Operator Copy FORM APPROVED Form 3160-3 OMB NO. 1004-0137 (August 2007) Expires: July 31, 2010 UNITED STATES DEPARTMENT OF THE INTERIOR 5. Lease Senal No BUREAU OF LAND MANAGEMENT NM-99034 6. If Indian, Allottee or Tribe Name APPLICATION FOR PERMIT TO DRILL OR REENTER 7. If Unit or CA Agreement, Name and No. XDRILL REENTER N/A Type of Work 8. Lease Name and Well No. X Oil Well Gas Well Juniper BIP Federal #8H Type of Well: Single Zone Multiple Zone Name of Operator <u> 30-015-37959</u> Yates Petroleum Corporation 025575 Address 3b. Phone No. (include area code) 105 South Fourth Street, Artesia, NM 88210 505-748-1471 Wildcat Bone Spring Location of well (Report location clearly and In accordance with any State requirements.*) 11 Sec, T., R., M, or Blk. And Survey or Area At surfac **UNORTHODOX** 1375' FSL & 130' FWL, Ut. L Section 4-T24E-R29E At proposed pLOCATION 1980' FSL & 330' FEL, Ut. I 12. County or Pansh Distance in miles and direction from the nearest town or post office* 13 State The well is about 8 miles east of Malaga, NM. Eddy NM 15. Distance from proposed* 16 No. of acres in lease 17. Spacing Unit dedicated to this well location to nearest property or lease line, ft 878.94 N2/S2 of Section 4-24S-29E (Also to nearest drlg unit line, if any) 18. Distance from proposed location' 19 Proposed Depth 20 BLM/ BIA Bond No on file to nearest well, drilling, completed, 7840' TVD; 12493' TMD NATIONWIDE BOND #NMB000434 applied for, on this lease, ft. Elevations (Show whether DF, KDB, RT, GL, etc.) 22 Aproximate date work will start* 23. Estimated duration 3063' GL **ASAP** 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1 shall be attached to this form

1.	well plat	certified by a registered surveyor	

- 2. A Drilling Plan
- 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- 4. Bond to cover the operations unless covered by existing bond on file(see item 20 above).
- 5. Operator certification
- 6. Such other site specific information and/ or plans as may be required by the

			۷					
25. Sign	nature	11	7	1		Name (Printed/	Typed)	Date
				1	mar		Cy Cowan	7/14/2009
Title	· · · · ·							

Land¶egulatory Agen

Approved By Signature, Title

Name (Prinsed/Typed)
Linda S. C. Rundall

STATE DIRECTOR MM STATE OFFICE Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to co

operations thereon. APPROVAL FOR TWO YEARS

Conditions of approval, if any, are attached

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

Well becomes orthodox @ 8185' mD + 7840

Carlsbad Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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

1220 S. St. Francis Dr., Santa Fe, NM 87506

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

OIL CONSERVATION DIVISION

WELL LOCKBOOK AND ACDRACE DEDICATION DIAT

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

☐ AMENDED REPORT

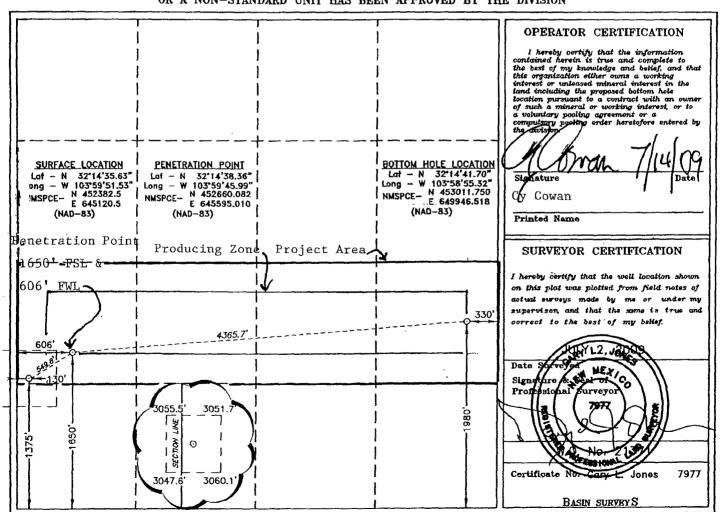
Fee Lease - 3 Copies

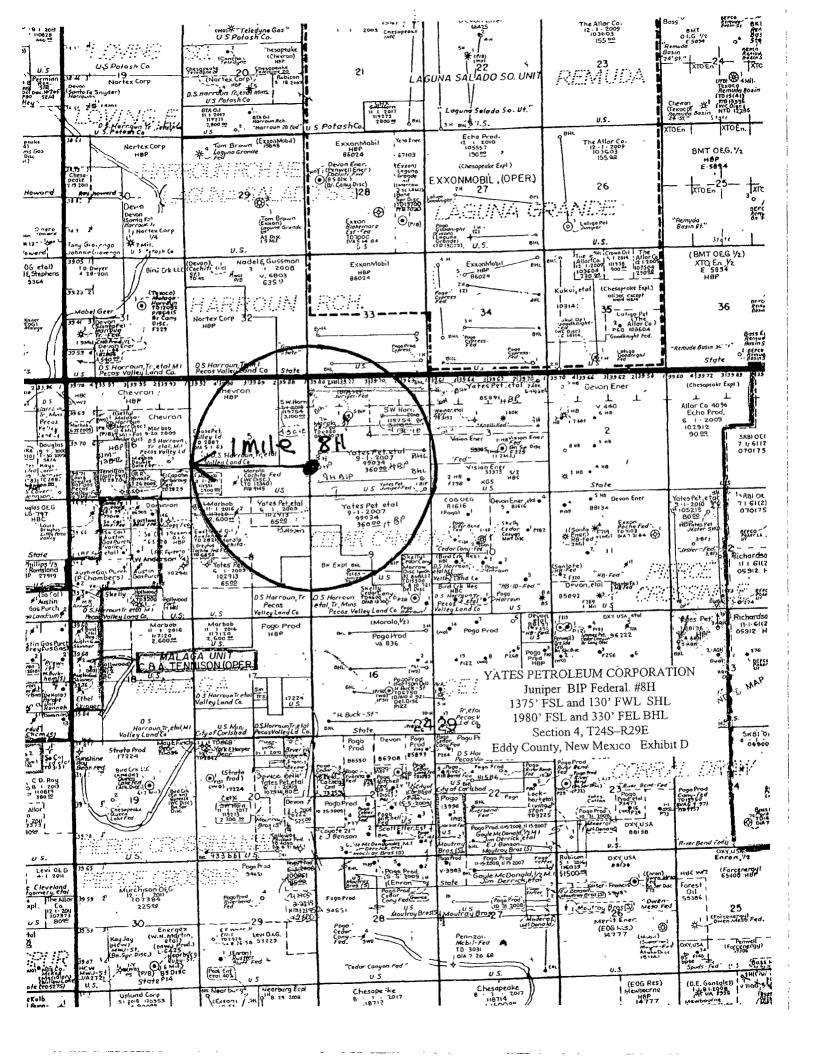
DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410 DISTRICT IV

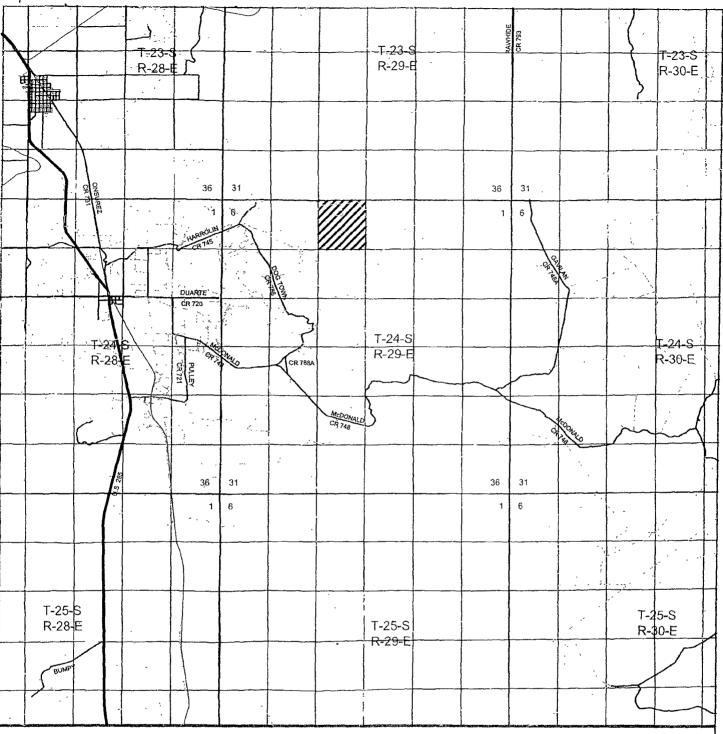
30-015-35	Pool Code Cocher Carmen Pool Name Wildcart Bone Springs					
Property Code	Property Name JUNIPER "BIP" FEDERAL	Well Number 8H				
ogrid no. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 3063				
Surface Location						

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	4	24 S	29 E		1375	SOUTH	130	WEST	EDDY
Bottom Hole Location If Different From Surface									
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	4	24 S	29 E		1980	SOUTH	330	EAST	EDDY
Dedicated Acres	Joint of	r Infill Co	nsolidation (Code Or	ier No.				
160									

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







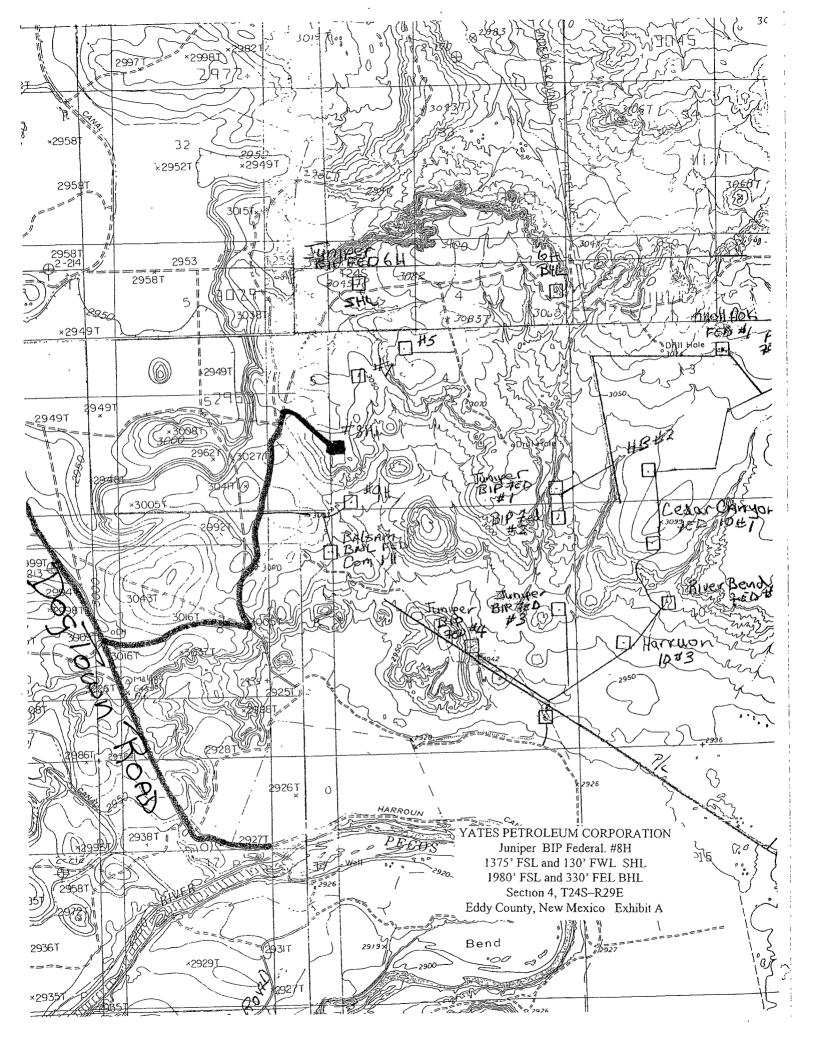
JUNIPER "BIP" FEDERAL #9H Located 130' FSL and 480' FWL Section 4, Township 24 South, Range 29 East, N.M.P.M., Eddy County, New Mexico.

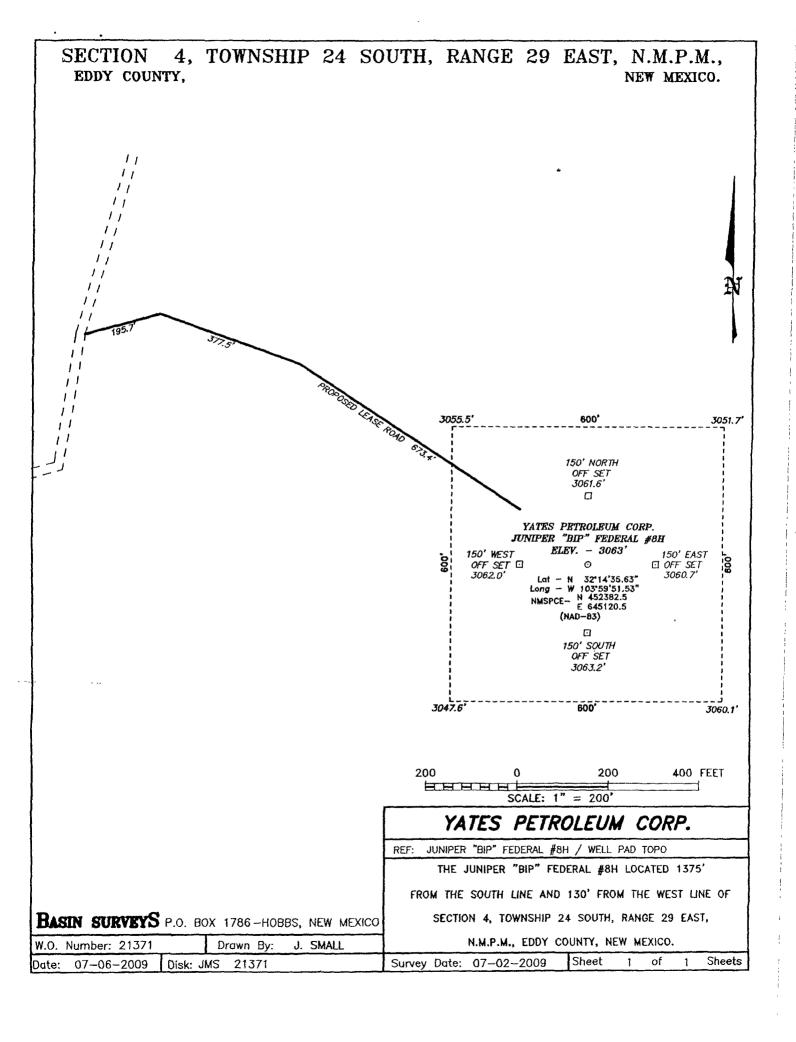


P.O. Box 1786 1120 N. West County Rd. Hobbs, New Mexico 88241 (575) 393-7316 - Office | Scole: 1" = 2 Miles (575) 392-2206 - Fax basinsurveys.com

W.O. Number: JMS 21373 Survey Date: 07-02-2009 Date: 07-06-2008

YATES PETROLEUM CORP.





YATES PETROLEUM CORPORATION

Juniper BIP Federal #8H

1375' FSL & 130' FWL, Surface Hole 1980' FSL & 330' FEL, Bottom Hole Section 4-T24S-R29E Eddy County, New Mexico

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

Rustler	312'	Brushy Canyon Marker	6320'	
Top of Salt	650'	Bone Spring	6620'	OIL
Base of Salt	2750'	1 st Bone Spring Sand	7737'	OIL
Bell Canyon	2990' OIL	Bone Spring Sand 1 Pay	8185'	OIL
Cherry Canyon	3820' OIL	TVD	7840'	
Brushy Canyon	5050' OIL	MD	12549'	

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

Water: Approx 35'

Oil or Gas: OIL: Bell Canyon, Cherry Canyon, Brushy Canyon, Bone Spring, 1st Bone

Spring, and Bone Spring 1 Pay.

3. Pressure Control Equipment. BOPE will be installed on the 11 3/4" and 8 5/8" casing and rated for 3000 BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings, which are set and cemented in place. Blowout Preventor controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned Preventors will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit B.

Auxiliary Equipment:

A. Auxiliary Equipment: Kelly cock, pit level indicators, flow sensor equipment and a sub with full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when kelly is not in use.

4. THE PROPOSED CASING AND CEMENTING PROGRAM:

A. Casing Program: (All New)

Hole Size	Casing Size	Wt./Ft	Grade	Coupling	Interval	<u>Length</u>
17 1/2"	11 3/4"	42#	H-40	ST&C	0-600'	600' ← See COA
11"	8 5/8"	32#	J-55	ST&C	0-100'	100'
11"	8 5/8"	24#	J-55	ST&C	100'-2200'	2100'
11"	8 5/8"	32#	J-55	ST&C	2200'-2850'	650'
7 7/8"	5 1/2"	17#	HCP-110	LT&C	0-8200'	8200'
7 7/8"	5 1/2"	17#	L-80	LT&C	8200'-12549'	4349'

This well will be drilled vertically to 7363'. At 7363' the well will be kicked off and directionally drilled at 12 degrees per 100' with a 7 7/8" hole to 12549' MD (7,840' TVD) where 5 1/2" casing will be set and cemented to 2350'. Penetration point of producing zone will be encountered at 1650' FSL and 606' FWL of Section 4-24S-29E. The deepest TVD in the well is 7840' in the lateral.

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

Juniper BIP Federal #8H Page 2

COH

B. CEMENTING PROGRAM: See COA

Surface casing: TOC surface. Lead with 200 sacks C + 2% CaCl2 (WT 14.8 YLD 1.64); tail in with 200 sacks Class "C" + 2% CaCl2 (WT 14.8 YLD 1.34)

Intermediate Casing. TOC surface. Lead with 585 sacks Lite "C" (WT 12.4 YLD 2.0).

Tail in with 200 sacks "C" + 2% CaCl2 (WT. 14.8 YLD 1 32).

Production Casing:

Stage I: TOC 7000' DV tool at 7000'. Lead with 1375 sacks PecosVILt

(WT 13.0 YLD 1.41)

Stage II: TOC 4200' DV Tool at 4200'. Lead with 700 sacks PecosVILt

(WT 13.3 YLD 1.41).

Stage III: TOC 2350'. 455 sacks PecosVILt (WT 13.0 YLD 1.41)

5. Mud Program and Auxiliary Equipment:

Interval	Type	Weight	Viscosity	Fluid Loss
0-600'	Fresh Water	8.6-9.2	29-32	N/C
600'-2850'	Brine Water	10.0-10.2	28-28	N/C
2850'-7363'	Cut Brine	8.9-9.10.0	28-29	N/C
7363'-12549'	Cut Brine	8.9-9.10.0	28-32	<15cc

(Lateral Section)

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

Logging: Platform HALS; CMR

Coring: None Anticipated.

DST's: As warranted.

Mudlogging: Surface casing to TD

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

Anticipated BHP:

PSI BHP: 290 From: 0 TO: 600' Anticipated Max. Anticipated Max. BHP: 1510 PSI From: 600' TO: 2850' 7840' Anticipated Max. BHP: 3710 PSI From: 2850' TO:

Abnormal pressures or temperatures anticipated: None

Lost Circulation Zones Anticipated: None.

H2S Zones Anticipated: None

Maximum Bottom Hole Temperature: 152 F

8. ANTICIPATED STARTING DATE:

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

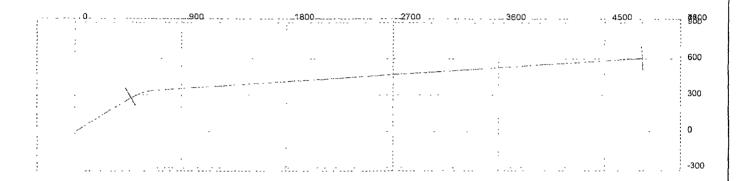
M.D	Inclination	. Azimuth	T.y.D.	N+/S	E+/W-	D.L.S.	ToolFace	. T.F. Ref [HS/GN]	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
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650	0	0	650	0	0	0			TOP OF SALT
2,750	0	0	2,750	0	0	0]		BASE OF SALT
2,990	0	0	2,990	0	0	0			BELL CANYON
3,820	0	0	3,820	0	0	0			CHERRY CANYON
5,050	0	0	5,050	0	0	0			BRUSHY CANYON
6,320	0	0	6,320	0	0	0			BRUSHY CANYON MARKER
6,620	0	0	6,620	0	0	0			BONE SPRINGS
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7450	10.45	59 98	7449.52	3,96	6 85	12.01	360	HS	
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7500	16.46	59 98	7498.12	9,77	16.92	12.01	0	H\$	
7525	19.46	59 98	7521.9	13.63	23.59	12.01	0	HS	
7550	22.46	59.98	7545.25	18.1	31,34	12.01	360	HS	
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7650	34,47	59.98	7632.99	41 9	72.53	12.01	0	H\$	
7675	37.48	59.98	7653.22	49,25		12.01	0	HS	
7700	40 48	59.98	7672.66		85.25	12.01	0		ļ
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		59.98	7699.84	69 67	120,59	12.01	360	HS	1ST BONE SPRINGS
7750	46.49	59,98	7708.92	74.32	128.64	12.01	360	HS	
7775	49.49	59.98	7725.65	83,61	144.72	12.01	360	HS	
7800	52.49	59 98	7741.38	93.33	161 54	12 01	360	HS	ļ
7825	55.49	59,98	7756.08	103 44	179.05	12.01	360	HS	
7850	58.5	59.98	7769.69	113.93	197.2	12.01	360	HS	ļ
7875	61.5	59.98	7782.19	124.76	215.95	12.01	0	HS	
7900	64.5	59.98	7793.54	135.9	235.23	12 01	360	HS	
7925	67.51	59.98	7803.71	147.33	255 01	12.01	360	HS	
7950	70.51	59.98	7812.66	159	275.22	12.01	0	HS	
7975	73.51	59 98	7820.38	170.89	295.8	12 01	360	HS	
8000	76.52	59.98	7826.84	182,97	316 71	12 01	0	HS	
8025	79 52	59.98	7832 03	195 21	337.88	12 01	0	HŞ	
8050	82 52	59.98	7835.94	207.56	359,26	12 01	0	HS	
8075	85.52	59 98	7838 54	219,99	380 79	12 01	0	HS	
8100	88,53	59.98	7839.84	232,48	402.41	12 01	0	HS	
8112.21	89 99	59 98	7839.99	238 59	412.98	12.01	0	HS	
8184.99	89.99	59.98	7840	275	476	0			1st BONE SPRINGS PAY
8184.99	89.99	59 98	7840	275	476	12	90	HS	
8200	_89,99	61 78	7840	282.3	489 11	12	90	HS	
8225	90	64.78	7840	293.54	511 44	12	90	HS	
8250	90	67.78	7840.01	303 59	534 32	12	90	HS	
8275	90	70.78	7840.01	312.44	557.71	12	90	HS	
8300	90	73,78	7840.01	320.04	581 52	12	90	HS	
8325	90	76 78	7840.01	326,39	605,69	12	90	HS	
8350	90	79.78	7840.01	331.47	630.17	12	90	HS	
8375	90	82.78	7840 01	335,26	654 88	12	90	HS	
8400	90	85 78	7840.01	337 74	679 75	12	90	HS	
8404 35	90	86.31	7840.01	338.04	684.1	12	90	HS	
	35 590 S.C	86:31		605	4820	, .0		11	LATERAL TO

Well will be drilled vertically to 7363' At 7363' well will be kicked off and directionally drilled at 12 degrees per 100' with a 7 7/8" hole to 12,549' MD (7,840' TVD) where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 1650' FSL and 606' FWL Section 4-24S-29E Deepest TVD in the well is 7840' in the lateral.

3D³ Directional Drilling Planner - 3D View

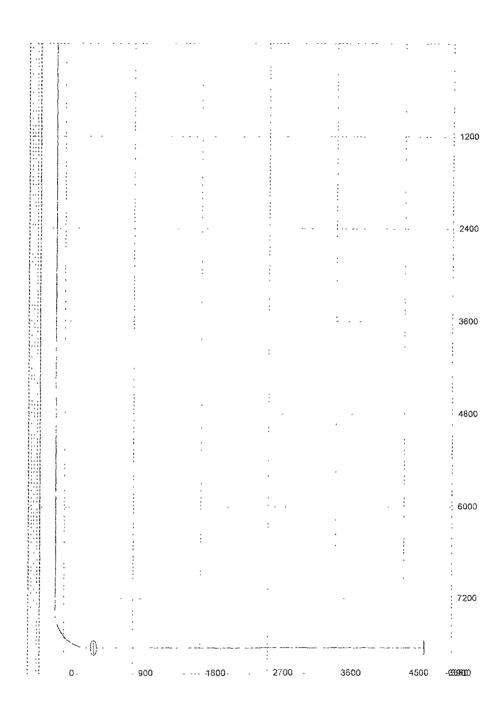
Company: Yates Petroleum Corporation

Well: Juniper BIP Federal #8H

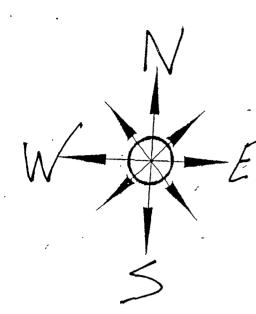


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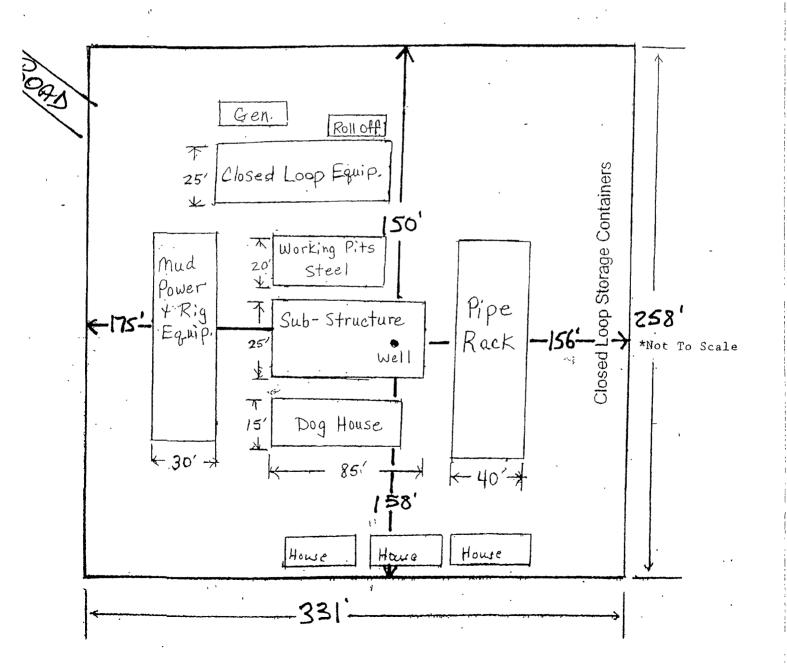
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YATES PETROLEUM CORPORATION Juniper BIP Federal. #8H 1375' FSL and 130' FWL SHL 1980' FSL and 330' FEL BHL Section 4, T24S-R29E Eddy County, New Mexico Exhibit B

Yates Petroleum Corporation Location Layout for Permian Basin

Closed Loop Design Plan

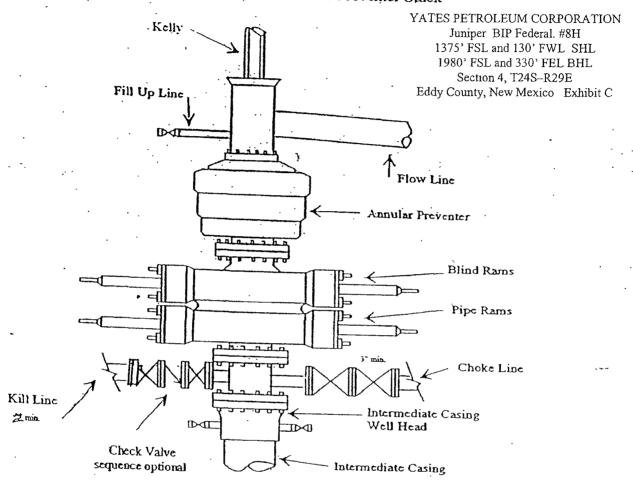




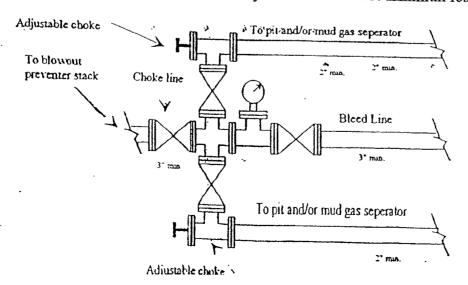
Yates Petroleum Corporation

BOP-3

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

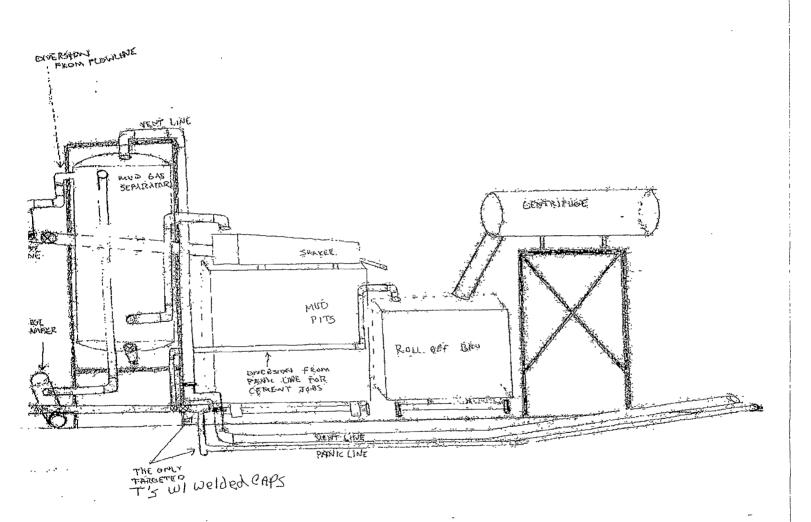


Typical 3,000 psi choke manifold assembly with at least these minimum features



YATES PETROLEUM CORPORATION Piping from Choke Manifold to the Closed-Loop Drilling Mud System

YATES PETROLEUM CORPORATION
Juniper BIP Federal. #8H
1375' FSL and 130' FWL SHL
1980' FSL and 330' FEL BHL
Section 4, T24S-R29E
Eddy County, New Mexico Exhibit E



MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Yates Petroleum Corporation
Juniper BIP Federal #8H
1375' FSL and 130' FWL (Surface Hole Location)
1980' FSL and 330' FEL, (Bottom Hole Location)
Section 4, T24S-R29E
Eddy County, New Mexico

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

1. EXISTING ROADS:

Exhibit A is a portion of the BLM map showing the well and roads in the vicinity of the proposed location. The proposed well site is located approximately 8 miles east of Malaga, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

Go east of Malaga, NM on Duarte Road (CR-720) for about 0.7 of a mile to Harroun Road (CR-745). Turn left on Harroun Road and go approximately 2.9 miles to Dog Town Road (CR-788). Turn right on Dog Town Road and go approximately 1.1 miles. Turn left here on lease road and go approximately 0.6 of a mile. Turn left here on lease road going to the north and go approximately 1 mile. The new access road will start here going southeast for approximately .3 of a mile to the northwest corner of the proposed well location.

2. PLANNED ACCESS ROAD:

- A The proposed new access road will start here going in a southeasterly direction for approximately .3 of a mile to the northwest corner of the proposed well location.
- B. The new road will be 14' in width (driving surface) and will be adequately drained to control runoff and soil erosion.
- C. The new road will be bladed with drainage on one side. Traffic turnouts may be built as needed.
- D. The route of the road is visible.
- E. Existing roads will be maintained in the same or better condition.

3. LOCATION OF EXISTING WELL

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

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

- A. There are production facilities on this lease at the present time. However, if production facilities are needed for this well they will be placed on the location as determined by Yates' Production Department. Placement has not been determined at this 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.

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: None9. WELLSITE LAYOUT:

- A. Exhibit B shows the relative location and dimensions of the well pad, the closed loop mud system, location of the drilling equipment, rig orientation and access road approach. The proposed well location will be approximately 350' x 300' All of the location will be constructed within the 600' x. 600' staked area
- 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.

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. At the time interim remediation is proposed Yates will furnish the BLM with a Sundry Notice detailing the remediation plans.
- 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.

CERTIFICATION YATES PETROLEUM CORPORATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; and an someone under employment of Yates Petroleum Corporation has full knowledge of state and federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this14thday of
Signature Signature
Name Cy Cowan
Position Title Regulatory Agent
Address 105 South Fourth Street, Artesia, New Mexico 88210
Telephone (505) 748-4372
Field Representative (if not above signatory) Tim Bussell, Drilling Supervisor
Address (if different from above) Same as above.
Telephone (if different from above) (505) 748-4221
E-mail (optional) cy@yates petroleumcorporation.com

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME: Vates Petroleum Corp

LEASE NO.: NM99034

WELL NAME & NO.: 8H Juniper BIP Federal

SURFACE HOLE FOOTAGE: 1375' FSL & 130' FWL

BOTTOM HOLE FOOTAGE 1980' FSL & 330' FEL

LOCATION: Section 4, T. 24 S., R 29 E., NMPM

COUNTY: Eddy County, New Mexico

TABLE OF CONTENTS

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

General Provisions
Permit Expiration
Archaeology, Paleontology, and Historical Sites
Noxious Weeds
Special Requirements
Construction
Notification
Topsoil
Reserve Pit
Federal Mineral Material Pits
Well Pads
Roads
Road Section Diagram
□ Drilling
Secretary's Potash
Medium cave/karst
Wildcat requirements
Logging requirements
Production (Post Drilling)
Well Structures & Facilities
☐ Interim Reclamation
Final Abandonment/Reclamation

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 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.

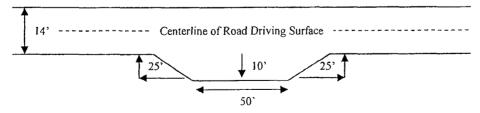
Ditching

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

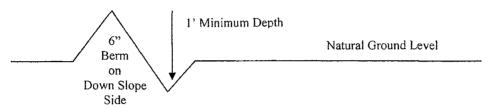


Drainage

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

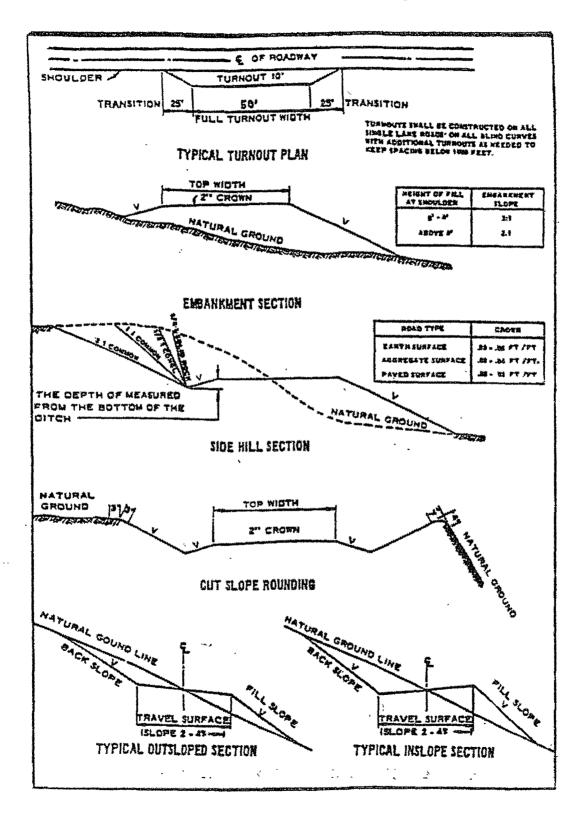
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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



VI. 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 as a hazard in the area, 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.
- 4. The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. The Rustler top and top and bottom of Salt is to be recorded on the Completion Report.

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.

Secretary's Potash.

Medium cave/karst.

Possible lost circulation in the Delaware and Bone Spring formations.

- 1. The 11-3/4 inch surface casing shall be set at approximately 600 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. If the salt is encountered at a shallower depth, the casing must be set 25' above the top of the salt. Additional cement will be required as cement volume proposed by operator results in an excess cement calculation of 1%.
 - 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 8-5/8 inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.

 Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst and Secretary's Potash.

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

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:
 - 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 to second DV tool, cement shall:
 - Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with third stage cement job.
 - c. Third stage above DV tool, cement shall:
 - Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.
- 4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17. Piping from choke manifold and to flare to be as straight as possible.
- 2. 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.

D. DRILL STEM TEST

Drill stem test required since this is shown as a wildcat and Onshore Order 2.III.D shall be followed.

WWI 080809

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

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

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

VIII. 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 3, for Shallow 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 Bristlegrass (Setaria magrostachya)	1.0
Green Spangletop (Leptochloa dubia)	2.0
Side oats Grama (Bouteloua curtipendula)	5.0

^{*}Pounds of pure live seed:

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

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

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

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