

OCD-ARTESIA

JUL 13 2009

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone
2. Name of Operator

Yates Petroleum Corporation 025575

3a. Address
105 South Fourth Street, Artesia, NM 88210
3b. Phone No. (include area code)
575
505-748-1471

4 Location of well (Report location clearly and in accordance with any State requirements. *)
At surface

200' FNL and 480' FEL Unit A Section 29, T24S-R29E

At proposed prod zone

330' FNL and 990' FEL Unit A Section 20, T24S-R29E

14. Distance in miles and direction from the nearest town or post office*
Approximately 8 miles southeast of Malaga, New Mexico.

5. Lease Serial No.

NM-102914

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

Spruce BNH Federal Com. #1H

9. API Well No.

30-015-37154

10. Field and Pool, or Exploratory

Pierce Crossing:

Wildcat Bone Spring

11. Sec, T., R., M., or Blk And Survey or Area

Section 29, T24S-R29E

12. County or Parish

Eddy

13. State

New Mexico

15. Distance from proposed*
location to nearest
property or lease line, ft
(Also to nearest drlg. unit line, if any)

UNORTHODOX
LOCATION

200'

16. No. of acres in lease

150.00

17. Spacing Unit dedicated to this well

E/2E/2 of Section 20, T24S-R29E

18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft.

.3 of a mile.

19. Proposed Depth
7900' pilot hole
7600'
7900' TVD 12,647'TMD

20. BLM/ BIA Bond No. on file

NATIONWIDE BOND #NMB000434

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

2948' GL

22. Approximate date work will start*

ASAP

23. Estimated duration

45 days

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 BLM

25. Signature

Cy Cowan

Name (Printed/ Typed)

Cy Cowan

Date

4/30/2009

Title

Land Regulatory Agent

Approved By (Signature)

/s/ Don Peterson

Name (Printed/ Typed)

/s/ Don Peterson

Date

JUL 10 2009

Title

FIELD MANAGER

Office

CARLSBAD FIELD 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 operations thereon

Conditions of approval, if any, are attached

APPROVAL FOR TWO YEARS

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

* (Instructions on page 2)

Approval Subject to General Requirements
& Special Stipulations Attached

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

NR

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1201 W. Grand Avenue, Artesia, NM 88210

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-37154	Pool Code 50371	Pool Name Rexco Crossing Wildcat Bone Springs
Property Code 37746	Property Name SPRUCE "BNH" FEDERAL COM	Well Number 1H
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 2948'

Surface Location

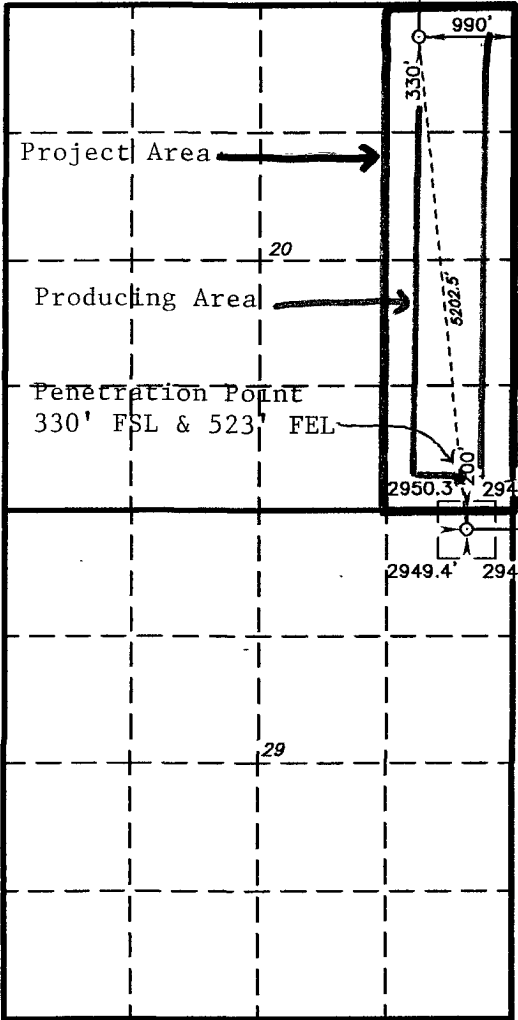
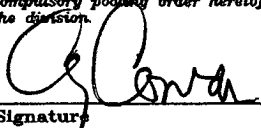
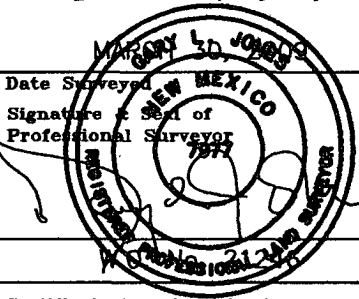
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	29	24 S	29 E		200	NORTH	480	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	20	24 S	29 E		330	NORTH	990	EAST	EDDY

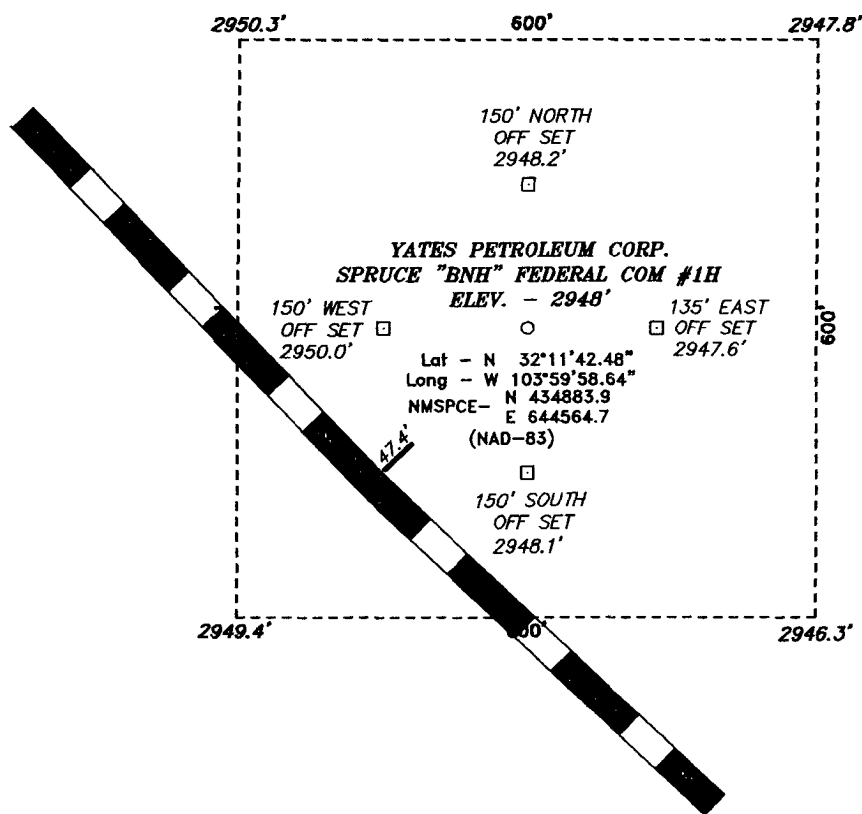
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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

	BOTTOM HOLE LOCATION Lat - N 32°12'33.73" Long - W 104°00'04.20" NMSPCE- N 440061.798 E 644071.203 (NAD-83)
	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or released mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.  Signature _____ Date 4/30/09 Cy Cowan Printed Name _____
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.  Date Surveyed _____ Signature & Seal of Professional Surveyor _____ Certificate No. Gary L. Jones 7977
	SURFACE LOCATION Lat - N 32°11'42.48" Long - W 103°59'58.64" NMSPCE- N 434883.9 E 644564.7 (NAD-83)

BASIN SURVEYS

SECTION 29, TOWNSHIP 24 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



200 0 200 400 FEET
SCALE: 1" = 200'

YATES PETROLEUM CORP.

REF: SPRUCE "BNH" FEDERAL COM #1H / WELL PAD TOPO

THE SPRUCE "BNH" FEDERAL COM #1H LOCATED 200'
FROM THE NORTH LINE AND 480' FROM THE EAST LINE OF
SECTION 29, TOWNSHIP 24 SOUTH, RANGE 29 EAST,
N.M.P.M., CHAVES COUNTY, NEW MEXICO.

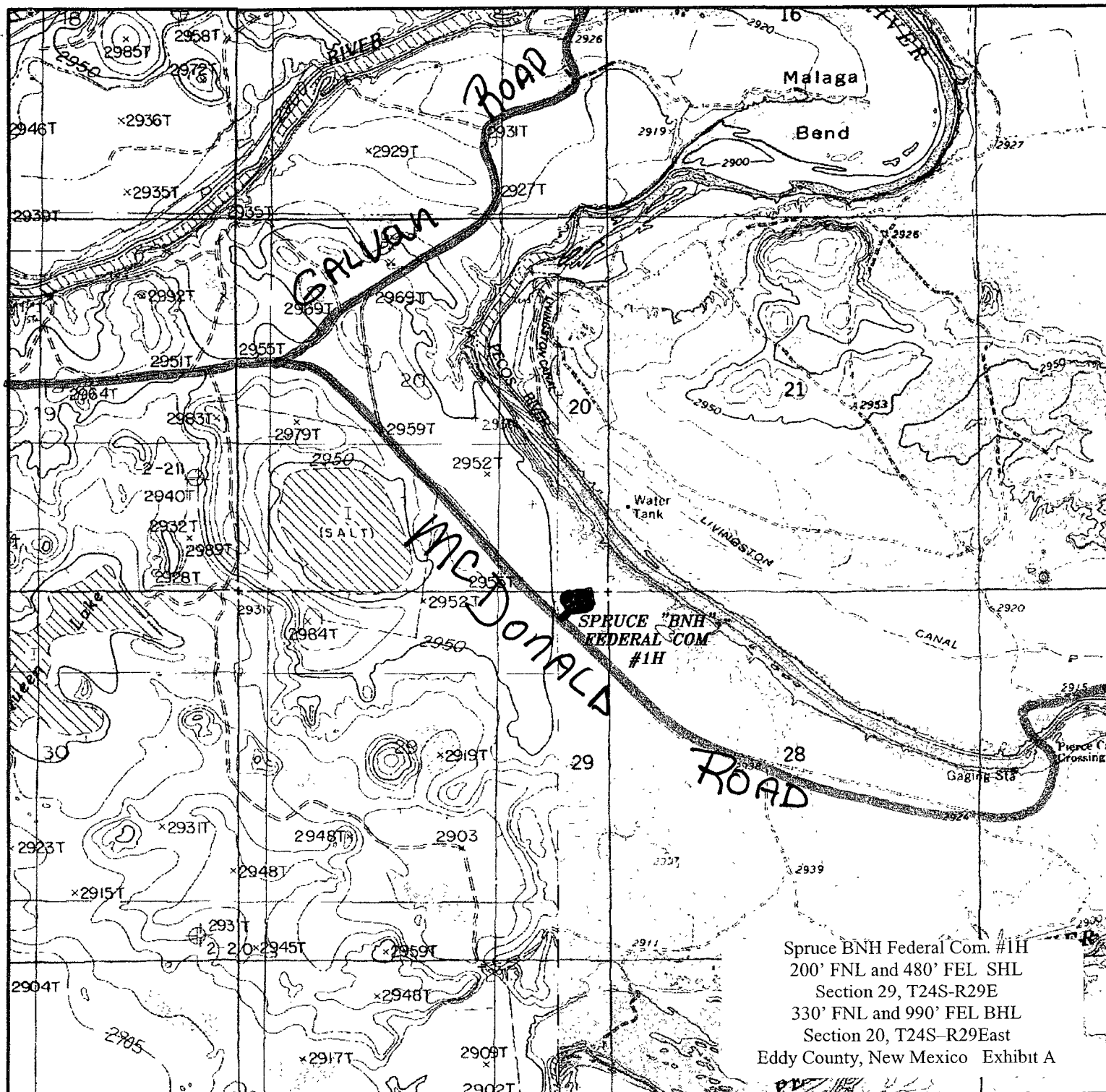
BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 21246 Drawn By: J. SMALL

Date: 03-31-2009 Disk: JMS 21246

Survey Date: 03-30-2009

Sheet 1 of 1 Sheets



SPRUCE "BNH" FEDERAL COM #1H
 Located 200' FNL and 480' FEL
 Section 29, Township 24 South, Range 29 East,
 N.M.P.M., Eddy County, New Mexico.

basin
surveys
 focused on excellence
 in the oilfield

P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (575) 393-7316 - Office
 (575) 392-2206 - Fax
 basinsurveys.com

W.O. Number: JMS 21246

Survey Date: 03-30-2009

Scale: 1" = 2000'

Date: 03-31-2009

YATES
PETROLEUM
CORP.

YATES PETROLEUM CORPORATION
Spruce BNH Federal Com. #1H
 200' FNL & 480' FEL, (Surface Hole Location)
 Section 29-T24S-R29E
 330' FNL & 900' FEL, Bottom Hole Location)
 Section 20-T24S-R29E
 Eddy County, New Mexico

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

Rustler	312'	Brushy Canyon Marker	6250'
Top of Salt	650'	Bone Spring	6550' OIL
Base of Salt	2740'	1 st Bone Spring Sand	7580' OIL
Bell Canyon	2850' OIL	TVD	7900'
Cherry Canyon	3730' OIL	MD	12647'
Brushy Canyon	4960' OIL		

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, and 1st Bone Spring.

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 Preventer controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventers 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	Length
14 3/4"	11 3/4"	42#	H-40	ST&C	0-650'	650'
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	0-8100'	8100'
7 7/8"	5 1/2"	17#	L-80	LT&C	8100'-12647'	4547'

See COA

This well will be drilled vertically to 7900'. Well will then be plugged back and then kicked off at approximately 7207 and directionally drilled at 12 degrees per 100' with a 7 7/8" hole to 12647 MD (7,660' TVD) where 5 1/2" casing will be set and cemented to 2500'. Penetration point of producing zone will be encountered at 330' FSL and 523' FEL of section 20-24S-39E. The deepest TVD in the well is 7900' in the pilot hole. Deepest TVD in the lateral is 7687.

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

- B. CEMENTING PROGRAM:** ← See COA
- Surface casing: TOC surface; 200 sacks C w/CaCl₂ (WT 14.80 YLD 1.64); Tail in w/ 200 sacks Class "C" w/CaCl₂ (WT 14.80 YLD 1.34).
- Intermediate Casing: TOC surface. 600 sacks Lite "C" (WT 12.40 YLD 2.00); Tail in w/ 200sx "C" + 2% CaCl₂ (WT. 14.80 YLD 1.32)
- Production Casing: DV Tool at 6000'. Stage I: TOC 6000', 1475 sacs 505010 PzH (WT 13.20 YLD 1.57)
Stage II: TOC 2500'. 775 sacks 505010PzH (WT 13.20 YLD 1.57).

5. Mud Program and Auxiliary Equipment:

See COA

Interval	Type	Weight	Viscosity	Fluid Loss
0-650'	Fresh Water	8.60-9.20	29-32	N/C
650'-2850'	Brine Water	10.00-10.20	28	N/C
2850'-7900'	Cut Brine	8.70-9.20	28-29	N/C
**7207'-12647'	Cut Brine(lateral section)	8.90-9.10	28-32	10.0-12.0

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: From surface casing

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

Anticipated BHP:

From: 0	TO: 650'	Anticipated Max.	BHP: 310	PSI
From: 650'	TO: 2850'	Anticipated Max.	BHP: 1510	PSI
From: 2850'	TO: 7900'	Anticipated Max.	BHP: 3780	PSI

No abnormal pressures or temperatures are anticipated.
Lost Circulation Zones Anticipated: None.
H₂S Zones Anticipated: None
Maximum Bottom Hole Temperature: 140 F

8. ANTICIPATED STARTING DATE:

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

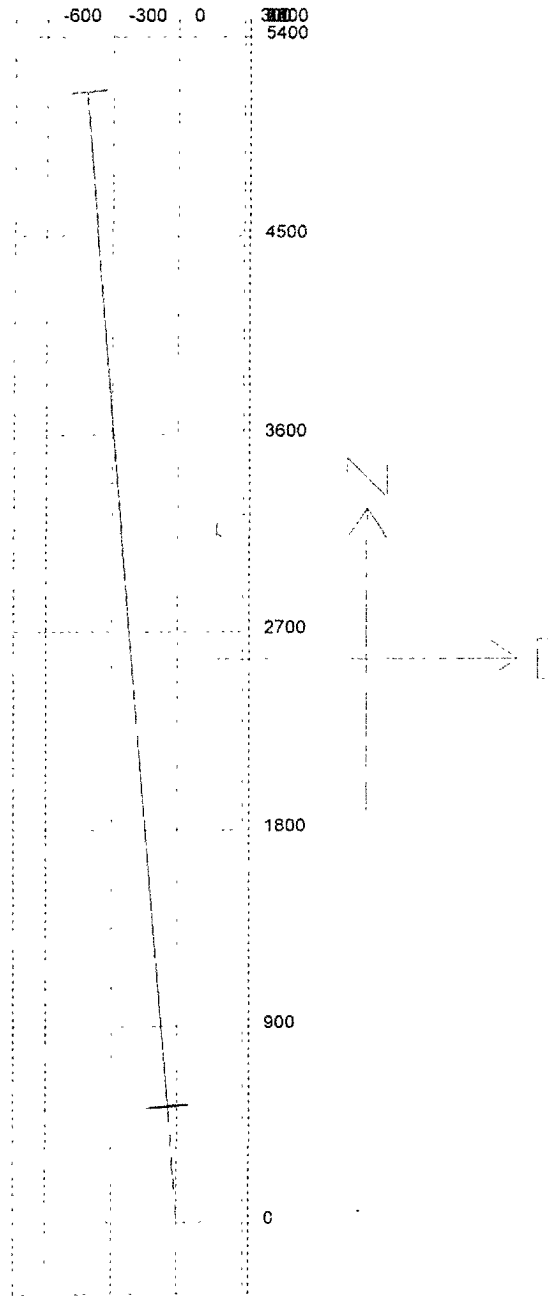
M.D.	Inclination	Azimuth	T.V.D.	N+/S-	E+/W-	D.L.S.	ToolFace	T.F. Ref [HS/GN]	
0	0	0	0	0	0	0			
312	0	0	312	0	0	0			RUSTLER
650	0	0	650	0	0	0			TOS
2,740	0	0	2,740	0	0	0			BOS
2,850	0	0	2,850	0	0	0			BELL CANYON
3,730	0	0	3,730	0	0	0			CHERRY CANYON
4,960	0	0	4,960	0	0	0			BRUSHY CANYON
6,250	0	0	6,250	0	0	0			BRUSHY CANYON MKR
6,550	0	0	6,550	0	0	0			BONE SPRINGS
7207	0	0	7207	0	0	12	355	GN	KOP
7225	2 16	355.34	7225	0.34	-0.03	12	0	HS	
7250	5 16	355.34	7249.94	1.93	-0.16	12	360	HS	
7275	8 16	355.34	7274.77	4.82	-0.39	12	360	HS	
7300	11 16	355.34	7299.41	9	-0.73	12	360	HS	
7325	14 16	355.34	7323.8	14.46	-1.18	12	0	HS	
7350	17 16	355.34	7347.87	21.18	-1.73	12	0	HS	
7375	20 16	355.34	7371.56	29.16	-2.38	12	0	HS	
7400	23 16	355.34	7394.79	38.35	-3.13	12	0	HS	
7425	26 16	355.34	7417.5	48.75	-3.98	12	0	HS	
7450	29 16	355.34	7439.65	60.31	-4.92	12	0	HS	
7475	32 16	355.34	7461.15	73.02	-5.95	12	0	HS	
7500	35 16	355.34	7481.95	86.83	-7.08	12	360	HS	
7525	38 16	355.34	7502.01	101.7	-8.29	12	0	HS	
7550	41 16	355.34	7521.25	117.6	-9.59	12	0	HS	
7575	44 16	355.34	7539.63	134.49	-10.97	12	0	HS	
7600	47 16	355.34	7557.1	152.31	-12.42	12	0	HS	
7625	50 16	355.34	7573.62	171.01	-13.95	12	0	HS	
7633	51 12	355.34	7578.69	177.18	-14.45	12	0	HS	FIRST BONE SPRINGS
7650	53 16	355.34	7589.12	190.55	-15.54	12	0	HS	
7675	56 16	355.34	7603.58	210.88	-17.2	12	360	HS	
7700	59 16	355.34	7616.95	231.93	-18.91	12	360	HS	
7725	62 16	355.34	7629.2	253.65	-20.68	12	0	HS	
7750	65 16	355.34	7640.29	275.97	-22.5	12	0	HS	
7775	68 16	355.34	7650.2	298.85	-24.37	12	0	HS	
7800	71 16	355.34	7658.88	322.21	-26.28	12	0	HS	
7825	74 16	355.34	7666.33	345.99	-28.21	12	0	HS	
7850	77 16	355.34	7672.53	370.13	-30.18	12	360	HS	
7875	80 16	355.34	7677.44	394.66	-32.18	12	360	HS	
7900	83 16	355.34	7681.07	419.21	-34.19	12	0	HS	
7925	86 16	355.34	7683.39	444.02	-36.21	12	360	HS	
7938.03	87.72	355.34	7684.09	456.99	-37.27	12	360	HS	
8011.35	87.72	355.34	7687	530	-43.22	0			FBSG PAY
8011.35	87.72	355.34	7687	530	-43.22	12	360	HS	
8025	89.36	355.34	7687.35	543.6	-44.33	12	360	HS	
8033.15	90.34	355.34	7687.37	551.72	-44.99	12	360	HS	
12646.77	90.34	355.34	7660	5150	-420	0			LATERAL TD

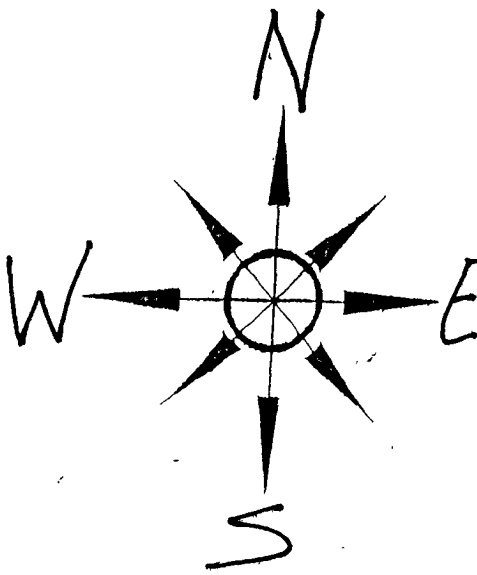
Pilot hole drilled vertically to 7900'. Well will then be plugged back then kicked off at approx. 7207' and directionally drilled at 12 degrees per 100' with a 7 7/8" hole to 12,647' MD (7,660' TVD) where 5 1/2" casing will be set & cemented. Penetration point of producing zone will be encountered at 330' FSL and 523' FEL. 20-24S-29E. Deepest TVD in the well is 7900' in the pilot hole. Deepest TVD in the lateral is 7687'

3D³ Directional Drilling Planner - 3D View

Company: Yates Petroleum Corporation

Well: Spruce BNH Federal Com. #1H



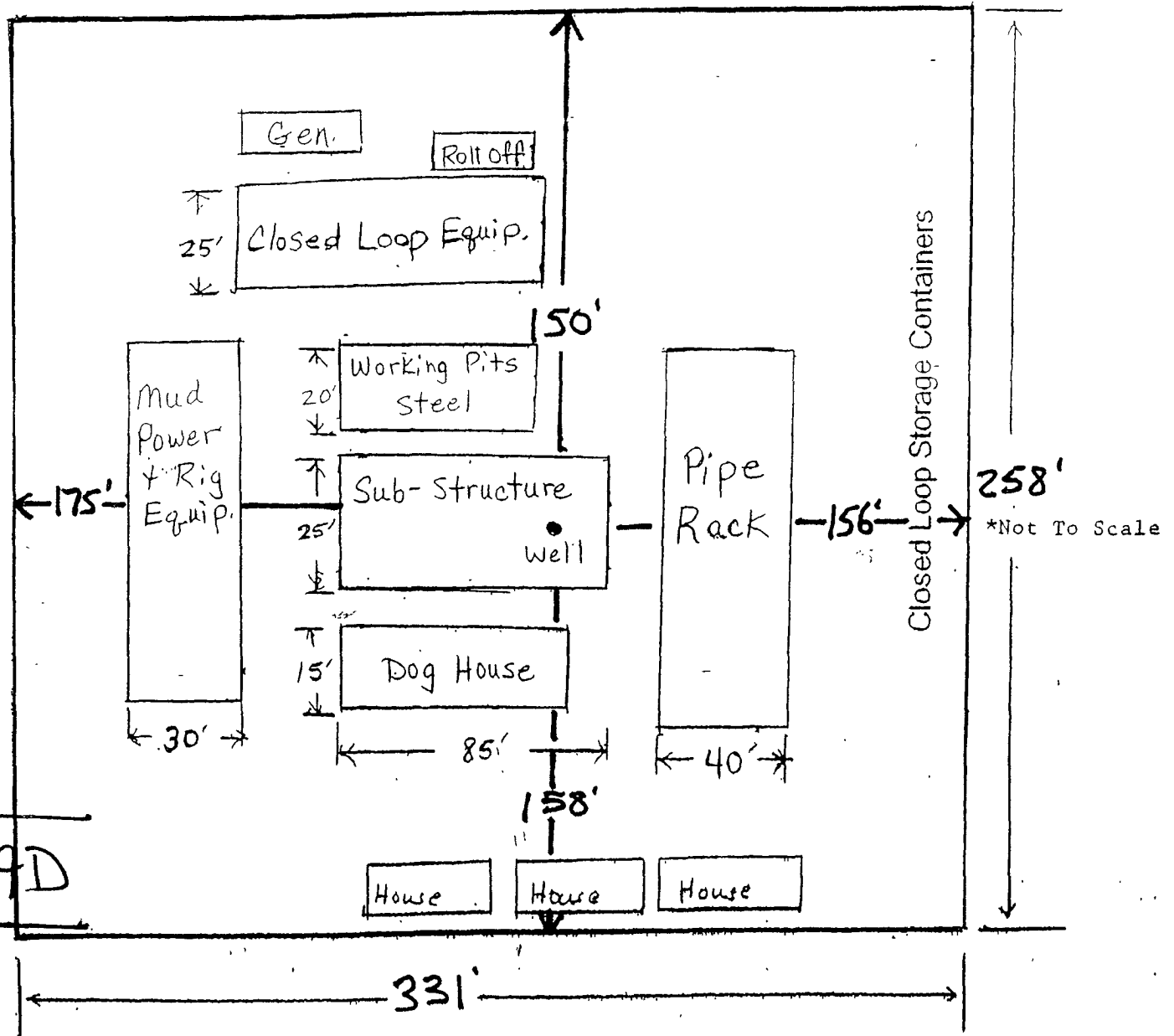


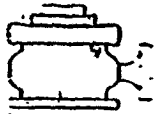
Yates Petroleum Corporation
Location Layout for Permian Basin

1.96
103
1.99

Closed Loop Design Plan

Spruce BNH Federal Com. #1H
200' FNL and 480' FEL SHL
Section 29, T24S-R29E
330' FNL and 990' FEL BHL
Section 20, T24S-R29East
Eddy County, New Mexico Exhibit B



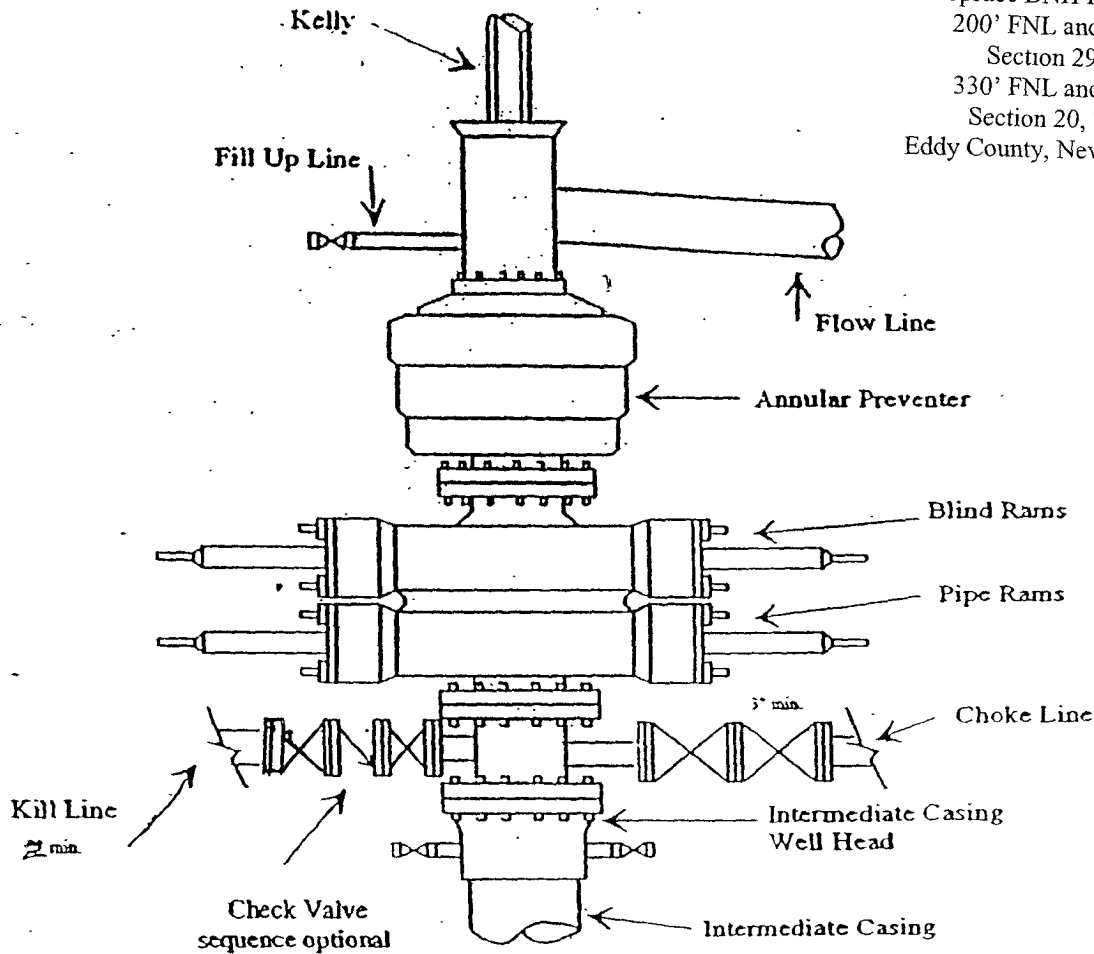


Yates Petroleum Corporation

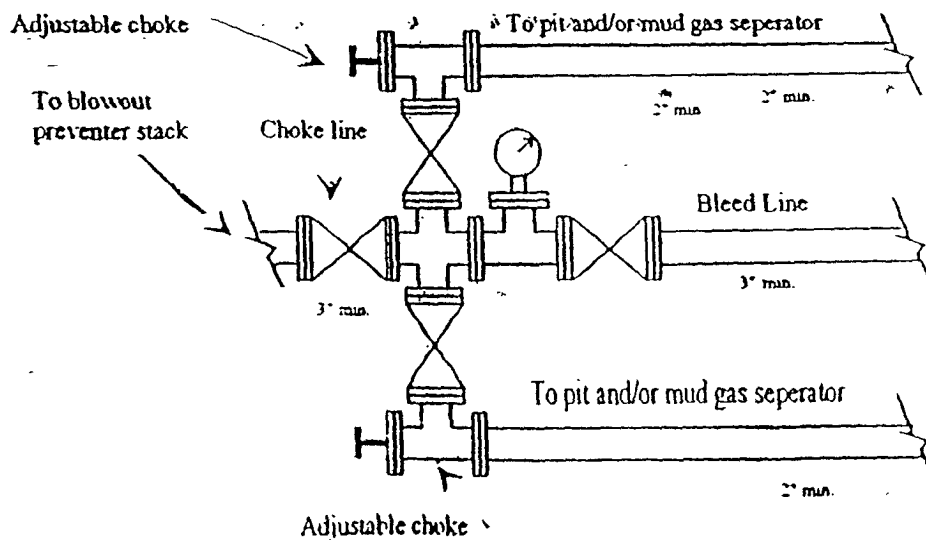
BOP-3

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

Spruce BNH Federal Com. #1H
200' FNL and 480' FEL SHL
Section 29, T24S-R29E
330' FNL and 990' FEL BHL
Section 20, T24S-R29East
Eddy County, New Mexico Exhibit C

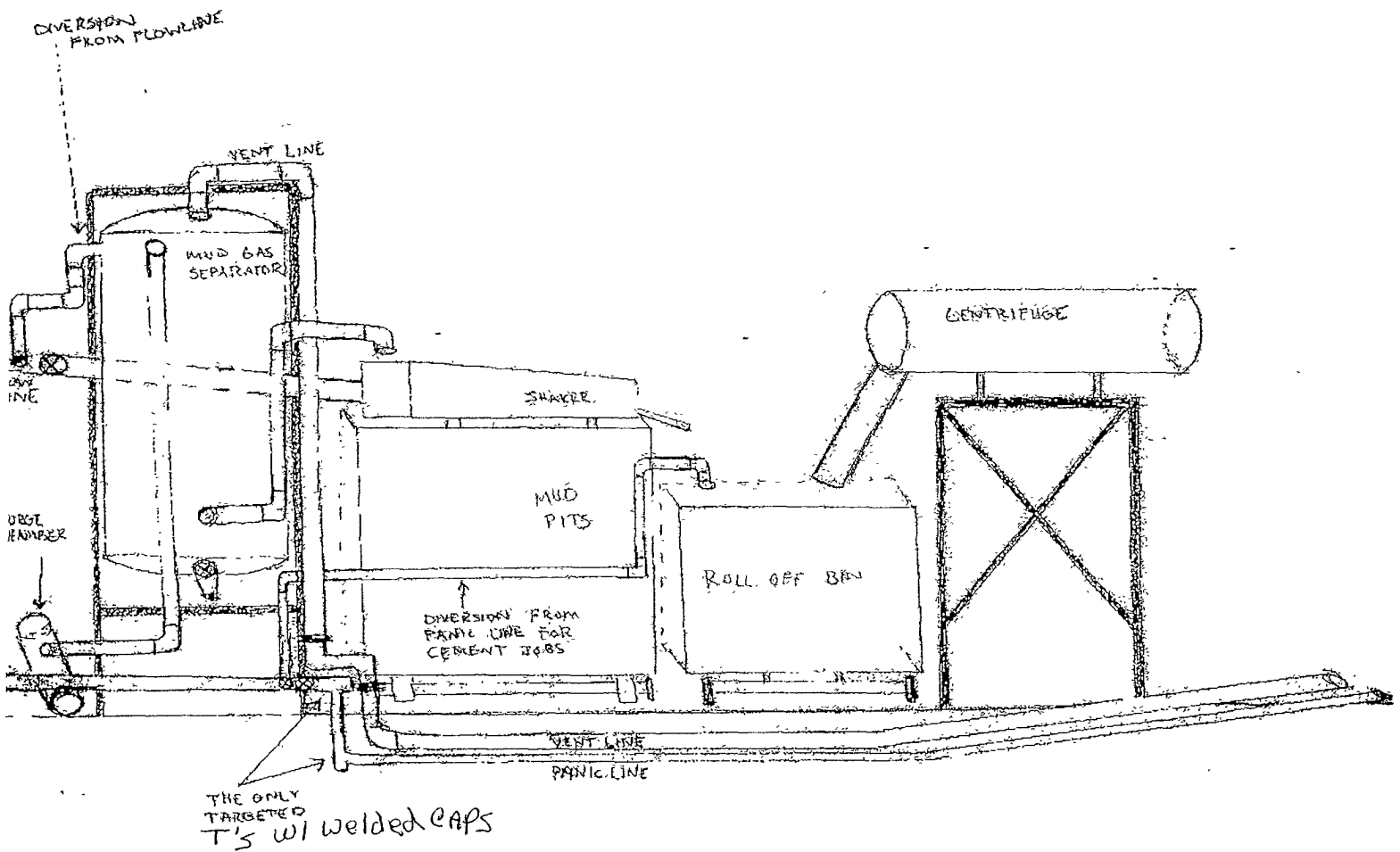


Typical 3,000 psi choke manifold assembly with at least these minimum features



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

Spruce BNH Federal Com. #1H
200' FNL and 480' FEL SHL
Section 29, T24S-R29E
330' FNL and 990' FEL BHL
Section 20, T24S-R29East
Eddy County, New Mexico Exhibit E



MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Yates Petroleum Corporation
Spurce BNH Federal Com. #1H
200' FNL and 480' FEL (Surface Hole Location)
Section 29, T24S-R29E
330' FNL and 990' FEL, (Bottom Hole Location)
Section 20, 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 6 miles southeast 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 approximately 1.2 miles to McDonald Road. Turn right on McDonald Road and go approximately 3.4 miles. At this point you will pass a big salt lake on the right. Continue on McDonald Road for approximately .2 of a mile and there will be a Chesapeake well location just off of the right side of the road. Continue on for .3 of a mile more and the proposed well location will be just off of the left side of McDonald Road approximately 50 feet. Total Mileage from Duarte Road to the location is 3.9 miles.

2. PLANNED ACCESS ROAD:

- A. The proposed new access road will start here going in a northeasterly direction for approximately 50 feet to the southwest 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 not any 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.

- C. Should off location facilities be needed for power line, flow line right-of-ways, etc. they will be filed under a separate application by Yates or a third party if applicable. The route and placement will be determined at that time.

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 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.

11. SURFACE OWNERSHIP:

Surface Estate: Managed by the Bureau of Land Management, 620 East
Greene Street, Carlsbad, NM 88201

Mineral Estate: Bureau of Land Management, 620 East Greene Street,
Carlsbad, NM 88201

12. OTHER INFORMATION:

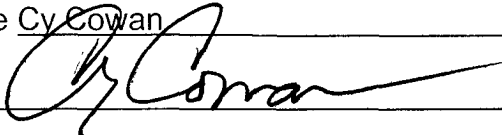
- A. Topography: *Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, and dwellings, historical and cultural sites.*
- B. The primary surface use is for grazing.

CERTIFICATION
YATES PETROLEUM CORPORATION
Spruce BNH 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 30th day of April, 2009.

Printed Name Cy Cowan

Signature 

Position Title Land Regulatory Agent

Address 105 South Fourth Street, Artesia, NM 88210

Telephone 575-748-4372

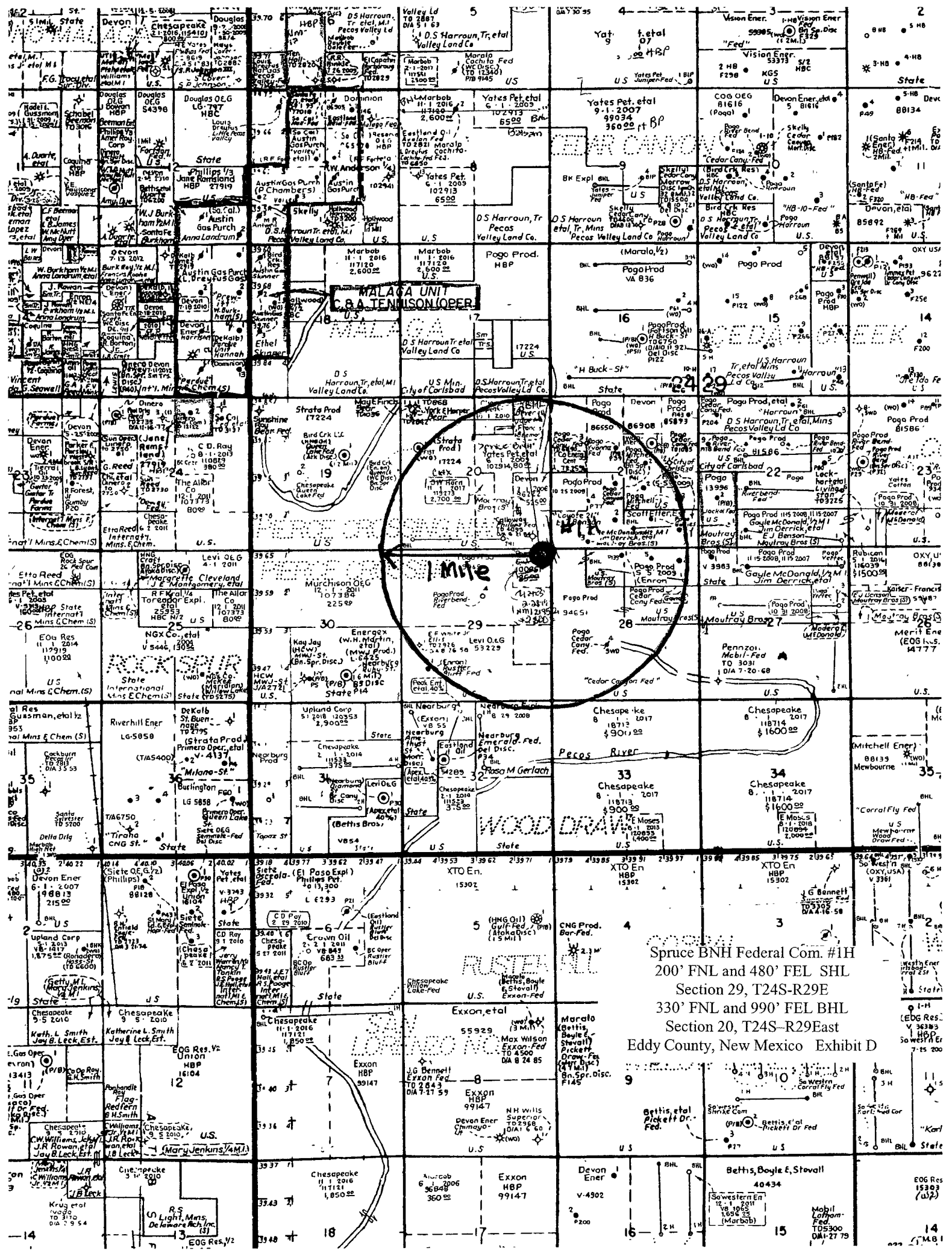
E-mail (optional) cy@yatespetroleum.com

Field Representative (if not above signatory) Tim Bussell

Address (if different from above) Same

Telephone (if different from above) 575-748-4221

E-mail (optional) _____



Spruce BNH Federal Com. #1H
200' FNL and 480' FEL SHL
Section 29, T24S-R29E
330' FNL and 990' FEL BHL
Section 20, T24S-R29E East
Eddy County, New Mexico Exhibit D

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Yates Petroleum Corporation
LEASE NO.:	NM-102914
WELL NAME & NO.:	Spruce BNH Fed Com 1H
SURFACE HOLE FOOTAGE:	200' FNL & 480' FEL
LOCATION:	Section, 29, T. 24 S., R. 29 E. NMPM
BOTTOM HOLE FOOTAGE	330' FNL & 990' FEL
LOCATION:	Section 20, 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**
 - Communitization Agreement**
 - Cave/Karst
- ☐ **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 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)

Communitization Agreement

A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales. Operator to supply NMOCD order or description of pool which details the vertical and horizontal extent of pool to verify that requested communitization is within an approved and established pool.

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.

No Blasting:

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:

The pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the pad. All sides will be bermed.

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, siting valves 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 valves, 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 cave-bearing 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.

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 6 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.

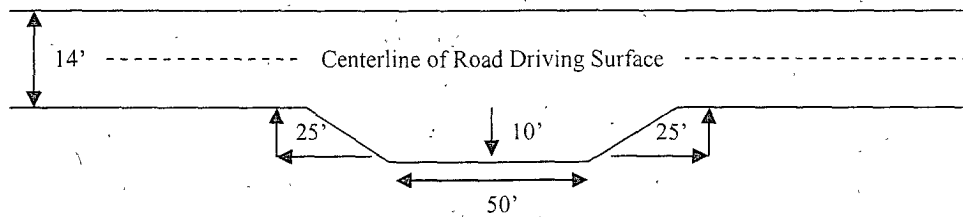
Ditching

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

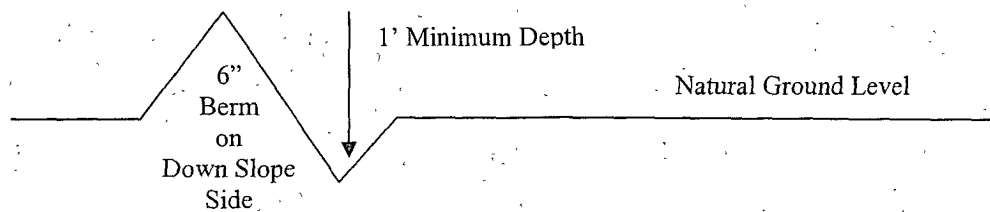


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill out sloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Culvert Installations

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards

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

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

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

Fence Requirement

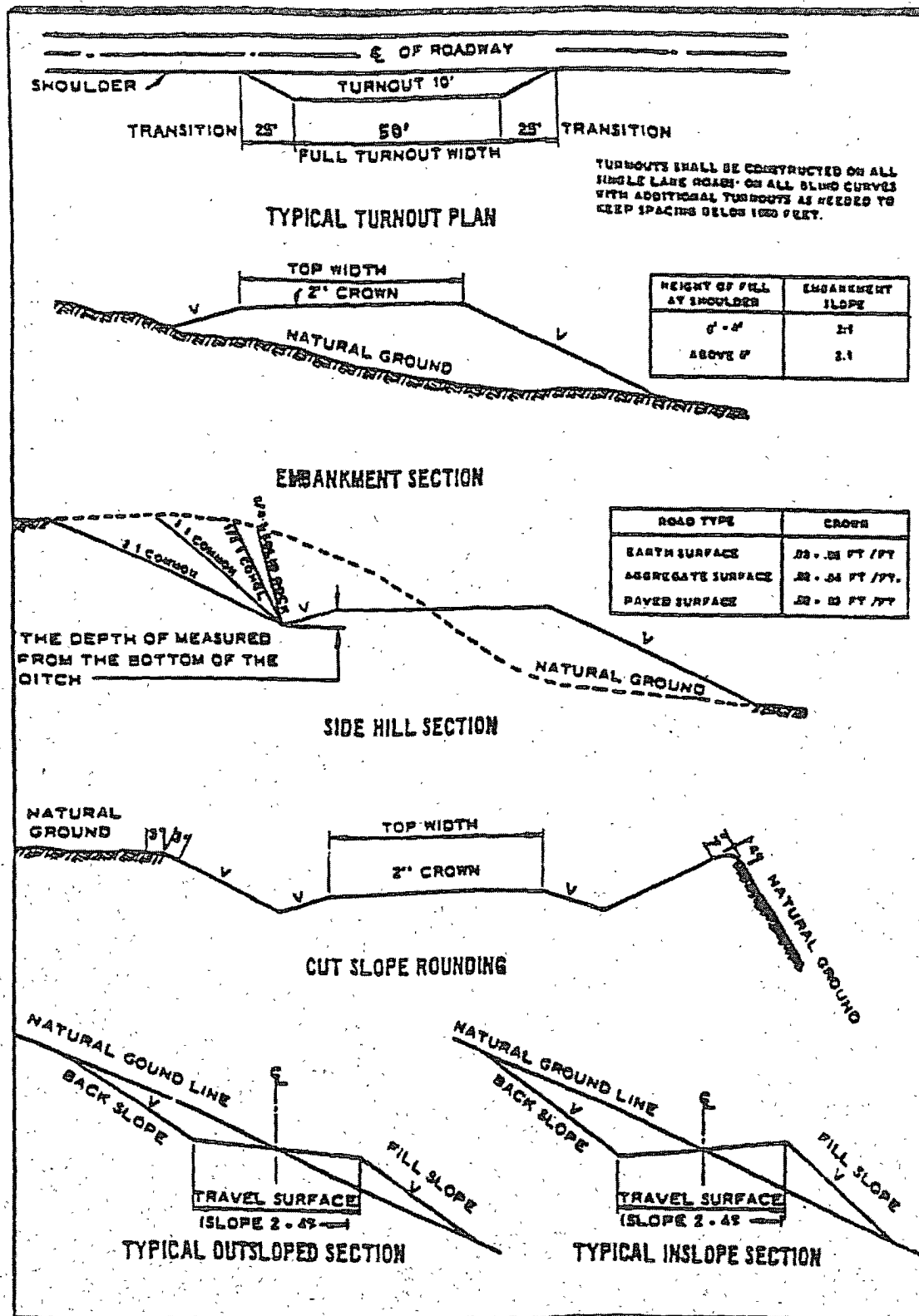
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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

Public Access

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

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

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

☒ **Eddy County**

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

1. **Although Hydrogen Sulfide has not been reported in 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. Report Rustler and Top of Salt on 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.

High 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 560 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.**
 - 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.

Intermediate hole to be drilled with brine water mud.

2. The minimum required fill of cement behind the 8-5/8 inch intermediate casing **(to be set in the Lamar Limestone)** 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.

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

Formation below the 9-5/8" 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.

Pilot hole is required to have a plug at the bottom of the hole. If two plugs are set, the BLM is to be contacted (575-361-2822) prior to tag of bottom plug, which must be a minimum of 180' in length. Operator can set one plug from bottom of pilot hole to kick-off point and save the WOC time for tagging the first plug.

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 should tie-back at least 350 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

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

WWI 061109

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

VRM Facility Requirement

Low-profile tanks not greater than eight-feet-high shall be used.

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 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 no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass (<i>Setaria magrostachya</i>)	1.0
Green Spangletop (<i>Leptochloa dubia</i>)	2.0
Side oats Grama (<i>Bouteloua curtipendula</i>)	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.