# JAN 16 2009 OCD-ARTESIA

Form 3160-3 (August 2007)

Split Estate

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

UNITED STATES

DEPARTMENT OF THE INTE	RIOR	5.	Lease Serial No		
BUREAU OF LAND MANAGE	l	NM-103872 & VB -0824			
APPLICATION FOR PERMIT TO DRILL	6.	6. If Indian, Allottee or Tribe Name			
			N/A		
			If Unit or CA Agreement	Name and No	
1a. Type of Work: X DRILL REEN	TER	'	N/A	, rumo una rio	
Land Control C	8	Lease Name and Well No	).		
1b. Type of Well X Oil Well Gas Well Other	Single Zone Multiple Zo	one	Beginner BLB Fede	ral Com. #1H	
2 Name of Operator		9.	API Well No.		
Value Balustanas Como anation 625		Son	20.015.	36683	
Yates Petroleum Corporation 025 3a. Address 3b. Ph	one No. (include a en Code)	<del>~~~</del>	Field and Pool, or Explor	2 de la conv	
		UN  ''	1 icio and 1 con, or Explor	uioi y	
105 South Fourth Street, Artesia, NM 88210	505-748-1471		Wildcat Wol		
4. Location of well (Report location clearly and In accordance with an	y State requirements.*)	11.	Sec., T., R., M., or Blk. /	And Survey or Area	
At surface	160 300 814 8 4 4		,		
1210' FNL & 250' FEL, Sec.19- At proposed prod. zonc	103-20E, Ut. Ltr. A		Section 19-T10	6S-R28E	
360' FNL & 330' FWL, S	ec. 19-16S-28E,Ut. Ltr. D				
14. Name of Operator		12.	County or Parish	13. State	
The well is about 12 miles north & west of L	oco Hills, NM.	l	Eddy	NM	
15. Distance from proposed*	16. No. of acres in lease	17. Spacin	g Unit dedicated to this we	<del></del>	
location to nearest					
property or lease line, ft.					
(Also to nearest drlg unit line, if any) 250'	St. 240 & Fed. 200		N2N2 of Sec.19-T16S-R28E		
18. Elevations (Show whether DF, KDB, RT, to nearest well, drilling, completed,	19. Proposed Depth	20. BLM/	BIA Bond No. on file		
applied for, on this lease, ft. None	Ø <sub>R</sub> VD-6395' MD-10993'		NATIONWIDE BOND #	VMR000434	
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Aproximate date work will	4	23. Estimated duration	4332500045-1	
3567 GL	ASAP				
	24. Attachments				
The following, completed in accordance with the requirements of Onshor	e Oil and Gas Order No. 1 shall l	be attached t	o this form:		
Well plat certified by a registered surveyor.	A Dand to sever the	amaratiana i	nless covered by existing t	and an file(see	
A Drilling Plan.	item 20 above).	operations u	mess covered by existing t	some on melace	
3. A Surface Use Plan ( if the location is on National Forest System Lar		ion.			
SUPO must be filed with the appropriate Forest Service Office).	6. Such other site spe	cific inform	ation and/ or plans as may	be required by the	
	BLM				
25. Signature Name	(Printed/Typed)		Date		
Change !		Cy Cowar	. 1. 41	24/08	
Title	······································				
Regulatory Agent					
Approved By (Signature) Name	(Printed/ Typed)		Date	31	
J. Muso			10-	<b>80-03</b>	
Title Office	CADIC	BAD FIELI	n nefine		
Joh FIELD MANAGER					
Application approval does not warrant or certify that the applicant holds l	egal or equitable title to those rig	hts in the su	bject lease which would en	ntitle the applicant to co	

operations thereon. APPROVAL FOR TWO YEARS

Conditions of approval, if any, are attached.

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

\* (Instructions on page 2)

**Roswell Controlled Water Basin** 

Witness Surface & Intermediate Casing

Approval Subject to General Requirements & Special Supulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL DISTRICT I 1626 M. French Dr., Hobbs, NM 83240 DISTRICT II 1301 W. Grand Avenue, Artesia, NM 86210

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 57410

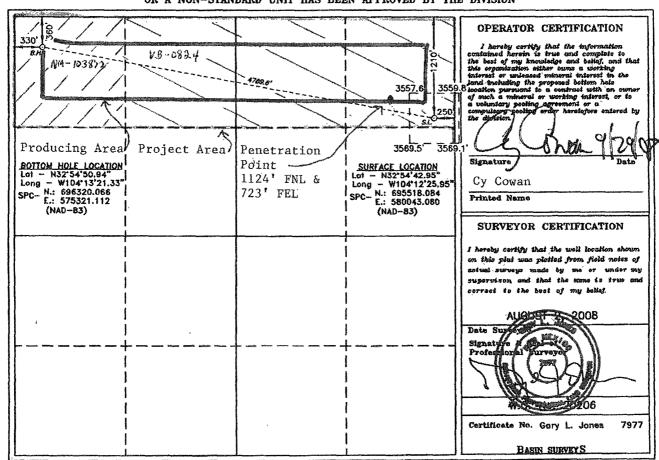
DISTRICT IV 1220 S. St. Francis Dr., Santa Fo. Not 87000 OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

C AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number			Pool Code		mc:	Pool Name				
					olfcamp					
Property		1			Property Nen	ne .		Well No	Well Number	
374	13		1	BEGINNE	R "BLB" FE	DERAL COM		1H		
OGRID N	0,		······································	······································	Operator Nam	10			Elevation	
02557	5			YATE	S PETROLEU	M CORP.		3567	7'	
Surface Location										
UL or lot No.	Section	Township	Range	Lot ldn	Feet from the	North/South line	Feet from the	Rast/West line	County	
Α	19	16 S	28 E		1210	NORTH	250	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	Rast/West line	County	
D	19	16 S	28 E		360	NORTH	330	WEST	EDDY	
Dedicated Acre 160	s Joint	or Infill Co	prolidation (	Code Or	der No.		ā	Read of the second seco	D-**	

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 Beginner BLB Federal Com #1H

1210' FNL and 250' FEL, Section 19-16S-28E (Surface Hole Location) 360' FNL and 330' FWL, Section 19-16S-28E (Bottom Hole Location) Eddy County, New Mexico

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

Yates		179'	Glorieta	3133'	
Seven Rivers	;	349'	Tubb	4417'	
Queen	Oil	875'	ABO	5137'	Gas
Grayburg	Oil	1049'	Wolfcamp Pay	6697'	Oil
San Andres	Oil	1655'	TVD	6395'	
<b>+</b>			TMD	10993'	

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

Water:

Oil or Gas: Queen; Grayburg; San Andres; ABO; Wolfcamp

Well will be drilled vertically to approximately 5944'. At 5944 the well will be kicked off and directionally drilled at 12 degrees per 100' with a 7 7/8" hole to 10,993 MD (6395' TVD) where 5 1/2" casing will be set and cemented. Penetration point of the producing zone will be encountered at 1124' FNL & 723' FEL. No pilot hole will be drilled.

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 ria floor in the open position at all times for use when kelly is not in use.

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

A. Casing Program: (All New)

<u>Hole Size</u>	Casing Size	Wt./Ft	<u>Grade</u>	<u>Thread</u>	<u>Interval</u>	<u>Length</u>
17 1/2"	13 3/8"	48#	H-40	ST&C	0-400'	400'
11"	8 5/8"	24#	J-55	ST&C	0-1750'	1750'
7 7/8"	5 1/2"	17#	J-55	LT&C	10993' MD	10993'
			He :	mar of carded	Refrestor inco	

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

# Beginner BLB Federal Com. #1H Page Two

#### B. CEMENTING PROGRAM:

Surface Casing: 425 sx "C" w/CaCl2 (WT 14.80 YLD 1.34). TOC at surface.

Intermediate Casing: 325 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

Production Casing: TOC 1250', Lead w/ 600 sx 50:50:10C (WT 11.60 YLD 2.43). Tail in with 1300 Sx 50:50:4C (WT 13.50 YLD 1.46). TOC at surface.

# 5. Mud Program and Auxiliary Equipment:

<u>Interval</u>	<u>Type</u>	Weight	<u>Viscosity</u>	Fluid Loss
Spud to 400'	Fresh Water Gel	8.60-9.00	32-34	N/C
400'-1750'	Brine Water	10.00-10.20	28-28	N/C
1750'-5100'	Cut Brine	8.70 <b>-</b> 9.20	28-28	N/C
5100'-5944'	Cut Brine	8.70-9.20	28-28	10-15
5944'-10993'	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: 0 TO 400' TVD Anticipated Max. BHP: 190 PSI From: 400' TO 1750' TVD Anticipated Max. BHP: 925 PSI From: 1750' TO 6421' TVD Anticipated Max. BHP. 3070 PSI

Abnormal Pressures Anticipated: None Lost Circulation Zones Anticipated: None

H2S Zones Anticipated: None

Maximum Bottom Hole Temperature: 120° F

#### 8. ANTICIPATED STARTING DATE:

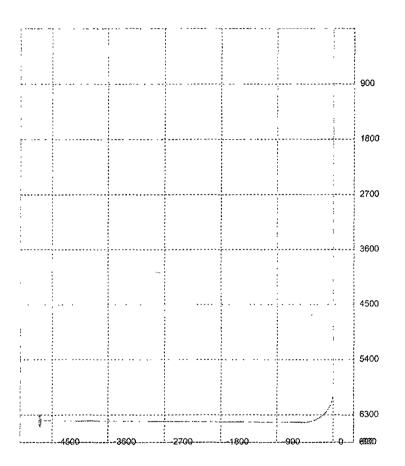
Plans are to drill this well as soon as possible after receiving approval. It should take approximately 45 days to drill the well with completion taking another 30 days.

M.D.	Inclination	Azimuth	TVD	≥ N+/S- x-	数WE+/Wsess	AND.LS	ToolFace	Ref (HS/GN)	
0	0	0	0	0	0	0			
179	0	0	179	0	0	0		. :	YATES
349	0	Ò	349	0	0	0			SEVEN RIVERS
875	0	0	875	0	0	0			QUEEN
1049	0	0	1049	0	0	0			GRAYBURG
1655	0	0	1655	0	0	0			SAN ANDRES
3133	0	0	3133	0	0	0			GLORIETA
4417	0	0	4417	0	0	0			TUBB
5137	0	0	5137	0	0	0			ABO
5944	0	0	5944	0	0	12	280	GN	KOP
5950	0.72	280 25	5950	0 01	-0.04	12	0	HS	
5975	3 72	280 25	5974.98	0.18	-0.99	12	0	H\$	
6000	6 72	280 25	5999.87	0.58	-3.23	12	360	HS	
6025	9.72	280 25	6024.61	1.22	<b>-6.74</b>	12	C	HS	
6050	12.72	280 25	6049.13	2.09	-11.53	12	0	HS	
6075	15.72	280.25	6073.36	3 18	-17.57	12	360	HS	,, .
6100	18.72	280.25	6097.24	4.5	-24.86	12	0	HS	
6125	21 72	280 25	6120.7	6 03	-33.36	12	0	HS	
6150	24.72	280.25	6143.67	7.79	-43.06	12	0	H\$	
6175	27.72	280.25	6166.09	9 75	-53.92	12	0	H\$	
6200	30.72	280.25	6187 91	11.92	-65.93	12	360	HS	
6225	33.72	280 25	6209.06	14.3	-79.05	12	360	HS	
6250	36.72	280.25	6229.48	16.86	-93.23	12	360	HS	
6275	39 72	280.25	6249 12	19.61	-108.45	12	0	HS	
6300	42.72	280.25	6267 92	22 54	-124.66	12	0	HS	
6325	45.72	280.25	6285 83	25.65	-141.82	12	360	HS	
6350	48 72	280.25	6302.81	28.91	-159.87	12	360	HS	
6375	51.72	280.25	6318 81	32.33	-178.77	12	360	HS	
6400	54.72	280.25	6333 77	35 89	-198.48	12	360	HS	
6425	57.72	280.25	6347.67	39 59	-218.92	12	0	HS	
6450	60.72	280.25	6360.46	43.41	-240.05	12	0	H\$	
6475	63.72	280.25	6372.11	47 35	-261.82	12	0	HŞ	
6500	66.72	280 25	6382 59	51.39	-284.15	12	0	HS	
6525	69.72	280 25	6391.87	55.52	-306 99	12	360	HS	
6550	72.72	280.25	6399.91	59.73	-330.28	12	360	HS	
6575	75.72	280 25	6406.71	64.01	-353.95	12	0	HS	
6600	78 72	280.25	6412.24	68 35	-377 94	12	0	HS	
6625	81.72	280.25	6416.49	72.73	-402.18	12	360	HS	
6650	84 72	280.25	6419.44	77.15	-426.61	12	0	HS	
6675	87.72	280.25	6421.09	81 59	-451 15	12	0	HS	
6696.94	90.35	280.25	6421.46	85 5	-472.74	0			Producing Zone
10992.86	90.35	280 25	6395	850	-4700	0			Lateral TD

Well will be drilled vertically to approx. 5944'. At 5944' well will be kicked off and directionally drilled at 12 degrees per 100' with a 7 7/8" hole to 10,993' MD 6,395' TVD where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 1124' FNL and 723' FEL, 19-16S-28E. Deepest TVD in the well is 6421' in the lateral. NO PILOT HOLE.

# 3D³ Directional Drilling Planner - 3D View

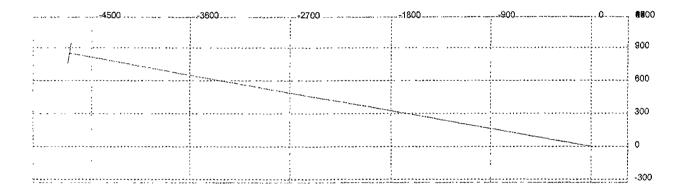
Company: Yates Petroleum Corporation Well: Beginner BLB Federal Com. #1H



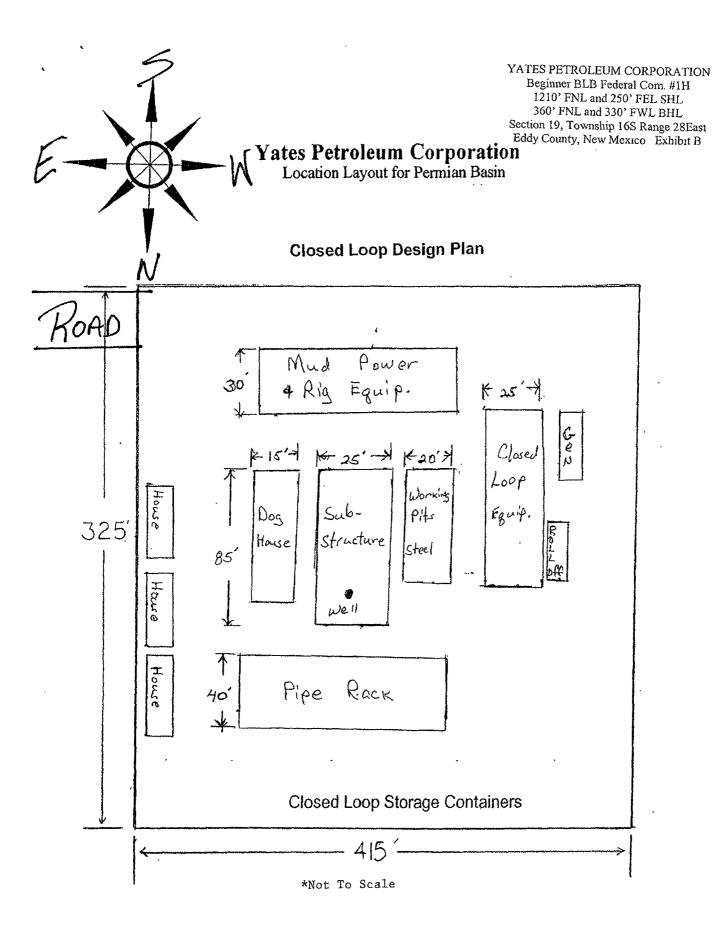
File: C:\Program Files\Drilling Toolbox 2001\Templates\Visual Wellbore\Horizontal\beginner1h.wpp

# 3D³ Directional Drilling Planner - 3D View

Company: Yates Petroleum Corporation Nell: Beginner BLB Federal Com. #1H



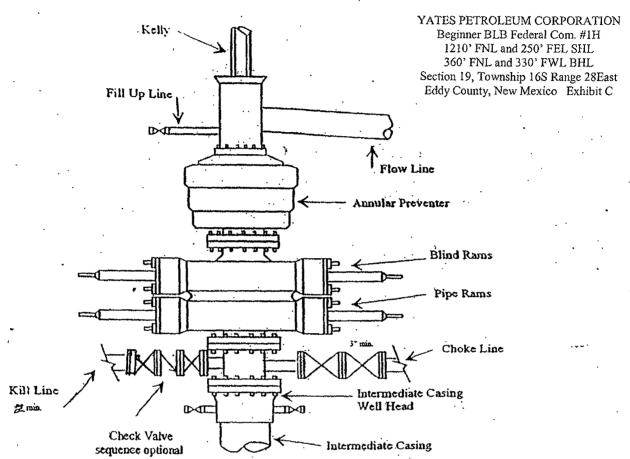
File: C:\Program Files\Drilling Toolbox 2001\Templates\Visual Wellbore\Horizontal\beginner1h.wpp



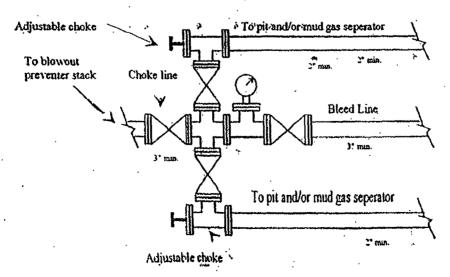


# Yates Petroleum Corporation

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



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

1210' FNL and 250' FEL, 19-16S-28E (Surface Hole Location) 360' FNL and 330' FWL, 19-16S-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 of Artesia, NM on highway 82 for approximately 9.5 miles to County Road 202. Electric power station here. Turn north on County Road 202 and go approximately 4 miles. Turn left here at PNM Station and go approx. .1 of a mile. Turn right and go 1 mile. Turn right here and go east for approx. 1.1 miles. Turn left here and go north for .6 of a mile. Road will curve. Turn left here and go approx. .7 of a mile. The road will fork. Take the left fork and cross a cattle guard. From here go approx. 2.7 miles. The road will "T" here. Turn left here and go approx. 1.2 miles. Turn left here on a trail road and go approx. . 5 of a mile. The new road will start here going west for approx. .2 of a mile to the southeast corner of the proposed well location.

#### 2. PLANNED ACCESS ROAD:

- A. The proposed new road will go in a southerly and westerly direction for about 0.7 of a mile to the southeast 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. 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.

# Beginner BLB 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. A closed loop system will be used to drill this well..

- B. The closed loop system will be constructed, maintained, and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division the "Pit Rule" 19.15.17 NMAC.
- C. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.

D. Oil produced during operations will be stored in tanks until sold.

- E. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- F. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not approved.

# 8. ANCILLARY FACILITIES: None

# 9. WELLSITE LAYOUT:

- A. 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 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. 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: State of New Mexico, PO Box 1148, Santa Fe, NM 87504

# Beginner BLB Federal Com. #1H Page Three

#### 12. OTHER INFORMATION:

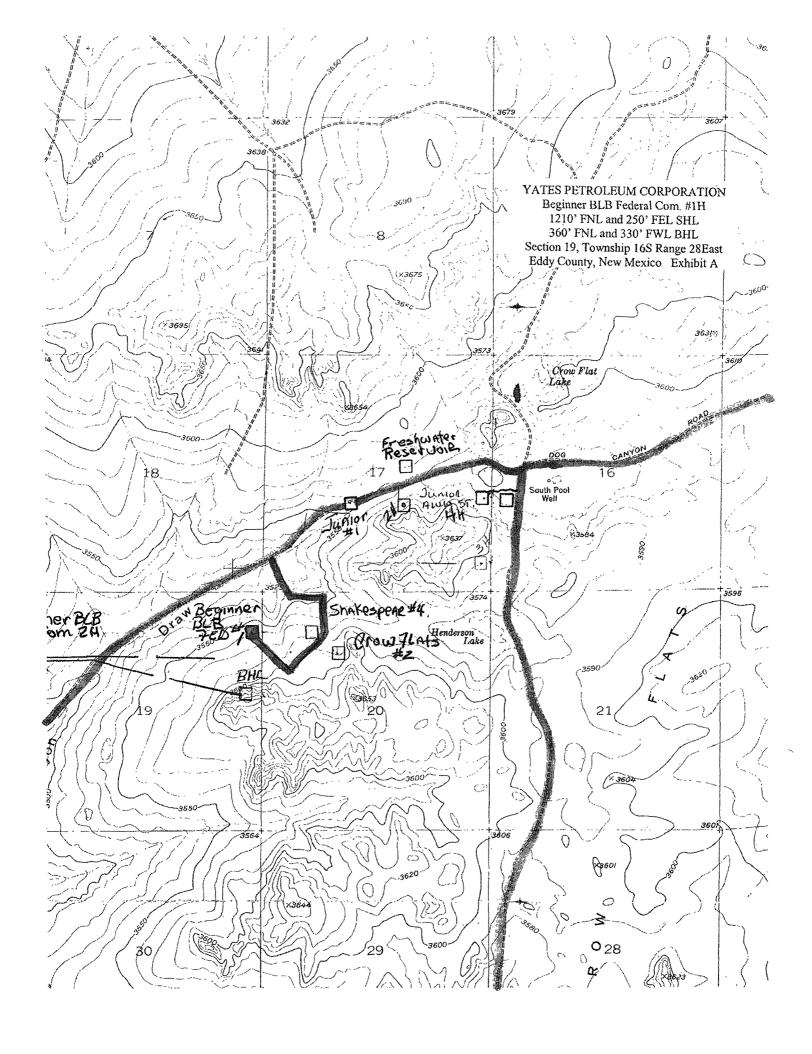
- Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, and dwellings, historical and cultural A. sites.

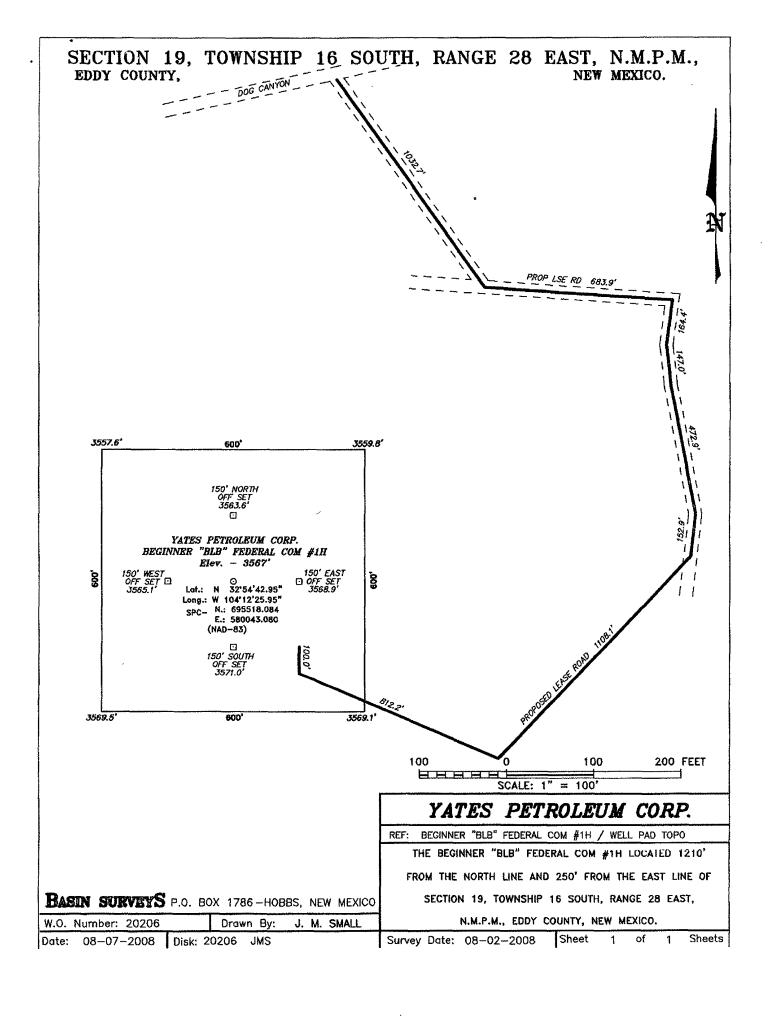
  The primary surface use is for grazing.
- B.

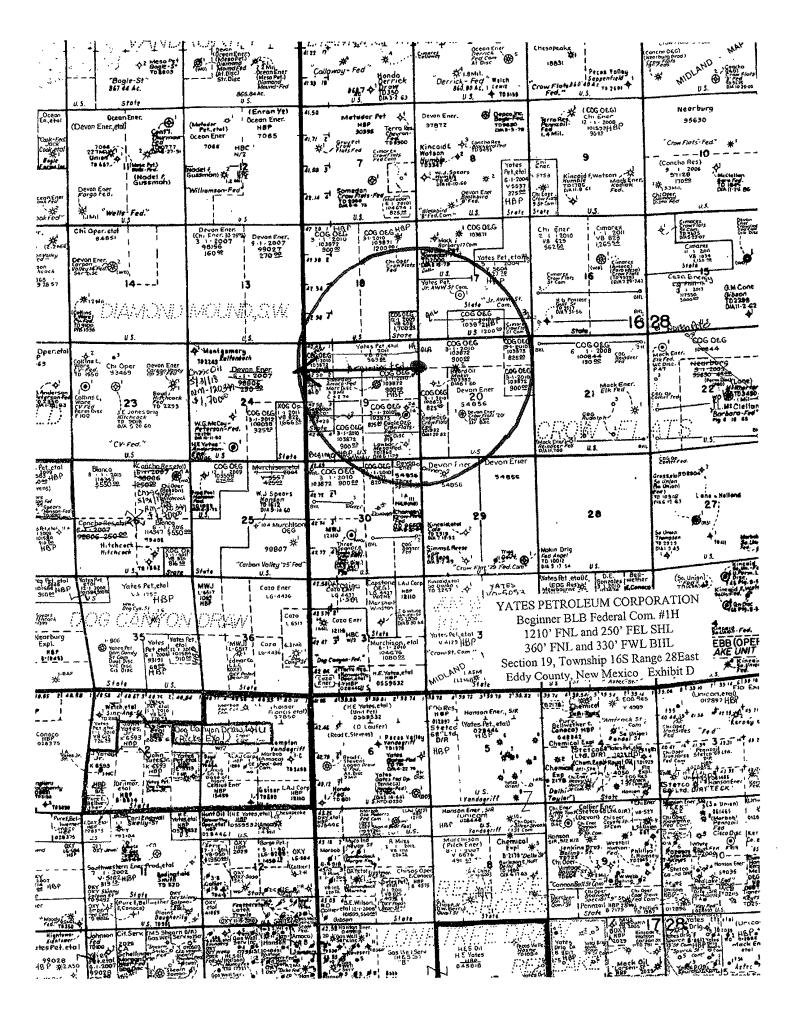
# CERTIFICATION YATES PETROLEUM CORPORATION Beginner BLB Federal Com. #1H

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 29th day of September 2008.
Printed Name Cycowan
Signature Chara
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>
E-mail (optional)







# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:
LEASE NO.:
WELL NAME & NO.:
SURFACE HOLE FOOTAGE:
BOTTOM HOLE FOOTAGE
LOCATION:
COUNTY:
VATES PETROLEUM CORPORATION
NM-103872
Beginner BLB Federal Com #1H
1210' FNL & 250' FEL
360' FNL & 330' FWL
Section 19, T. 16 S., R 28 E., NMPM
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.

Canada Daniel
General Provisions
Permit Expiration
Archaeology, Paleontology, and Historical Sites
Noxious Weeds
Special Requirements
Cave/Karst
Cultural
☐ Construction
Notification
Topsoil
Reserve Pit
Federal Mineral Material Pits
Well Pads
Roads
Road Section Diagram
Drilling
Production (Post Drilling)
Well Structures & Facilities
☐ Interim Reclamation
Final Ahandanment/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)

# Conditions of Approval Cave and Karst

\*\* Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

# Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

### Construction:

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

# Pad Berming:

The pad will be bermed on the north and west side to prevent oil, salt, and other chemical contaminants from leaving the pad.

# Closed Mud System Using Steel Tanks with All Fluids and Cuttings Hauled Off.

A closed mud system using steel tanks for all cuttings and fluids is required. All fluids and cuttings will be hauled off site for disposal. No pits are allowed.

# Tank Battery Liners and Berms:

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

#### Leak Detection System:

A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

#### Automatic Shut-off Systems:

Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

# Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

### Rotary Drilling with Fresh Water:

Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

# Directional Drilling:

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

#### Lost Circulation:

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cavebearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

# **Abandonment Cementing:**

Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

# Pressure Testing:

Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.



# EXHIBIT NO. 1

Date of Issue: 10/14/2008

# Bureau of Land Management, Carlsbad Field Office 620 E. Greene Street Carlsbad, NM 88220

Cultural and Archaeological Resources

BLM Report No. 08-NM-523-994

# NOTICE OF STIPULATIONS

<u>Historic properties</u> in the vicinity of this project are protected by federal law. In order to ensure that they are not damaged or destroyed by construction activities, the project proponent and construction supervisors shall ensure that the following stipulations are implemented.

<u>Project</u>	A Class III Archaeological Survey of the Proposed Beginner BLB Federal Com #1H Pad and Associated Access
Name:	Road
Required	1). A 3-day preconstruction call-in notification. Contact BLM Inspection and Enforcement at (505) 234-5977, 5909, or 5995, to establish a construction start date.
Required	2. Professional archaeological monitoring. Contact your project archaeologist, or BLM's Cultural Resources Section at (505) 5917, 5967, 5943, or 5986, for assistance.
A. 🛛	These stipulations must be given to your monitor at least 5 days prior to the start of construction.
B. 🖂	No construction, including vegetation removal or other site prep may begin prior to the arrival of the monitor.
The sales of the Made Contract of the sales	3. Cultural site barrier fencing. (Your monitor will assist you).
<b>A.</b> □	A temporary site protection barrier(s) shall be erected prior to all ground-disturbing activities. The minimum barrier(s) shall consist of upright wooden survey lath spaced no more than ten (10) feet apart and marked with blue ribbon flagging or blue paint. There shall be no construction activities or vehicular traffic past the barrier(s) at any time.
В. 🗌	<u>A permanent, 4-strand barbed wire fence</u> strung on standard "T-posts" shall be erected prior to all ground-disturbing activities. No construction activities or vehicle traffic are allowed past the fence.
Required	4. The archaeological monitor shall:
A. 🗌	Ensure that all site protection barriers are located as indicated on the attached map(s).
B. 🛛	Observe all ground-disturbing activities within 100 feet of cultural sites LA 132331 and LA 158658.
<b>c</b> . ⊠	Ensure that the proposed well pad construction, vehicles, and equipment remain outside LA 158658.
D. 🔯	Ensure the proposed reroute for the access road is adhered to avoid LA 132331.
E. 🛛	Submit a brief monitoring report within 30 days of completion of monitoring.
	If subsurface cultural resources are encountered during the monitoring, all activities shall cease and a BLM-CFO archaeologist shall be notified immediately.
Other:	IF THE CONTRACT ARCHAEOLOGIST DOES NOT KNOW WHERE THE SITE(S) ARE LOCATED AT PLEASE COME BY THE CARLSBAD BLM AND MAPS AND OTHER DATA WILL BE PROVIDED UPON REQUEST TO THE CONTRACT ARCHAEOLOGIST

<u>Site Protection and Employee Education</u>: It is the responsibility of the project proponent and his construction supervisor to inform all employees and subcontractors that cultural and archaeological sites are to be avoided by all personnel, vehicles, and equipment; and that it is illegal to collect, damage, or disturb cultural resources on Public Lands.

For assistance, contact BLM Cultural Resources:

Martin Stein (575) 234-5967

Bruce Boeke (575) 234-5917

James Smith (575) 234-5986

George MacDonell (575) 234-

2228

#### 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 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.

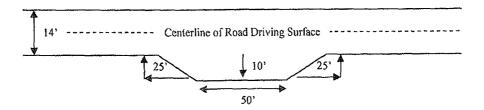
# Ditching

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

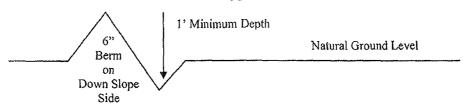


#### Drainage

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

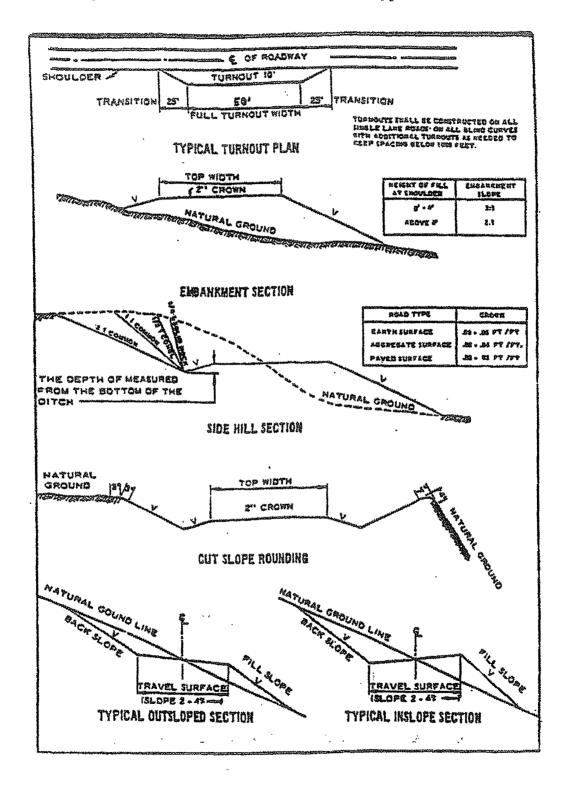
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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.

High cave/karst.

Possible lost circulation in the Grayburg and San Andres formations. Possible water flows in the San Andres formation.

Possible high pressure gas bursts from the Wolfcamp formation.

- 1. The 13-3/8 inch surface casing shall be set at approximately 400 feet within the Seven Rivers formation 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 remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - c. 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 above.

    Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst concerns or the tail cement can be increased to tie-back to the surface casing.

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

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 to surface. If cement does not circulate, contact the appropriate BLM office.
- 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 103008

# 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 4, for Gypsum 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>
1	
Alkali Sacaton (Sporobolus airoides)	1.0
DWS Four-wing saltbush (Atriplex canescens)	5.0

DWS: DeWinged Seed

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

<sup>\*</sup>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.