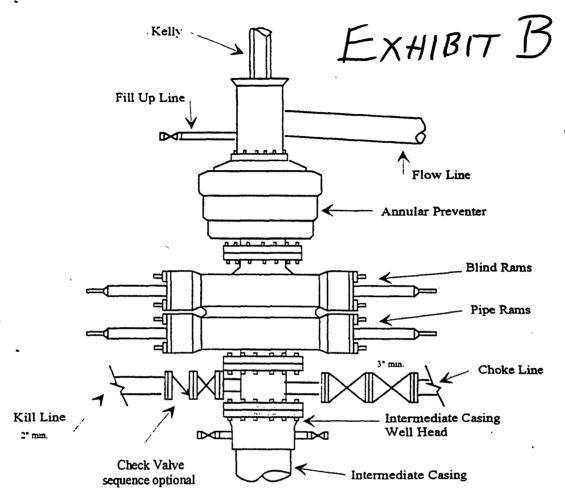


Company: Yates Petroleum Corporation Well: Glow Worm ALX Federal #10H

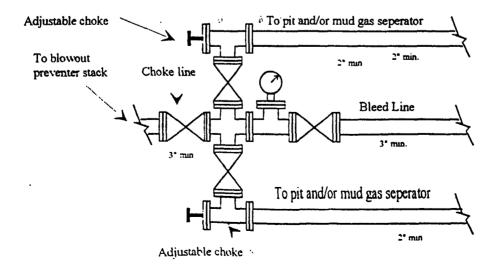


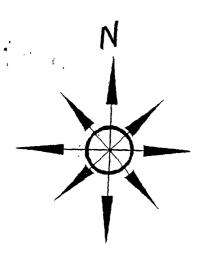
Yates Petroleum Corporation

Typical 3.000 psi Pressure System
Schematic
Annular with Double Ram Preventer Stack



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

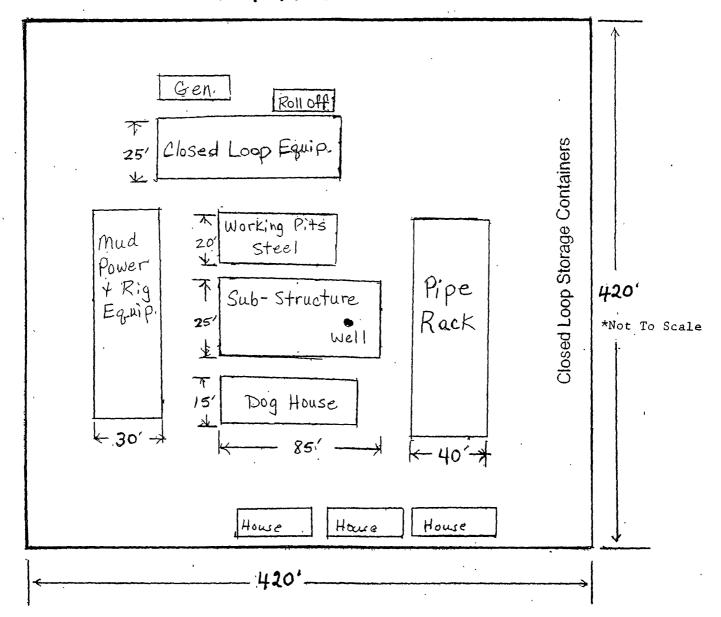




Yates Petroleum Corporation Location Layout for Permian Basin

Closed Loop Design Plan

EXHIBITC



Yates Petroleum Corporation

105 S. Fourth Street Artesia, NM 88210

Hydrogen Sulfide (H₂S) Contingency Plan

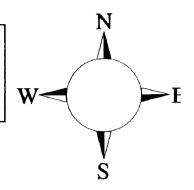
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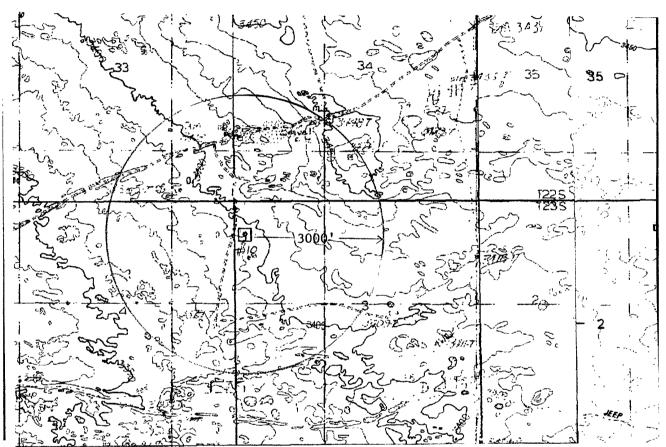
Glow Worm ALX Federal #10H

200' FNL, 660' FWL, Surface Location 330' FSL, 660' FWL, Bottom Hole Section 3, T-23S, R-31E Eddy County NM

Glow Worm ALX Federal #10H Location

This is an open drilling site. H_2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H_2S , including warning signs, wind indicators and H_2S monitor.





Assumed 100 ppm ROE \equiv 3000? 100 ppm H2S concentration shall trigger activation of this plan.

Emergency Procedures

In the case of a release of gas containing H₂S, the first responder(s) must isolate the area and prevent entry by other persons into the 100 ppm ROE. Additionally the first responder(s) must evacuate any public places encompassed by the 100 ppm ROE. First responder(s) must take care not to injure themselves during this operation. Company and/or local officials must be contacted to aid in this operation. Evacuation of the public should be beyond the 100 ppm ROE.

All responders must have training in the detection of H₂S, measures for protection against the gas, equipment used for protection and emergency response. Additionally, responders must be equipped with H₂S monitors and air packs in order to control the release. Use the "buddy system" to ensure no injuries during the response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Characteristics of H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentr- ation
Hydrogen Sulfide	H ₂ S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

YPC personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. YPC Company response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

Yates Petroleum Corporation Phone Numbers

YPC Office	(575) 748-1471
Paul Ragsdale/Operations Manager	
	(575) 748-4210
Wade Bennett/Prod Superintendent	(575) 740-4210
wade bennett/Prod Superintendent	(575) 748-4230
Mike Lankin/Drilling	
Paul Hanes/Prod. Foreman/Roswell	
Tim Bussell/Drilling Superintendent	(575) 748-4221
Artesia Answering Service	(575) 748-4302
(During non-office hours)	
Agency Call List	
Eddy County (505)	
Artesia	
State Police	746-2703
City Police	
Sheriff's Office	
Ambulance	
Fire Department.	
LEPC (Local Emergency Planning Committee)	
NMOCD	
NMOCD	748-1283
Carlsbad	
State Police	885-3137
City Police	
Sheriff's Office	
Ambulance	
Fire Department.	
LEPC (Local Emergency Planning Committee)	
,	
US Bureau of Land Management	887-6544
New Mexico Emergency Response Commission (Santa Fe)	(505)476-9600
24 HR	
New Mexico State Emergency Operations Center	
National Emergency Response Center (Washington, DC)	(800) 424-8802
Other	
Boots & Coots IWC	
Flight For Life 4000 24th St. Lubbook TV	(806) 742 0011
Flight For Life -4000 24th St, Lubbock, TX	•
Aerocare -Rr 3 Box 49f, Lubbock, TX	(800) 141-8923

Med Flight Air Amb 2301 Yale Blvd SE #D3, Albuq, NM(505) 842-4433 S B Air Med Svc 2505 Clark Carr Loop SE, Albuq, NM(505) 842-4949

MARTIN YATES, III

FRANK W. YATES

S.P. YATES



JOHN A. YATES
CHAIRMAN OF THE BOARD
PRESIDENT

DAVID LANNING

105 SOUTH FOURTH STREET

ARTESIA, NEW MEXICO 88210-2118

TELEPHONE (575) 748-1471

As per BLM instructions, Yates Petroleum Corporation is tendering the \$4,000.00 APD Processing Fee for the Glow Worm ALX Federal #10H, APD date submitted: November 10, 2008, Section 3, Township 23 South, Range 31 East, Eddy County, New Mexico.

Please be advised we are tendering this fee under protest as we believe it contradicts language in the Energy Policy Act of 2005 signed by President Bush.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN YATES PETROLEUM CORPORATION

Glow Worm ALX Federal #10H

200' FNL and 660" FWL, SHL 330' FSL and 660' FWL. BHL Section 3-T23S-R31E 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 23 miles east of Carlsbad, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

Go East of Carlsbad on Highway 62-180 to Hwy 31. Turn south on Hwy 31 and go to Hwy 128 (Jal Highway). Turn east and go approx. 16 miles to Red Road (CR-802). Turn left on Red Rd. and go approx. 7 miles to Mills Ranch Road (CR-798). Turn left here and go approx. 2.2 of a mile. Turn left here (there will be a blue marker here with H-175 on it) and go approx. 0.3. This spot will be just past a big WIPP Notice Sign. Just past the sign about 300', turn left on lease road and go east for approx. 0.1 of a mile. The new road will start here and go north for about 110' to the southwest corner of the proposed well location. This location is just on the east side of the #12 pad.

PLANNED ACCESS ROAD:

- A. The proposed new access will go north for approximately 110' to the southwest corner of the drilling pad.
- 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. Some traffic turnouts will be built.
- 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 any 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 necessary.

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:

Dirt contractor will locate nearest pit and obtain any permits and materials needed for construction.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. A closed loop system will be used to drill this well instead of reserve pits.
- B. The closed loop system will be constructed, maintained and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division—the "Pit Rule" 19.15.17 NMAC. Form c-144 attached
- 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 closed loop system, the location of the drilling equipment, rig orientation and access road approach.
 - B. The reserve pits will be constructed, maintained and closed in compliance with the Pit Rule 19.15.17 NMAC.
- 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 after they have evaporated and dried.

SURFACE OWNERSHIP: Federal Surface, Administered by Bureau of Land Management, Carlsbad, New Mexico

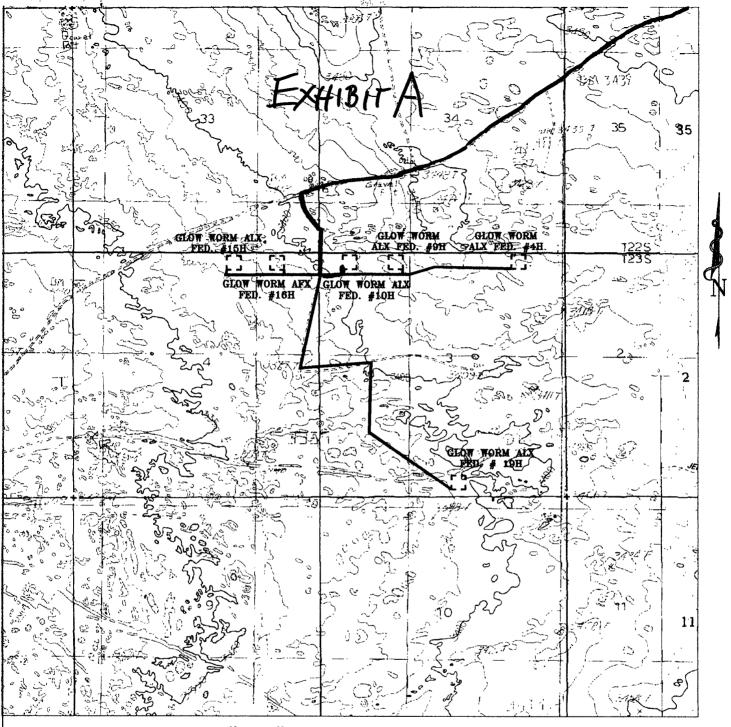
12. OTHER INFORMATION:

- 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 Glow Worm ALX Federal #10ff

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 10 years of 1000 over bex, 2008.
Printed Name Co Cowan
Signature 6
Position Title Regulatory Agent
Address 105 South Fourth Street, Artesia, NM 88210
Telephone <u>575-748-4372</u>
E-mail (optional) cyc@ypcnm.com
Field Representative (if not above signatory) Tim Bussell
Address (if different from above) Same
Telephone (if different from above) <u>575-748-4221</u>
F-mail (optional)



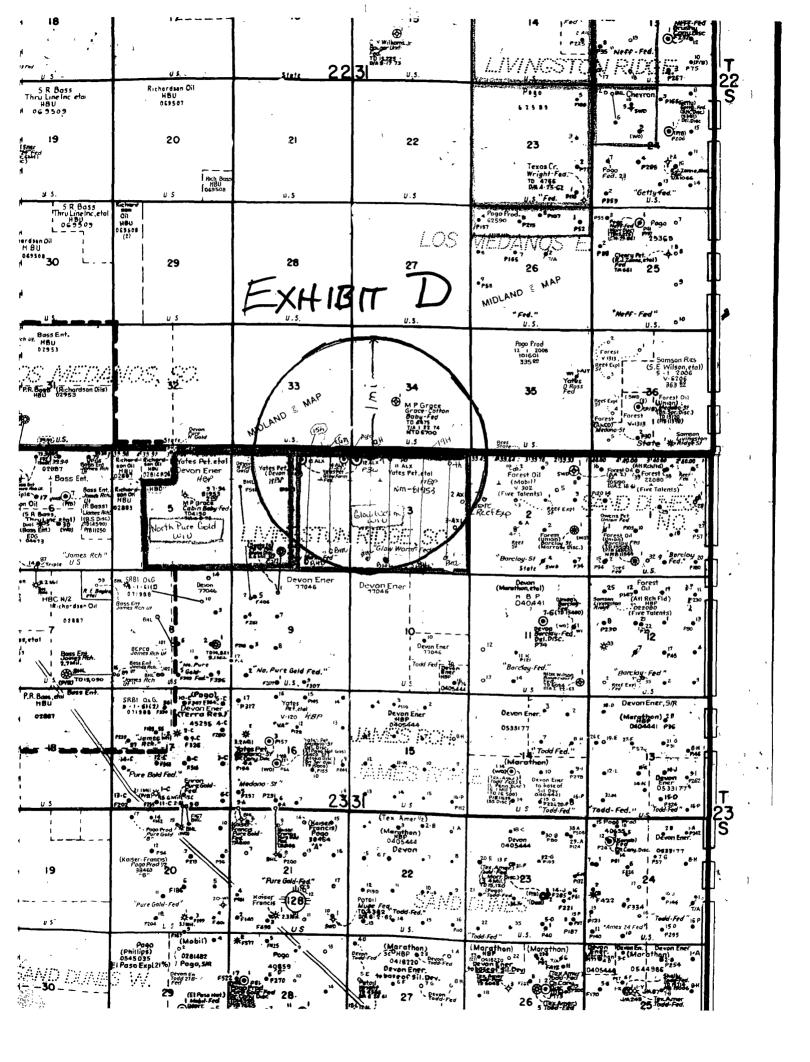
GLOW WORM "ALX" FEDERAL #10H Located at 200' FNL AND 660' FWL Section 3, Township 23 South, Range 31 East, N.M.P.M., Eddy County, New Mexico.



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

AND ASSESSED.	W.O. Number. 193277
PARTICIPATION OF THE PARTY OF T	Survey Date: 03—12—2008
Section Commence	Scale: 1" = 2000'
200	Date: 03-12-2008

YATES PETROLEUM CORP.



PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME: Vates Petroleum Corporation
LEASE NO.: NMNM81953
WELL NAME & NO.: Glow Worm ALX Federal No 10H
SURFACE HOLE FOOTAGE: 200' FNL & 660' FWL
BOTTOM HOLE FOOTAGE 330' FSL & 660' FWL
LOCATION: Section 3, T. 23 S., R 31 E., NMPM
COUNTY: Eddy County, New Mexico

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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.

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Topsoil
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Casing/cement
☐ 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)

LESSER PRAIRIE-CHICKENS

No surface use is allowed during the following time periods; unless otherwise specified, this stipulation does not apply to operation and maintenance of production facilities.

For the purpose of: Protecting Lesser Prairie-Chickens:

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.

Reporting

- 1. Subsequent sundries to be filed with drilling details about spud, casing and completion work.
- 2. Completion report to be sent within 30 days of completion. Completion report to have all items completed.

VI. CONSTRUCTION

RESTRICT PAD SIZE TO THE NORTH TO 180 FT. DUE TO POWER LINE AND WIPP LANDS TO THE NORTH.

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

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.

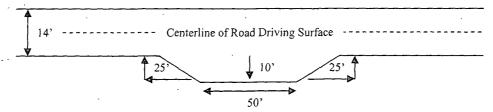
Ditching

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

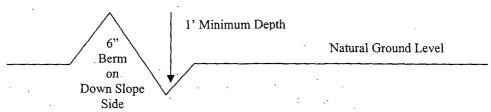


Drainage

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

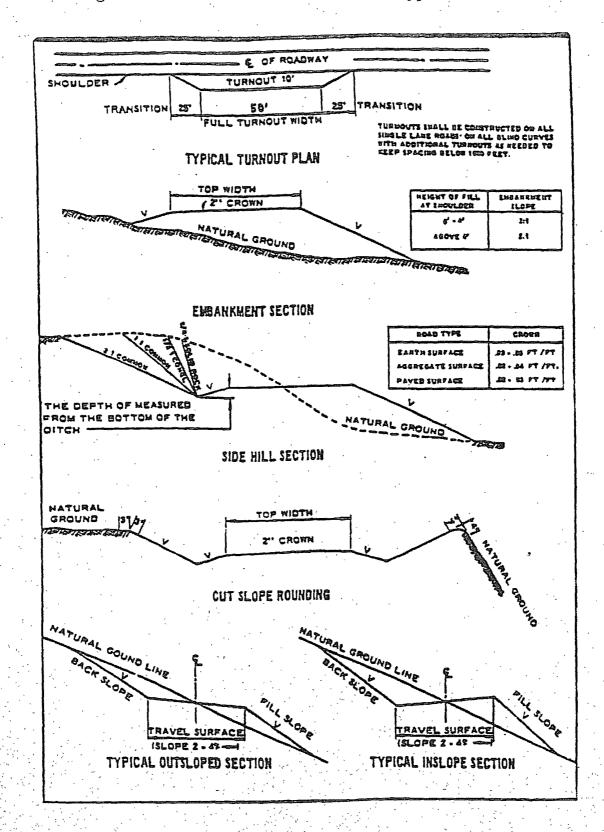
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the Salado formation. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.
- 2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
- 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.
- 4. Gamma-Ray/Neutron logs shall be run from the base of the Salado formation to the surface. The logs shall be run at a speed which allows the logs to be legible and no faster than manufacturer of the logging tools recommended speed. (R-111-P area only)

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.

R-111-P potash / WIPP

Possible lost circulation in the Delaware and Bone Spring formations.

Possible water flows in the Salado, Castile, Delaware and Bone Spring formations.

- 1. The 13-3/8 inch surface casing shall be set at approximately 575 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. Fresh water mud to be used to setting depth.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with 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.
 - 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, c-d above. Per R-111-P potash regulations, this casing is to be set a minimum of 100' below the salt and not more than 600' below the salt. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to R-111-P potash.

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:
 - 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 to surface. If cement does not circulate, contact the appropriate BLM office. Additional cement will be required as excess cement calculates to less than 5%.
- 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.
- 5. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

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 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. Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.

D. DRILL STEM TEST

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

E. WIPP Requirements

The proposed well is located within 330' of the WIPP Land Withdrawal Area boundary. As a result, Yates Petroleum Corporation is required to submit daily logs and deviation survey information to the Department of Energy per requirements of the Joint Powers Agreement. Information from this well will be included in the Quarterly Drilling Report. Information will also be provided to the New Mexico Oil Conservation Division after drilling activities have been completed. Any future entry into the well for purposes of completing additional drilling will require supplemental information. Further, Yates should carefully observe the distance of any structures placed on the well pad to ensure that no supporting structure encroaches on the WIPP Land Withdrawal Area.

Yates Petroleum Corporation can email the required information to Ms. Susan McCauslin at susan.mccauslin@wipp.ws or fax to her attention at 575-234-6003.

WWI 122008

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 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 <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 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:

Species	<u>lb/acre</u>	,
Plains Bristle	egrass	5lbs/A
Sand Blueste	em	5lbs/A
Little Bluestem		3lbs/A
Big Bluestem		6lbs/A
Plains Coreopsis		2lbs/A
Sand Dropseed		1lbs/A
-		•

^{**}Four-winged Saltbush

Pounds of seed x percent purity x percent germination = pounds pure live seed (Insert Seed Mixture Here)

⁵lbs/A

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

^{*}Pounds of pure live seed:

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.