ATS-12-336

OCD-ARTESIA

RECEIVED
APR 08 2013
NMOCD ARTESIA

RESUBMITTAL

Form 3160-3
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: March 31,2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NM-103594

6. If Indian, Allottee or Tribe Name: N/A

1a. Type of Work: [X] DRILL [ ] REENTER — CRITICAL

7. If Unit or CA Agreement, Name and No.: N/A

1b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone

8. Lease Name and Well No.: 35161 Koonunga Hill BGX Federal #2H

2. Name of Operator: Yates Petroleum Corporation 025575

9. API Well No.: 30-015-36014

3a. Address: 105 South Fourth Street, Artesia, NM 88210

3b. Phone No. *(include area code)*: 505-748-1471

10. Field and Pool, or Exploratory: McKittrick Hills; Upper Penn (G) Wildcat Cisco-Canyon Dolomite 81160

4. Location of well *(Report location clearly and In accordance with any State requirements.*)*
At surface: 1914' FNL & 940' FWL, 19-22S-25E, NWSW
At proposed prod. zone: 1980' FSL & 660' FWL, 19-22S-25E, SWNW

11. Sec., T., R., M., or Blk. And Survey or Area: Sec. 19-22S-25E

14. Distance in miles and direction from the nearest town or post office*: Approximately 41 miles southeast of Artesia, New Mexico

12. County or Parish: Eddy

13. State: NM

15. Distance from proposed* location to nearest (Also to nearest drlg. unit line, if any): 660'

16. No. of acres in lease: 639.92

17. Spacing Unit dedicated to this well: 320 W2, Section 19, T22S-R25E

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 50' SHL & 1350' BHL

19. Proposed Depth: 8800' TVD & 9056' MD

20. BLM/ BIA Bond No. on file: NMB000434 Section 19, 22S-25E

21. Elevation: 3879' GL

22. Aproximate date work will start*: ASAP

23. Estimated duration: 60 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. ap
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: 1/24/12

Title: Land Regulatory Agent

Approved By *(Signature)*: /s/ James A. Amos — Name *(Printed/ Typed)* — Date: APR - 4 2013

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

** (Instructions on page 2)*

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Carlsbad Controlled Water Basin

PLEASE NOTE THIS IS A DIRECTIONAL WELL NOT A HORIZONTAL WELL

Approval Subject to General Requirements & Special Stipulations Attached

PLEASE NOTE THIS IS A DIRECTIONAL WELL NOT A HORIZONTAL WELL

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well
☐ Oil Well ☑ Gas Well ☐ Other

2. Name of Operator **Yates Petroleum Corporation**

3a. Address **105 South Fourth Street, Artesia, NM 88210**

3b. Phone No. *(include area code)* **575-748-1471**

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*

1914' FNL & 940' FWL, Lot 2, SHL & 1980' FSL & 660' FWL, Lot 3, BHL 19-22S-25E

5. Lease Serial No.
NM_103594

6. If Indian, Allottee or Tribe Name
N/A

7. If Unit or CA/Agreement, Name and/or No.
N/A

8. Well Name and No.
Koonunga Hill BGX Federal #2

9. API Well No.

10. Field and Pool, or Exploratory Area
Wildcat Cisco-Canyon Dolomite

11. County or Parish, State
Eddy County, New Mexico

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other **change name and make corrections**
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Yates Petroleum Corporation would like to correct the name of this well from the Koonunga Hill BGX Federal #2-H to the Koonunga Hill BGX Federal #2 as this well is a directional drill and not a horizontal drill.
Block 4. Yates wants to correct the description on the SHL from NWSW to Lot 2 and correct the BHL from SWNW to Lot 3.

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)* **Cy Cowan** Title **Land Regulatory Agent**

Signature Cy Cowan Date 2/9/12

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by /s/ James A. Amos Title FIELD MANAGER Date APR - 4 2013

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully 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)

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210
Phone (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-36014	81160	McKittrick Hills; Upper Penn (GAS) ~~Wildcat Cisco-Canyon-Dolomite~~

Property Code	Property Name	Well Number
35161	KOONUNGA HILL BGX FEDERAL	2

OGRID No.	Operator Name	Elevation
025575	YATES PETROLEUM CORP.	3879'

Surface Location

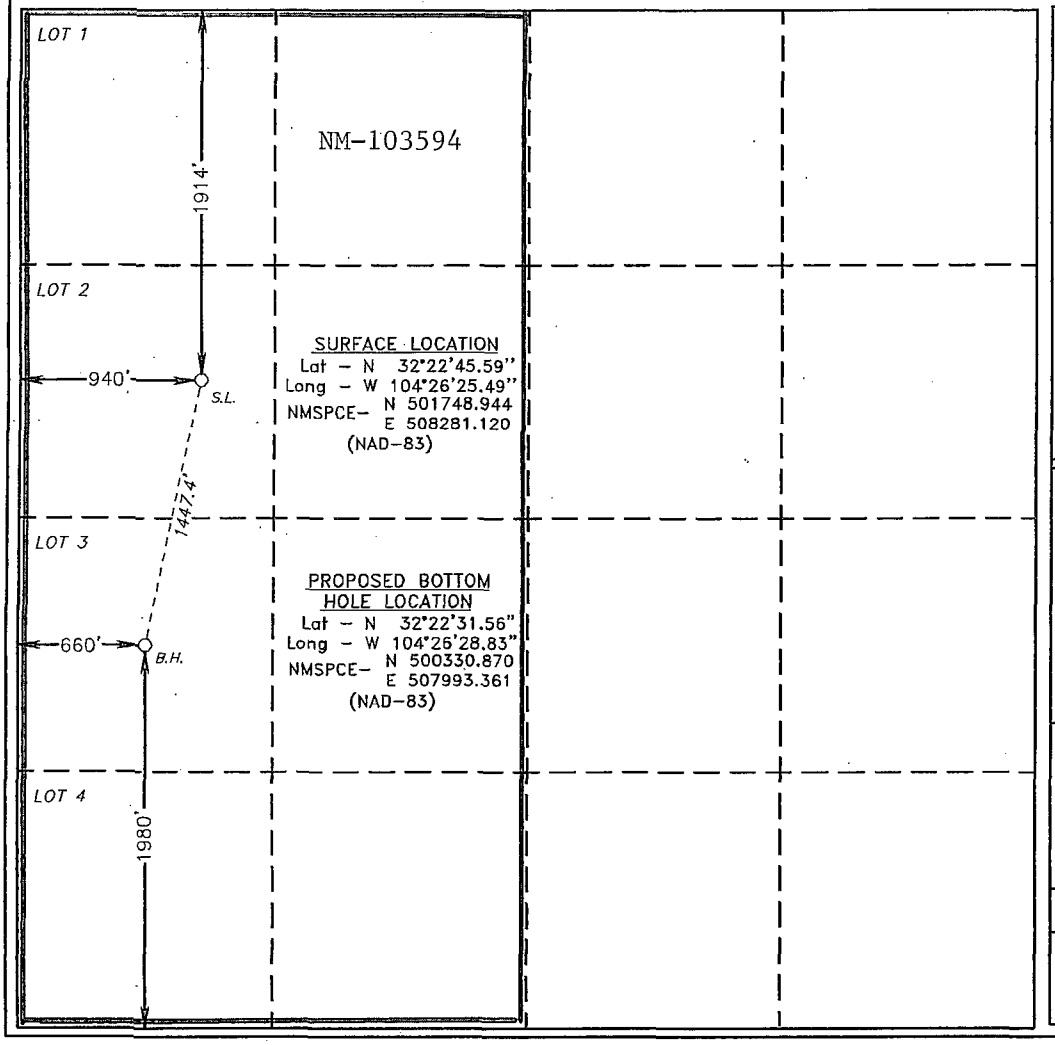
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 2	19	22 S	25 E		1914	NORTH	940	WEST	EDDY

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
LOT 3	19	22 S	25 E		1980	SOUTH	660	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
319.92			

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



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 unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this 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 2/8/12 Date

Cy Cowan
Printed Name

cy@yatespetroleum.com
Email Address

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 supervison, and that the same is true and correct to the best of my belief.

JANUARY 10, 2012
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

W.O. 12010992

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 25992

CERTIFICATION
YATES PETROLEUM CORPORATION

Koonunga Hill BGX Federal #2
1914' FNL & 940' FWL, SHL
1980' FSL & 660' FWL, BHL
Section 19-T22S-R25E
Eddy County, New Mexico

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; that I have 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 24th day of January, 2012.

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@ypcnm.com

Field Representative (if not above signatory) Tim Bussell

Address (if different from above) Same

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

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Form C-102
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
		Wildcat Cisco-Canyon Dolomite

Property Code	Property Name	Well Number
	KOONUNGA HILL BGX FEDERAL	2

OGRID No.	Operator Name	Elevation
025575	YATES PETROLEUM CORP.	3879'

Surface Location

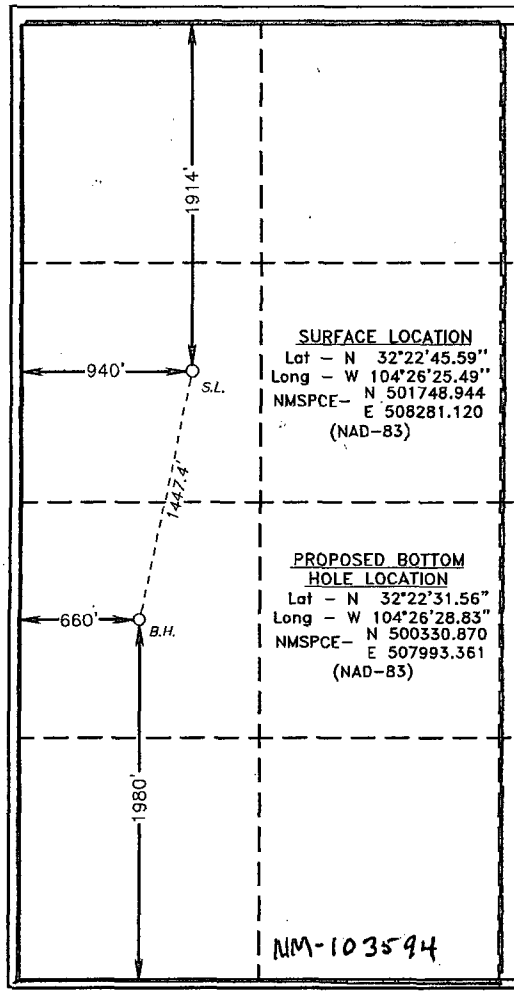
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E 2	19	22 S	25 E		1914	NORTH	940	WEST	EDDY

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
L 3	19	22 S	25 E		1980	SOUTH	660	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

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



SURFACE LOCATION
Lat - N 32°22'45.59"
Long - W 104°26'25.49"
NMSPCE- N 501748.944
E 508281.120
(NAD-83)

PROPOSED BOTTOM HOLE LOCATION
Lat - N 32°22'31.56"
Long - W 104°26'28.83"
NMSPCE- N 500330.870
E 507993.361
(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 unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this 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 1/24/12 Date

C.M. Cowan
Printed Name

Email Address

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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 supervison, and that the same is true and correct to the best of my belief.

JANUARY 10, 2012
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL SURVEYOR

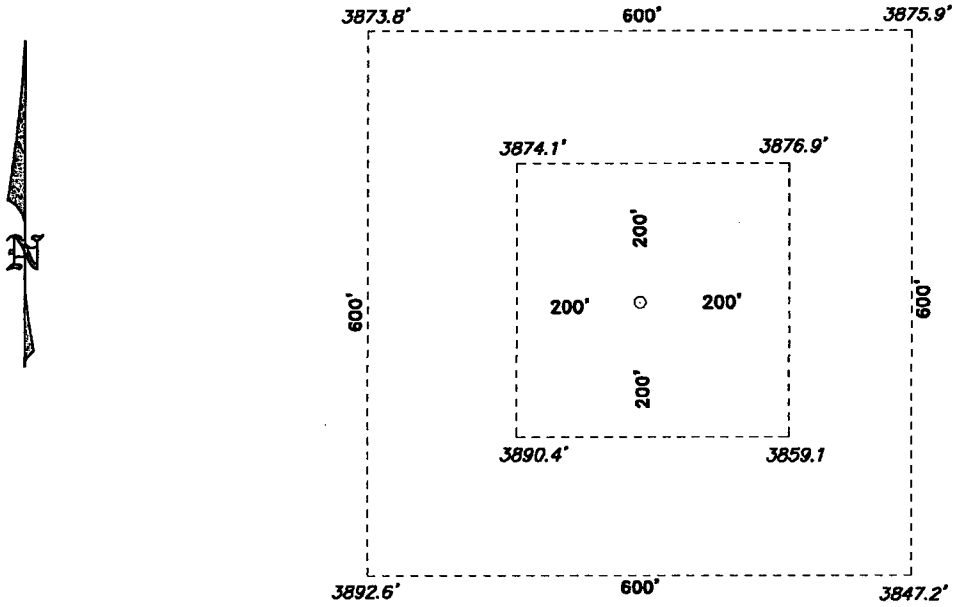
W.O. Number 69092

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 25992

SECTION 19, TOWNSHIP 22 SOUTH, RANGE 25 EAST, N.M.P.M.,

EDDY COUNTY, **NEW MEXICO.**



YATES PETROLEUM CORP
KOONUNGA HILL BGX FED #2
ELEV. – 3879'

Lat – N 32°22'45.59"
Long – W 104°26'25.49"
NMSPCE– N 501748.944
E 508281.120
(NAD–83)

200 0 200 400 FEET

SCALE: 1" = 200'

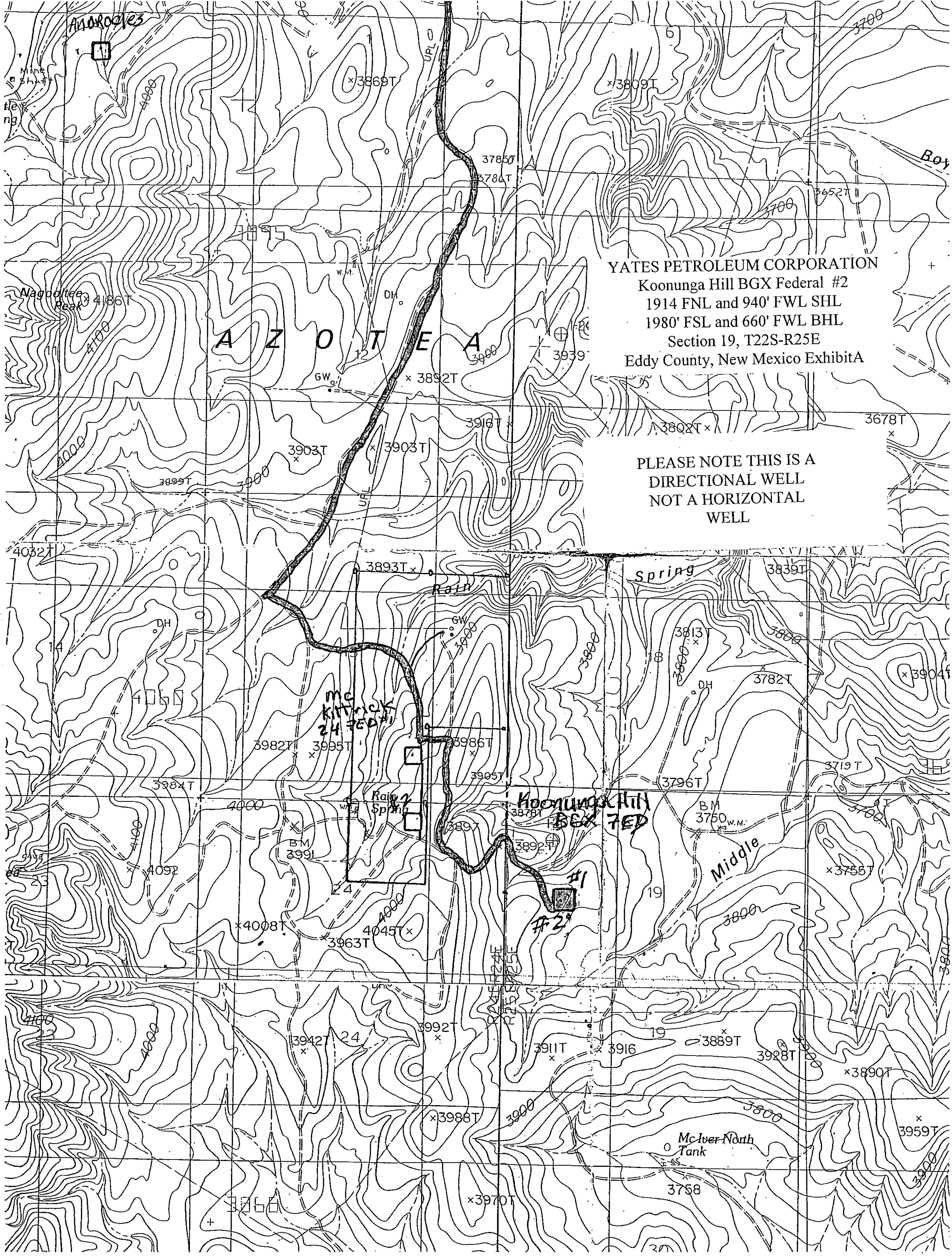
YATES PETROLEUM CORP.

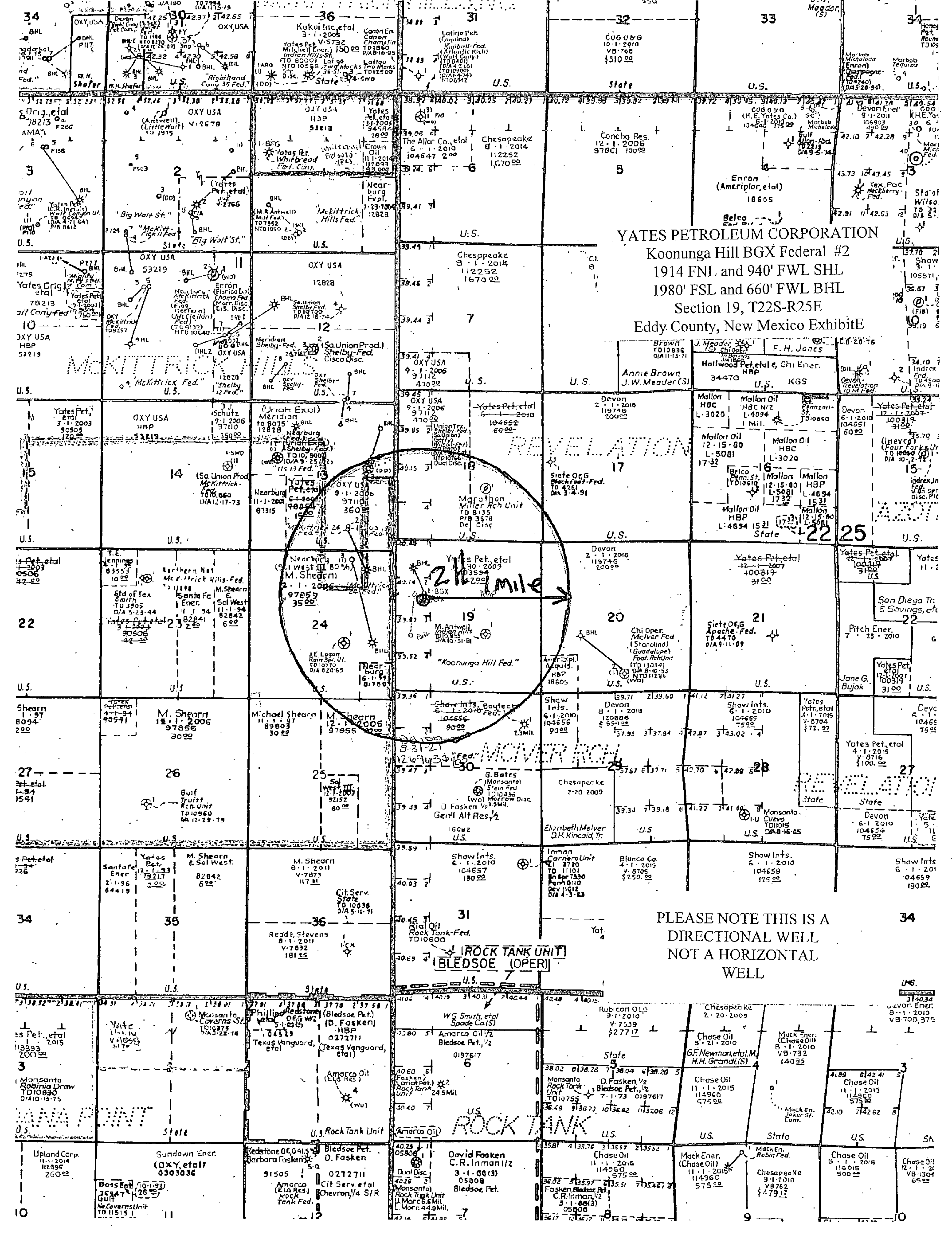
REF: KOONUNGA HILL BGX FED #2

THE KOONUNGA HILL BGX FED #2 LOCATED 1914' FROM THE NORTH LINE AND 940' FROM THE WEST LINE OF SECTION 19, TOWNSHIP 22 SOUTH, RANGE 25 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 25992 Drawn By: J. GOAD


YATES PETROLEUM CORPORATION
Koonunga Hill BGX Federal #2
1914 FNL and 940' FWL SHL
1980' FSL and 660' FWL BHL
Section 19, T22S-R25E
Eddy County, New Mexico ExhibitA
PLEASE NOTE THIS IS A
DIRECTIONAL WELL
NOT A HORIZONTAL
WELL
A Z O T E A
Nagooltee Peak
4186T
3869T
3809T
3892T
3903T
3916T
3802T
3678T
3893T
3839T
Rain
Spring
Middle
Rain Spring
Mc Kittrick 24 FED #1
Koonunga Hill BGX FED
#1
#2
3986T
3905T
3878T
3892
3796T
3750
3982T
3995T
3984T
3991
4092
4008T
3963T
4045T
3813T
3782T
3904T
3719T
3755T
3942T
3992T
3911T
3916
3889T
3928T
3890T
3988T
Mc Iver North Tank
3758
3959T
3970T
4032T
3785T
3786T
3652T
3939



YATES PETROLEUM CORPORATION
Koonunga Hill BGX Federal #2
1914 FNL and 940' FWL SHL
1980' FSL and 660' FWL BHL
Section 19, T22S-R25E
Eddy County, New Mexico ExhibitE
2 mile
PLEASE NOTE THIS IS A
DIRECTIONAL WELL
NOT A HORIZONTAL
WELL

YATES PETROLEUM CORPORATION
Koonunga Hill BGX Federal #2
1914' FNL and 940' FWL Surface Location
1980' FSL and 660' FWL Bottom Hole Location
Section 19-T22S-R25E
Eddy County, New Mexico

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

Yates	Surface		
Capitan	588'	Base on Dolomite	9034'
Cherry Canyon	1608' Oil	TD-MD	9056'
Brushy Canyon	2338' Oil		
Bone Spring Lime	4070' Oil/Gas		
1st Bone Spring Sand	4483' Oil/Gas		
2nd Bone Spring Sand	5622' Oil/Gas		
3rd Bone Spring Sand	7594' Oil/Gas		
Wolfcamp	7894' Gas		
Cisco-Canyon Dolomite	8324' Gas		

2. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:
   Water: 100'-700'
   Oil or Gas: See above.

3. Pressure Control Equipment: BOPE with a 13 5/8" opening will be installed on the 13 3/8" and on the 9 5/8" casing and rated for 5000#. 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	Length
17 1/2"	13 3/8"	**48#**	**H-40**	**ST&C**	0-500'	500'
12 1/4"	9 5/8"	36#	K-55	Buttress	0-2550'	2550'
8 3/4"	5 1/2"	20#	L-80	Buttress	0-500'	500'
8 3/4"	5 1/2"	17#	L-80	Buttress	500'-7894'	7394'
8 3/4"	5 1/2"	20#	L-80	Buttress	7894'-9056' MD	1162'

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

The well will be drilled vertically to 2600'. Well will then be kicked off at 2600' and directionally drilled with an 8 ¾" hole to 9056' MD (8800' TVD). Then 5 ½" casing will be set and cemented 500' into the intermediate casing. Penetration point of the producing zone will be at 1980' FSL & 660' FWL. Deepest TVD in the well is 8800'.

B. CEMENTING PROGRAM:

Surface casing: Lead with 520 sacks Class "C" (Wt. 14.80 Yld.1.34) with 2% CaCl2. Designed with 100% excess. TOC is surface.

9 5/8 Intermediate casing:. Lead with 660 sacks 35:65:6PzC (Wt. 12.50 Yld 2.00). Tail with 200 sacks Class "C" + 2% CaCl2 (Wt. 14.80 Yld. 1.34). Designed with 100% excess. TOC is surface.

5 1/2 Production casing will be done in three stages with DV tools at 5000' and 8000'. Cement designed with 25% excess.

Production casing: Stage I: Cement with 255 sacks Pecos ViLt with D112 0.4%; D151 22.5 lb//sack; D174 1.5 lb/sack, D177 0.01 lb/sack; D800 0.6 lb/sack and D46 0.15 lb/sack (Wt. 13.00 Yld. 1.41). TOC 8000'.

Production casing: Stage II: Lead with 375 sacks 35:65:6PzC (Wt. 12.50 Yld. 2.00). Tail in with 200 sacks of PecosViLt with D112 0.4%; D151 22.5 lb//sack; D174 1.5 lb/sack, D177 0.01 lb/sack; D800 0.6 lb/sack and D46 0.15 lb/sack (Wt. 13.00 Yld. 1.41). TOC 5000'.

Production casing: Stage III: Lead in with **716 sacks** 35:65:6PzC (Wt. 12.50 Yld. 2.00). Tail in with 200 sacks Class C with 2% CaCl2 (Wt. 14.80 Yld. 1.34). **TOC surface.**

5. Mud Program and Auxiliary Equipment:

Interval	Type	Weight	Viscosity	Fluid Loss
0-500'	Fresh Water	8.60-9.20	28-32	N/C
500'-2550'	Fresh Water	8.60-9.20	28-32	N/C
2550'-9056'	Cut Brine	8.80-9.20	30-32	N/C

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. Mud will be checked hourly by rig personnel.

6. EVALUATION PROGRAM:

Samples: 10' samples from surface casing to TD.
Logging: Platform/CNL/LDT/NGT/TD to intermediate casing; CNL/GR TD to Surface; DLL/MSFL TD to Surface Casing; SONIC TD to Surface Casing; FMI/CMR Zones of interest.
Coring: None anticipated.
DST's: None anticipated
Mudlogging: From 500' to TD

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

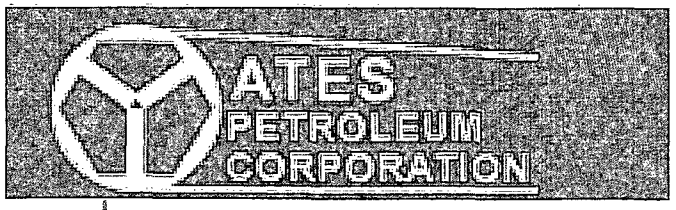
Anticipated BHP:

From:	0	To:	500'	Anticipated Max. BHP	239 PSI.
From:	500'	To:	2550'	Anticipated Max. BHP	1220 PSI.
From:	2550'	To:	8800'	Anticipated Max. BHP	4210 PSI.

No abnormal pressures or temperatures are anticipated.
Lost Circulation Zones Anticipated.
See COA H2S Zones Anticipated.
Maximum Bottom Hole Temperature: 160 F.

8. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 50 days to drill the well with completion taking another 20 days.



Yates Petroleum Corp.

Eddy County (NAD 83)
Koonunga Hill BGX
#2
OH

Plan: Plan #2

PathfinderX & Y Report

18 January, 2012

PATHFINDER®
A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18.8 @ 3897.8usft (Silver Oak 10)
Site:	Koonunga Hill BGX	MD Reference:	KB = 18.8 @ 3897.8usft (Silver Oak 10)
Well:	#2	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	EDM 5000.1 Single User Db

Project Eddy County (NAD 83)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Koonunga Hill BGX

Site Position:		**Northing:**	501,748.944 usft	**Latitude:**	32° 22' 45.594 N
From:	Map	**Easting:**	508,281.120 usft	**Longitude:**	104° 26' 25.491 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	-0.06 °

Well #2

Well Position	**+N/-S**	0.0 usft	**Northing:**	501,748.944 usft	**Latitude:**	32° 22' 45.594 N
	+E/-W	0.0 usft	**Easting:**	508,281.120 usft	**Longitude:**	104° 26' 25.491 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,879.0 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	1/14/2012	7.91	60.19	48,591

Design Plan #2

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	191.47

Survey Tool Program **Date** 1/18/2012

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	9,056.3	Plan #2 (OH)	MWD	MWD - Standard

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18.8 @ 3897.8usft (Silver Oak 10)
Site:	Koonunga Hill BGX	MD Reference:	KB = 18.8 @ 3897.8usft (Silver Oak 10)
Well:	#2	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
0.0	0.00	0.00	0.0	-3,897.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
100.0	0.00	0.00	100.0	-3,797.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
200.0	0.00	0.00	200.0	-3,697.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
300.0	0.00	0.00	300.0	-3,597.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
400.0	0.00	0.00	400.0	-3,497.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
500.0	0.00	0.00	500.0	-3,397.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
597.8	0.00	0.00	597.8	-3,300.0	0.0	0.0	0.0	0.00	501,748.94	508,281.12
Capitan										
600.0	0.00	0.00	600.0	-3,297.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
700.0	0.00	0.00	700.0	-3,197.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
800.0	0.00	0.00	800.0	-3,097.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
900.0	0.00	0.00	900.0	-2,997.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
1,000.0	0.00	0.00	1,000.0	-2,897.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
1,100.0	0.00	0.00	1,100.0	-2,797.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
1,200.0	0.00	0.00	1,200.0	-2,697.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
1,300.0	0.00	0.00	1,300.0	-2,597.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
1,400.0	0.00	0.00	1,400.0	-2,497.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
1,500.0	0.00	0.00	1,500.0	-2,397.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
1,600.0	0.00	0.00	1,600.0	-2,297.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
1,617.8	0.00	0.00	1,617.8	-2,280.0	0.0	0.0	0.0	0.00	501,748.94	508,281.12
Cherry Canyon										
1,700.0	0.00	0.00	1,700.0	-2,197.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
1,800.0	0.00	0.00	1,800.0	-2,097.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
1,900.0	0.00	0.00	1,900.0	-1,997.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
2,000.0	0.00	0.00	2,000.0	-1,897.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
2,100.0	0.00	0.00	2,100.0	-1,797.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
2,200.0	0.00	0.00	2,200.0	-1,697.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18.8 @ 3897.8usft (Silver Oak 10)
Site:	Koonunga Hill BGX	MD Reference:	KB = 18.8 @ 3897.8usft (Silver Oak 10)
Well:	#2	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
2,300.0	0.00	0.00	2,300.0	-1,597.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
2,347.8	0.00	0.00	2,347.8	-1,550.0	0.0	0.0	0.0	0.00	501,748.94	508,281.12
Brushy Canyon										
2,400.0	0.00	0.00	2,400.0	-1,497.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
2,500.0	0.00	0.00	2,500.0	-1,397.8	0.0	0.0	0.0	0.00	501,748.94	508,281.12
2,600.0	1.69	191.47	2,600.0	-1,297.8	-1.4	-0.3	1.5	1.69	501,747.50	508,280.83
2,700.0	3.38	191.47	2,699.9	-1,197.9	-5.8	-1.2	5.9	1.69	501,743.16	508,279.95
2,800.0	5.07	191.47	2,799.6	-1,098.2	-13.0	-2.6	13.3	1.69	501,735.94	508,278.48
2,900.0	6.76	191.47	2,899.1	-998.7	-23.1	-4.7	23.6	1.69	501,725.84	508,276.43
3,000.0	8.45	191.47	2,998.2	-899.6	-36.1	-7.3	36.8	1.69	501,712.87	508,273.80
3,100.0	10.14	191.47	3,096.9	-800.9	-51.9	-10.5	53.0	1.69	501,697.04	508,270.59
3,200.0	11.83	191.47	3,195.0	-702.8	-70.6	-14.3	72.0	1.69	501,678.36	508,266.80
3,300.0	13.52	191.47	3,292.6	-605.2	-92.1	-18.7	94.0	1.69	501,656.86	508,262.43
3,400.0	15.21	191.47	3,389.5	-508.3	-116.4	-23.6	118.8	1.69	501,632.54	508,257.50
3,500.0	16.90	191.47	3,485.6	-412.2	-143.5	-29.1	146.4	1.69	501,605.43	508,252.00
3,600.0	18.59	191.47	3,580.8	-317.0	-173.4	-35.2	176.9	1.69	501,575.56	508,245.93
3,700.0	20.28	191.47	3,675.1	-222.7	-206.0	-41.8	210.2	1.69	501,542.95	508,239.32
3,800.0	21.97	191.47	3,768.4	-129.4	-241.3	-49.0	246.2	1.69	501,507.63	508,232.15
3,854.1	22.89	191.47	3,818.4	-79.4	-261.5	-53.1	266.9	1.69	501,487.40	508,228.04
3,900.0	22.89	191.47	3,860.7	-37.1	-279.0	-56.6	284.7	0.00	501,469.90	508,224.49
4,000.0	22.89	191.47	3,952.8	55.0	-317.2	-64.4	323.6	0.00	501,431.79	508,216.76
4,070.6	22.89	191.47	4,017.8	120.0	-344.1	-69.8	351.1	0.00	501,404.89	508,211.30
Bone Springs Lm										
4,100.0	22.89	191.47	4,044.9	147.1	-355.3	-72.1	362.5	0.00	501,393.67	508,209.02
4,200.0	22.89	191.47	4,137.0	239.2	-393.4	-79.8	401.4	0.00	501,355.56	508,201.29
4,300.0	22.89	191.47	4,229.2	331.4	-431.5	-87.6	440.3	0.00	501,317.44	508,193.55
4,400.0	22.89	191.47	4,321.3	423.5	-469.6	-95.3	479.2	0.00	501,279.33	508,185.82

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18.8 @ 3897.8usft (Silver Oak 10)
Site:	Koonunga Hill BGX	MD Reference:	KB = 18.8 @ 3897.8usft (Silver Oak 10)
Well:	#2	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
4,483.0	22.89	191.47	4,397.8	500.0	-501.3	-101.7	511.5	0.00	501,247.68	508,179.39
1st Bone Spring Sand										
4,500.0	22.89	191.47	4,413.4	515.6	-507.7	-103.0	518.1	0.00	501,241.21	508,178.08
4,600.0	22.89	191.47	4,505.6	607.8	-545.8	-110.8	557.0	0.00	501,203.10	508,170.35
4,700.0	22.89	191.47	4,597.7	699.9	-584.0	-118.5	595.9	0.00	501,164.98	508,162.61
4,800.0	22.89	191.47	4,689.8	792.0	-622.1	-126.2	634.8	0.00	501,126.87	508,154.88
4,900.0	22.89	191.47	4,781.9	884.1	-660.2	-134.0	673.6	0.00	501,088.75	508,147.14
5,000.0	22.89	191.47	4,874.1	976.3	-698.3	-141.7	712.5	0.00	501,050.64	508,139.41
5,100.0	22.89	191.47	4,966.2	1,068.4	-736.4	-149.4	751.4	0.00	501,012.52	508,131.67
5,200.0	22.89	191.47	5,058.3	1,160.5	-774.5	-157.2	790.3	0.00	500,974.41	508,123.94
5,300.0	22.89	191.47	5,150.4	1,252.6	-812.6	-164.9	829.2	0.00	500,936.29	508,116.20
5,400.0	22.89	191.47	5,242.6	1,344.8	-850.8	-172.7	868.1	0.00	500,898.18	508,108.47
5,500.0	22.89	191.47	5,334.7	1,436.9	-888.9	-180.4	907.0	0.00	500,860.06	508,100.73
5,600.0	22.89	191.47	5,426.8	1,529.0	-927.0	-188.1	945.9	0.00	500,821.95	508,093.00
5,622.8	22.89	191.47	5,447.8	1,550.0	-935.7	-189.9	954.7	0.00	500,813.27	508,091.23
2nd Bone Spring Sand										
5,700.0	22.89	191.47	5,519.0	1,621.2	-965.1	-195.9	984.8	0.00	500,783.84	508,085.26
5,800.0	22.89	191.47	5,611.1	1,713.3	-1,003.2	-203.6	1,023.7	0.00	500,745.72	508,077.53
5,900.0	22.89	191.47	5,703.2	1,805.4	-1,041.3	-211.3	1,062.6	0.00	500,707.61	508,069.79
6,000.0	22.89	191.47	5,795.3	1,897.5	-1,079.5	-219.1	1,101.5	0.00	500,669.49	508,062.06
6,100.0	22.89	191.47	5,887.5	1,989.7	-1,117.6	-226.8	1,140.3	0.00	500,631.38	508,054.32
6,202.2	22.89	191.47	5,981.6	2,083.8	-1,156.5	-234.7	1,180.1	0.00	500,592.41	508,046.41
6,300.0	21.23	191.47	6,072.2	2,174.4	-1,192.5	-242.0	1,216.8	1.69	500,556.42	508,039.11
6,400.0	19.54	191.47	6,166.0	2,268.2	-1,226.7	-248.9	1,251.7	1.69	500,522.28	508,032.18
6,500.0	17.85	191.47	6,260.7	2,362.9	-1,258.1	-255.3	1,283.7	1.69	500,490.86	508,025.80
6,600.0	16.16	191.47	6,356.3	2,458.5	-1,286.7	-261.1	1,313.0	1.69	500,462.20	508,019.99
6,700.0	14.47	191.47	6,452.8	2,555.0	-1,312.6	-266.4	1,339.4	1.69	500,436.31	508,014.73

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18.8 @ 3897.8usft (Silver Oak 10)
Site:	Koonunga Hill BGX	MD Reference:	KB = 18.8 @ 3897.8usft (Silver Oak 10)
Well:	#2	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
6,800.0	12.78	191.47	6,549.9	2,652.1	-1,335.7	-271.1	1,363.0	1.69	500,413.21	508,010.05
6,900.0	11.09	191.47	6,647.8	2,750.0	-1,356.0	-275.2	1,383.6	1.69	500,392.94	508,005.93
7,000.0	9.40	191.47	6,746.2	2,848.4	-1,373.4	-278.7	1,401.4	1.69	500,375.51	508,002.39
7,100.0	7.71	191.47	6,845.1	2,947.3	-1,388.0	-281.7	1,416.3	1.69	500,360.92	507,999.44
7,200.0	6.02	191.47	6,944.3	3,046.5	-1,399.7	-284.1	1,428.3	1.69	500,349.21	507,997.06
7,300.0	4.33	191.47	7,043.9	3,146.1	-1,408.6	-285.9	1,437.3	1.69	500,340.36	507,995.26
7,400.0	2.64	191.47	7,143.7	3,245.9	-1,414.5	-287.1	1,443.4	1.69	500,334.40	507,994.05
7,500.0	0.95	191.47	7,243.7	3,345.9	-1,417.6	-287.7	1,446.5	1.69	500,331.33	507,993.43
7,556.3	0.00	0.00	7,300.0	3,402.2	-1,418.1	-287.8	1,447.0	1.69	500,330.87	507,993.34
7,594.1	0.00	0.00	7,337.8	3,440.0	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
3rd Bone Spring Sand										
7,600.0	0.00	0.00	7,343.7	3,445.9	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
7,700.0	0.00	0.00	7,443.7	3,545.9	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
7,800.0	0.00	0.00	7,543.7	3,645.9	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
7,894.1	0.00	0.00	7,637.8	3,740.0	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
Wolfcamp										
7,900.0	0.00	0.00	7,643.7	3,745.9	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
8,000.0	0.00	0.00	7,743.7	3,845.9	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
8,100.0	0.00	0.00	7,843.7	3,945.9	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
8,200.0	0.00	0.00	7,943.7	4,045.9	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
8,300.0	0.00	0.00	8,043.7	4,145.9	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
8,324.1	0.00	0.00	8,067.8	4,170.0	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
Cisco-Canyon Dolomite										
8,400.0	0.00	0.00	8,143.7	4,245.9	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
8,500.0	0.00	0.00	8,243.7	4,345.9	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
8,600.0	0.00	0.00	8,343.7	4,445.9	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
8,700.0	0.00	0.00	8,443.7	4,545.9	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
8,800.0	0.00	0.00	8,543.7	4,645.9	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18.8 @ 3897.8usft (Silver Oak 10)
Site:	Koonunga Hill BGX	MD Reference:	KB = 18.8 @ 3897.8usft (Silver Oak 10)
Well:	#2	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
8,900.0	0.00	0.00	8,643.7	4,745.9	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
9,000.0	0.00	0.00	8,743.7	4,845.9	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
9,034.1	0.00	0.00	8,777.8	4,880.0	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34
Base of Dolomite										
9,056.3	0.00	0.00	8,800.0	4,902.2	-1,418.1	-287.8	1,447.0	0.00	500,330.87	507,993.34

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
3,000.0	2,998.2	9 5/8"	9-5/8	12-1/4

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
9,034.1	8,777.8	Base of Dolomite		0.00	
1,617.8	1,617.8	Cherry Canyon		0.00	
597.8	597.8	Capitan		0.00	
4,070.6	4,017.8	Bone Springs Lm		0.00	
2,347.8	2,347.8	Brushy Canyon		0.00	
8,324.1	8,067.8	Cisco-Canyon Dolomite		0.00	
7,594.1	7,337.8	3rd Bone Spring Sand		0.00	
4,483.0	4,397.8	1st Bone Spring Sand		0.00	
7,894.1	7,637.8	Wolfcamp		0.00	
5,622.8	5,447.8	2nd Bone Spring Sand		0.00	

Checked By: _____ Approved By: _____ Date: _____

ATES PETROLEUM CORPORATION

Project: Eddy County (NAD 83)
Site: Koonunga Hill BGX
Well: #2
Wellbore: OH
Plan: Plan #2

PATHFINDER®
A Schlumberger Company

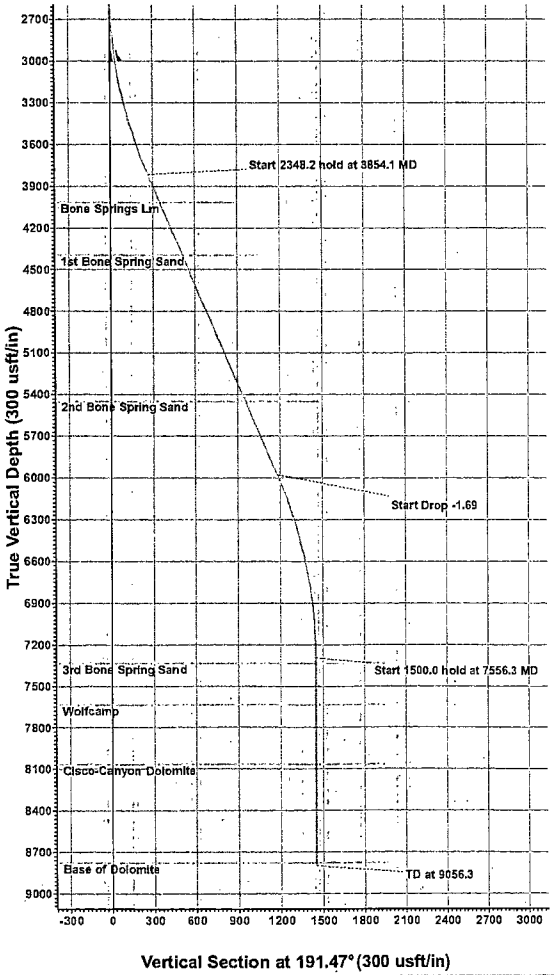
WELL DETAILS: #2

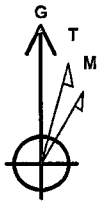
Ground Elevation:: 3879.0
RKB Elevation: KB = 18.8 @ 3897.8usft (Silver Oak 10)
Rig Name: Silver Oak 10

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	501748.944	508281.120	32°22' 45.594 N	104°26' 25.491 W	

DESIGN TARGET DETAILS

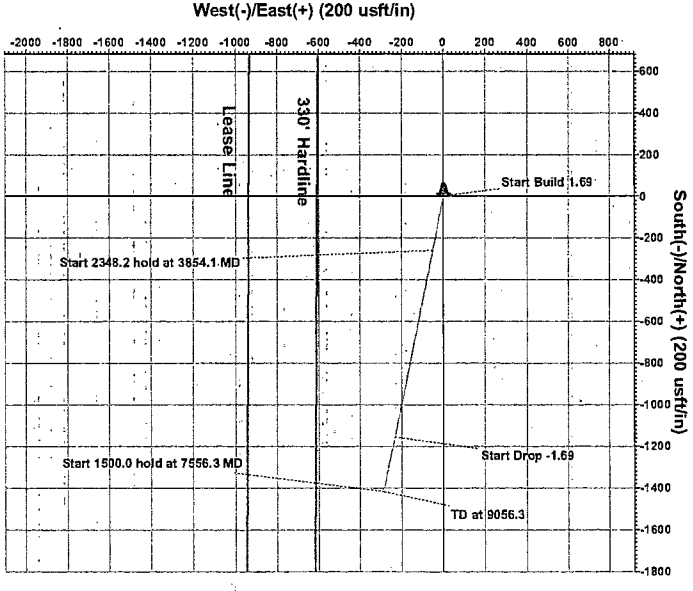
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL (#2)	8800.0	-1418.1	-287.8	500330.870	507993.336	32° 22' 31.558 N	104° 26' 28.830 W





Azimuths to Grid North
True North: 0.06°
Magnetic North: 7.97°

Magnetic Field
Strength: 48590.7snT
Dip Angle: 60.19°
Date: 1/14/2012
Model: IGRF200510



PROJECT DETAILS: Eddy County (NAD 83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2500.0	0.00	0.00	2500.0	0.0	0.0	0.00	0.00	0.0	
3	3854.1	22.89	191.47	3818.4	-261.5	-53.1	1.69	191.47	266.9	
4	5202.2	22.89	191.47	5981.6	-1156.5	-234.7	0.00	0.00	1180.1	
5	7556.3	0.00	0.00	7300.0	-1418.1	-287.8	1.69	180.00	1447.0	
6	9056.3	0.00	0.00	8800.0	-1418.1	-287.8	0.00	0.00	1447.0	PBHL (#2)

Project: Eddy County (NAD 83)
Site: Koonunga Hill BGX
Well: #2
Wellbore: OH
Plan: Plan #2 (#2/OH)

Plan: Plan #2 (#2/OH)
Created By: Sam Biffle Date: 15:40, January 18 2012
Checked: _____ Date: _____

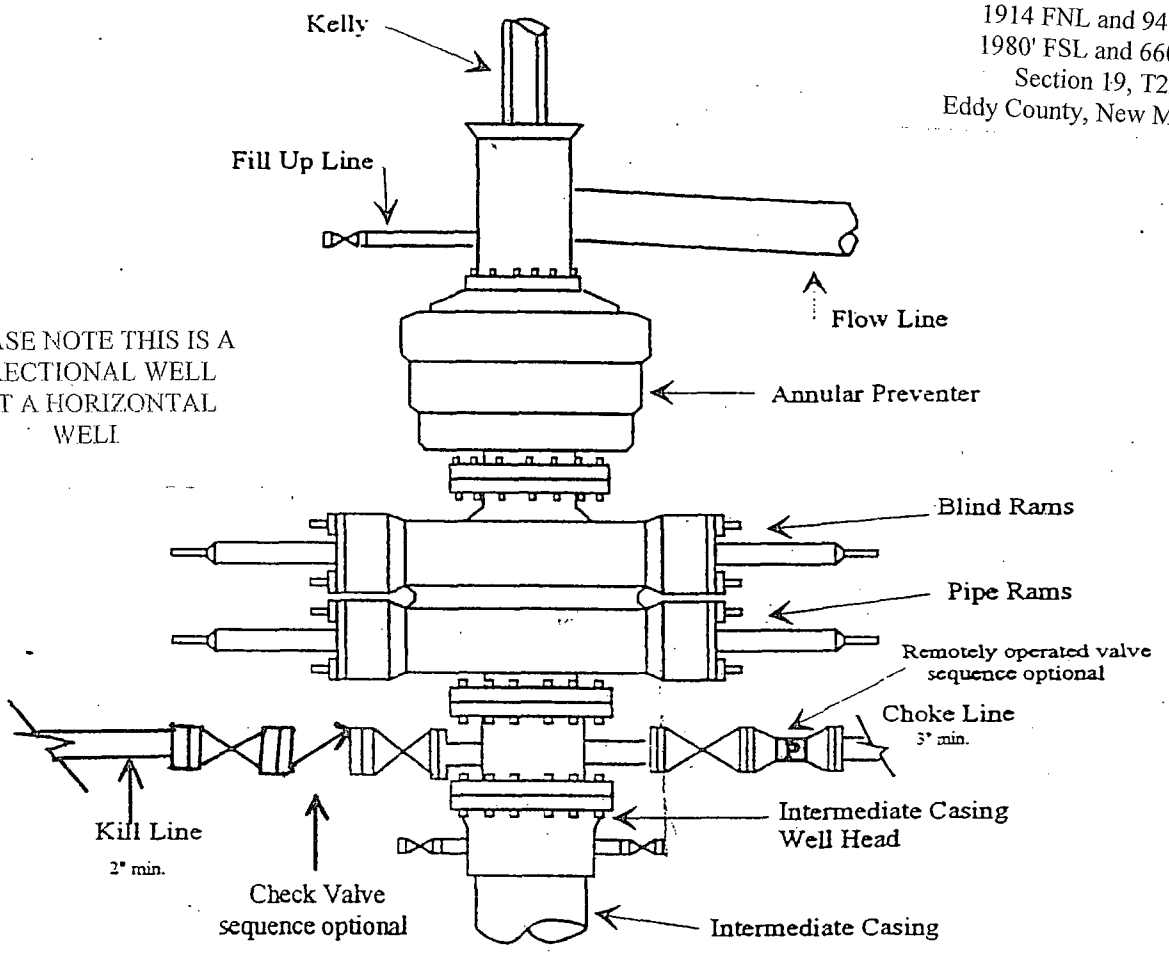
BOP-4

Yates Petroleum Corporation

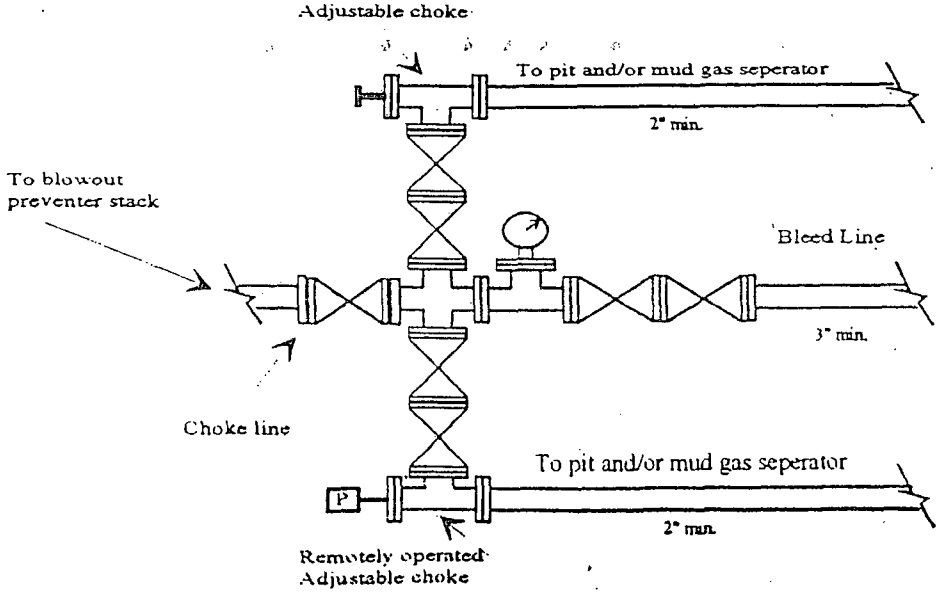
Typical 5,000 psi Pressure System Schematic
Annular with Double Ram Preventer Stack

YATES PETROLEUM CORPORATION
Koonunga Hill BGX Federal #2
1914 FNL and 940' FWL SHL
1980' FSL and 660' FWL BHL
Section 19, T22S-R25E
Eddy County, New Mexico ExhibitC

PLEASE NOTE THIS IS A DIRECTIONAL WELL NOT A HORIZONTAL WELL

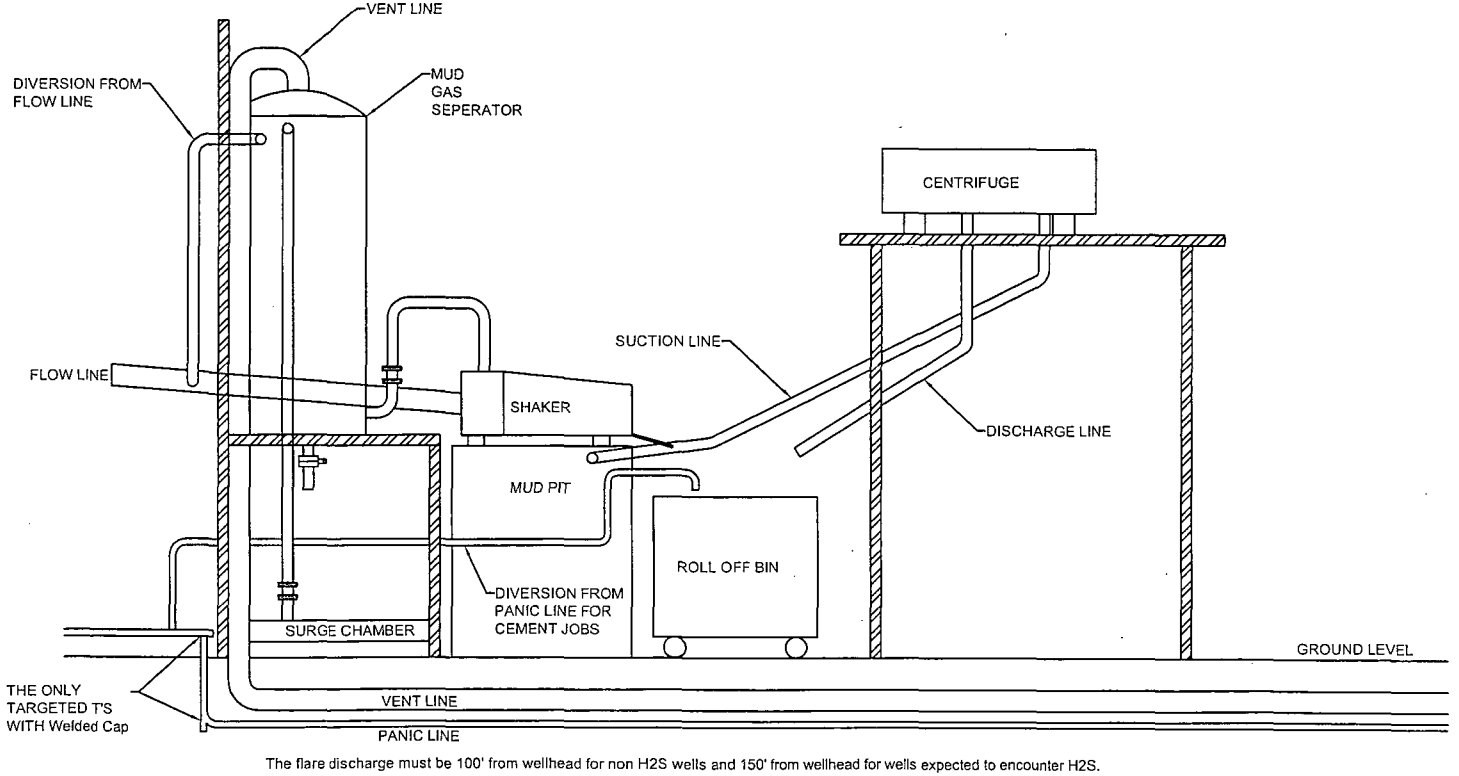


Typical 5,000 psi choke manifold assembly with at least these minimun features



YATES PETROLEUM CORPORATION

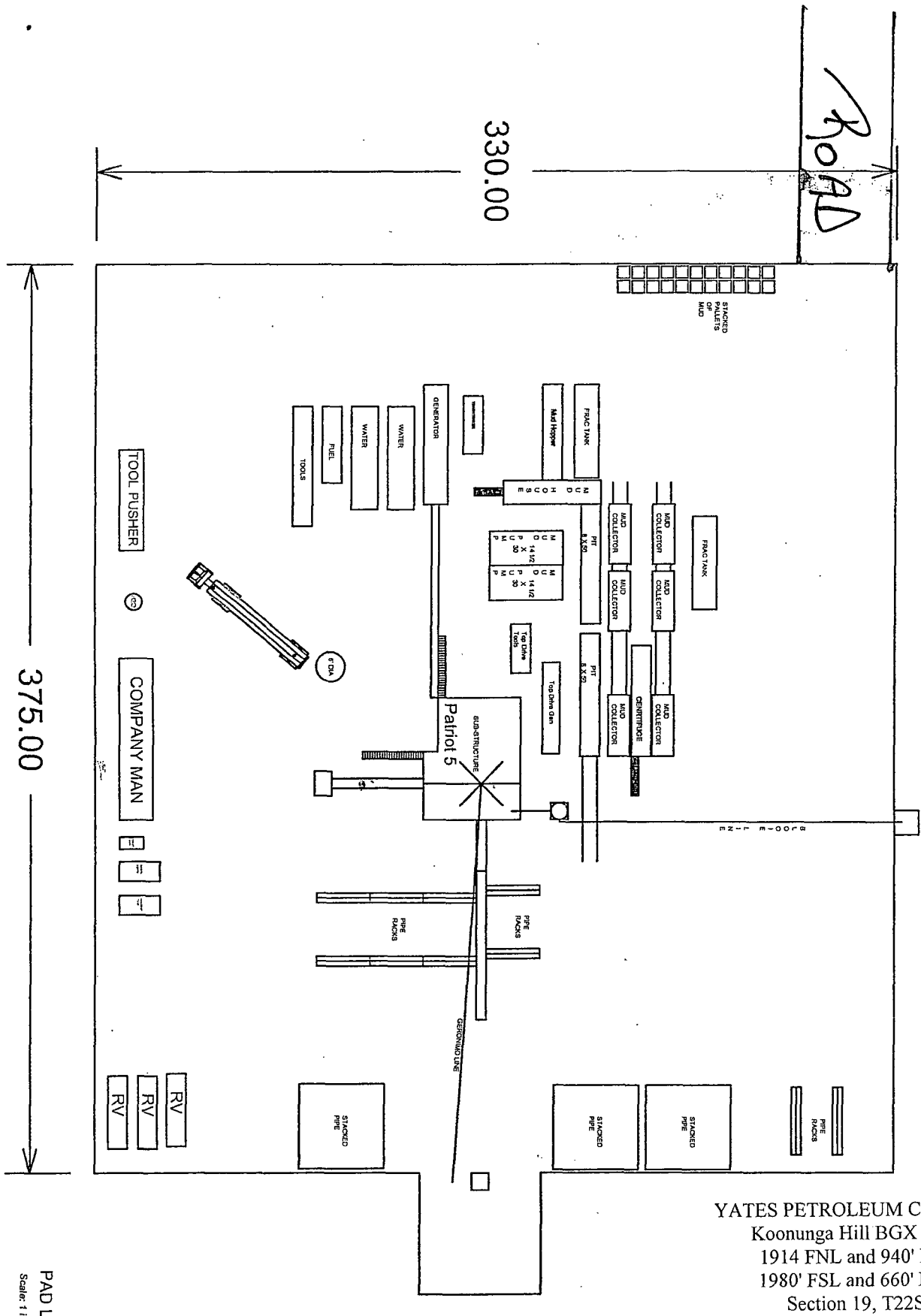
Piping from Choke Manifold
to the Closed Loop Drilling Mud System



The flare discharge must be 100' from wellhead for non H2S wells and 150' from wellhead for wells expected to encounter H2S.

YATES PETROLEUM CORPORATION
Koonunga Hill BGX Federal #2
1914 FNL and 940' FWL SHL
1980' FSL and 660' FWL BHL
Section 19, T22S-R25E
Eddy County, New Mexico ExhibitD

PLEASE NOTE THIS IS A
DIRECTIONAL WELL
NOT A HORIZONTAL
WELL



YATES PETROLEUM CORPORATION

YATES PETROLEUM CORPORATION
Koonunga Hill BGX Federal #2
1914 FNL and 940' FWL SHL
1980' FSL and 660' FWL BHL
Section 19, T22S-R25E
Eddy County, New Mexico ExhibitB

PAD LAYOUT
Scale: 1 inch = 60 feet

PLEASE NOTE THIS IS A DIRECTIONAL WELL NOT A HORIZONTAL WELL

Yates Petroleum Corporation

105 S. Fourth Street
Artesia, NM 88210

Hydrogen Sulfide (H_2S) ~~Contingency~~ Drilling Plan

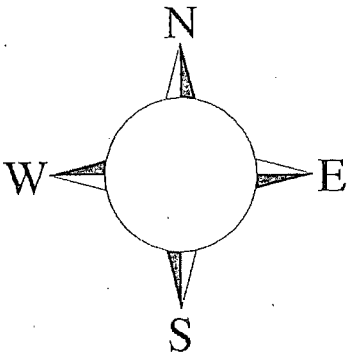
For

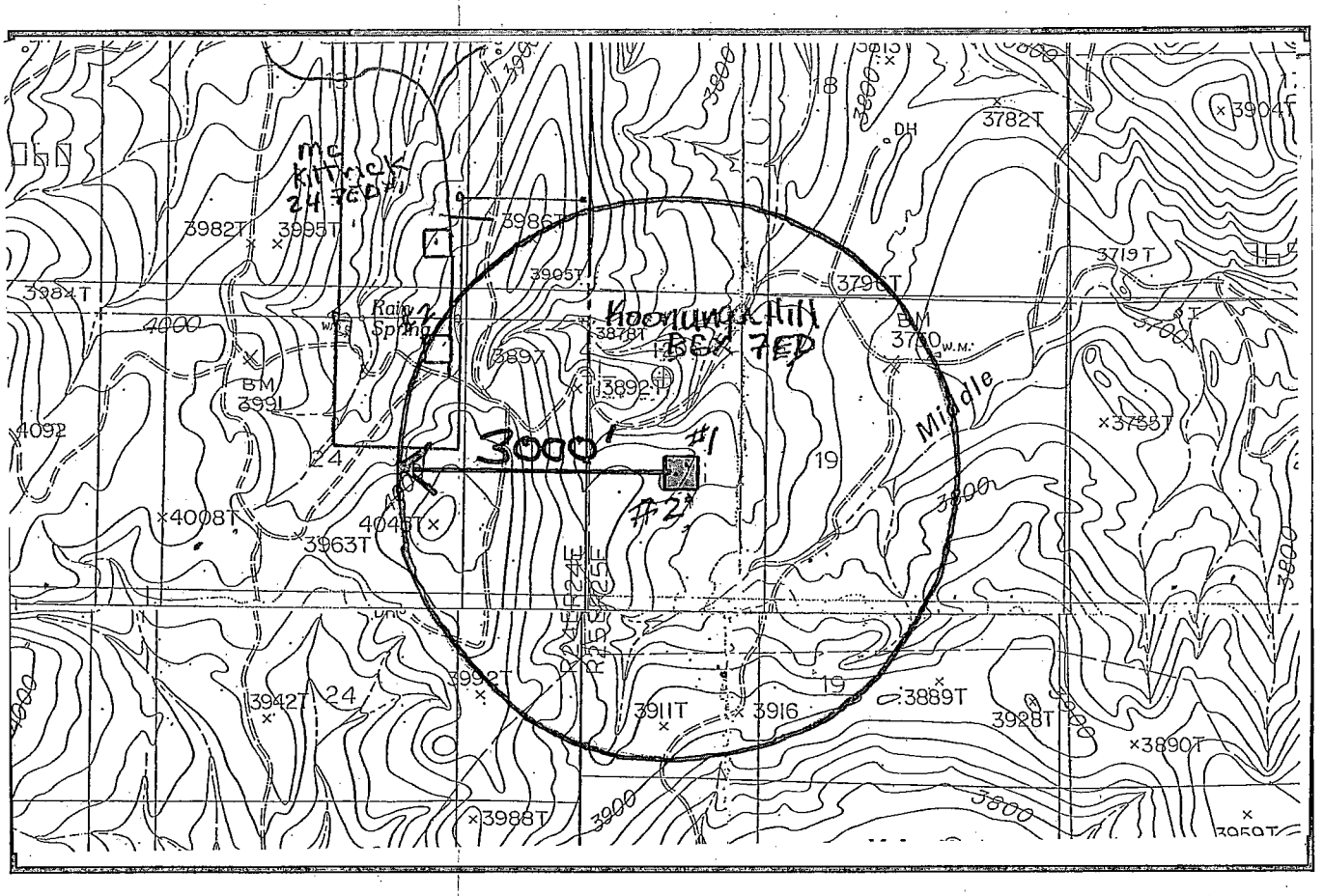
Koonunga Hill BGX Federal #2H

1914' FNL and 940' FWL
Section 19, T22S,-R25E
Eddy County, NM

Koonunga Hill BGX Federal #2H

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





Assumed 100 ppm ROE = 3000'

100 ppm H2S concentration shall trigger activation of this plan.

Emergency Procedures

In the case of a release of gas containing H_2S, the first responder(s) must isolate the area and prevent entry by other persons into the 100 ppm ROE. Additionally the first responder(s) must evacuate any public places encompassed by the 100 ppm ROE. First responder(s) must take care not to injure themselves during this operation. Company and/or local officials must be contacted to aid in this operation. Evacuation of the public should be beyond the 100 ppm ROE.

All responders must have training in the detection of H_2S, measures for protection against the gas, equipment used for protection and emergency response. Additionally, responders must be equipped with H_2S monitors and air packs in order to control the release. Use the "buddy system' to ensure no injuries during the response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentr-ation
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

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

Yates Petroleum Corporation Phone Numbers

YPC Office ..... (575) 748-1471
Pinson Mc Whorter/Operations Manager ..... (575) 748-4189
Wade Bennett/Prod Superintendent ..... (575) 748-4236
LeeRoy Richards/Assistant Prod Superintendent (575) 748-4228
Mike Larkin/Drilling ..... (575) 748-4222
Paul Hanes/Prod. Foreman/Roswell ..... (575) 624-2805
Tim Bussell/Drilling Superintendent ..... (575) 748-4221
Artesia Answering Service ..... (575) 748-4302
(During non-office hours)

Agency Call List

Eddy County (575)

Artesia

State Police 746-2703
City Police 746-2703
Sheriff's Office 746-9888
Ambulance 911
Fire Department 746-2701
LEPC (Local Emergency Planning Committee) 746-2122
NMOCD 748-1283

Carlsbad

State Police 885-3137
City Police 885-2111
Sheriff's Office 887-7551
Ambulance 911
Fire Department 885-2111
LEPC (Local Emergency Planning Committee) 887-3798
US Bureau of Land Management 887-6544
New Mexico Emergency Response Commission (Santa Fe) (505)476-9600
24 HR ..... (505) 827-9126
New Mexico State Emergency Operations Center ..... (505) 476-9635
National Emergency Response Center (Washington, DC) ...(800) 424-8802

Other

Boots & Coots IWC ..... 1-800-256-9688 or (281) 931-8884
Cudd Pressure Control ..... (915) 699-0139 or (915) 563-3356
Halliburton ..... (575) 746-2757
B. J. Services ..... (575) 746-3569

Flight For Life -4000 24th St, Lubbock, TX ..... (806) 743-9911
Aerocare -Rr 3 Box 49f, Lubbock, TX ..... (806) 747-8923
Med Flight Air Amb 2301 Yale Blvd SE #D3, Albuq, NM ..... (505) 842-4433
S B Air Med Svc 2505 Clark Carr Loop SE, Albuq, NM ..... (505) 842-4949

Yates Petroleum Corporation

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H2S).
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H2S on metal components. If high tensile tubular are to be used, personnel well be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H2S Drilling Operations Plan and H2S Contingency Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operation Plan and the H2S Contingency Plan. **The location of this well does not require a Public Protection Plan.**

II. H2S SAFETY EQUIPMENT AND SYSTEMS

NOTE: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H2S.

1. Well Control Equipment:

A. Flare line

B. Choke manifold

C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit

D. Auxiliary equipment may include if applicable: annular preventer & rotating head.

2. Protective equipment for essential personnel:

A. Mark II Survive Air (or equivalent) 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.

3. H2S detection and monitoring equipment:

A. 3 portable H2S monitors positioned at: Shale Shaker, Bell Nipple, and Rig Floor. These units have warning lights and audible sirens when H2S levels of 10 PPM are reached.

4. Visual warning systems:

A. Wind direction indicators as shown on well site diagram (attached).

B. Caution/Danger signs (attached) shall be posted on roads providing direct access to location. Signs will be painted with high visibility yellow with black lettering of a sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

5. Mud program:

A. The mud program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weight, safe drilling practices and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

6. Metallurgy:

A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

B. All elastomers used for packing and seals shall be H2S trim.

7. Communication:

A. Cellular communications in company vehicles.

B. Land line (telephone) communication at the Office.

8. Well testing:

A. There will be no drill stem testing.

EXHIBIT

DANGER

POISONS GAS

HYDROGEN SULFIDE

NORMAL OPERATIONS
(GREEN)

CAUTION POTENTIAL DANGER
(YELLOW)

DANGER POISONS GAS ENCOUNTERED
(RED) AUTHORIZED PERSONAL ONLY.
LOCATION SECURED.

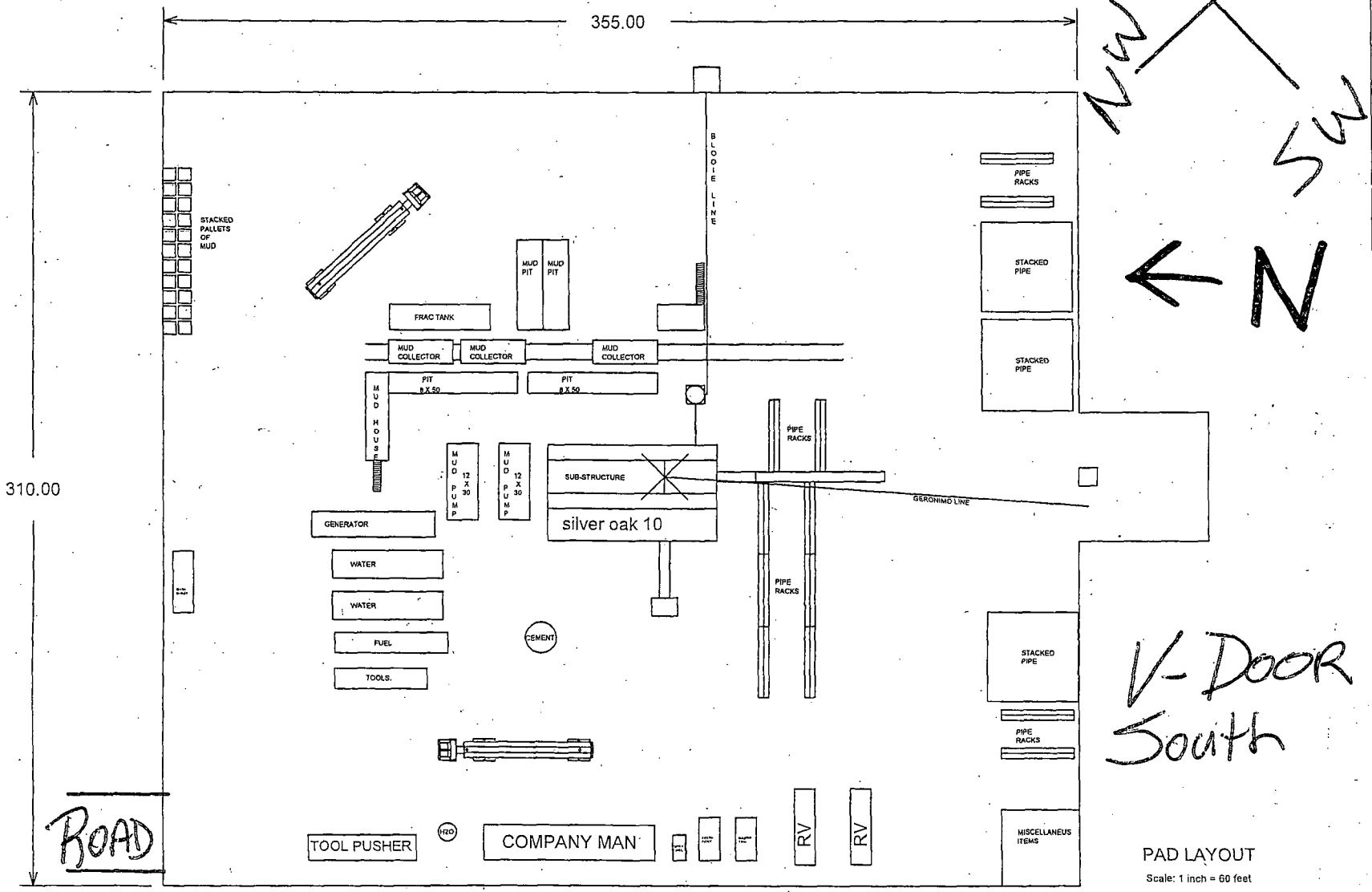
1-575-746-1096
1-877-879-8899

EDDY COUNTY EMERGENCY NUMBERS
ARTESIA FIRE DEPT. 575-746-5050
ARTESIA POLICE DEPT. 575-746-5000
EDDY CO. SHERIFF DEPT. 575-746-9888

LEA COUNTY EMERGENCY NUMBERS
HOBBS FIRE DEPT. 575-397-9308
HOBBS POLICE DEPT. 575-397-9285
LEA CO. SHERIFF DEPT. 575-396-1196

Koonunga Hill
BGX 7ED #2H

YATES PETROLEUM CORPORATION

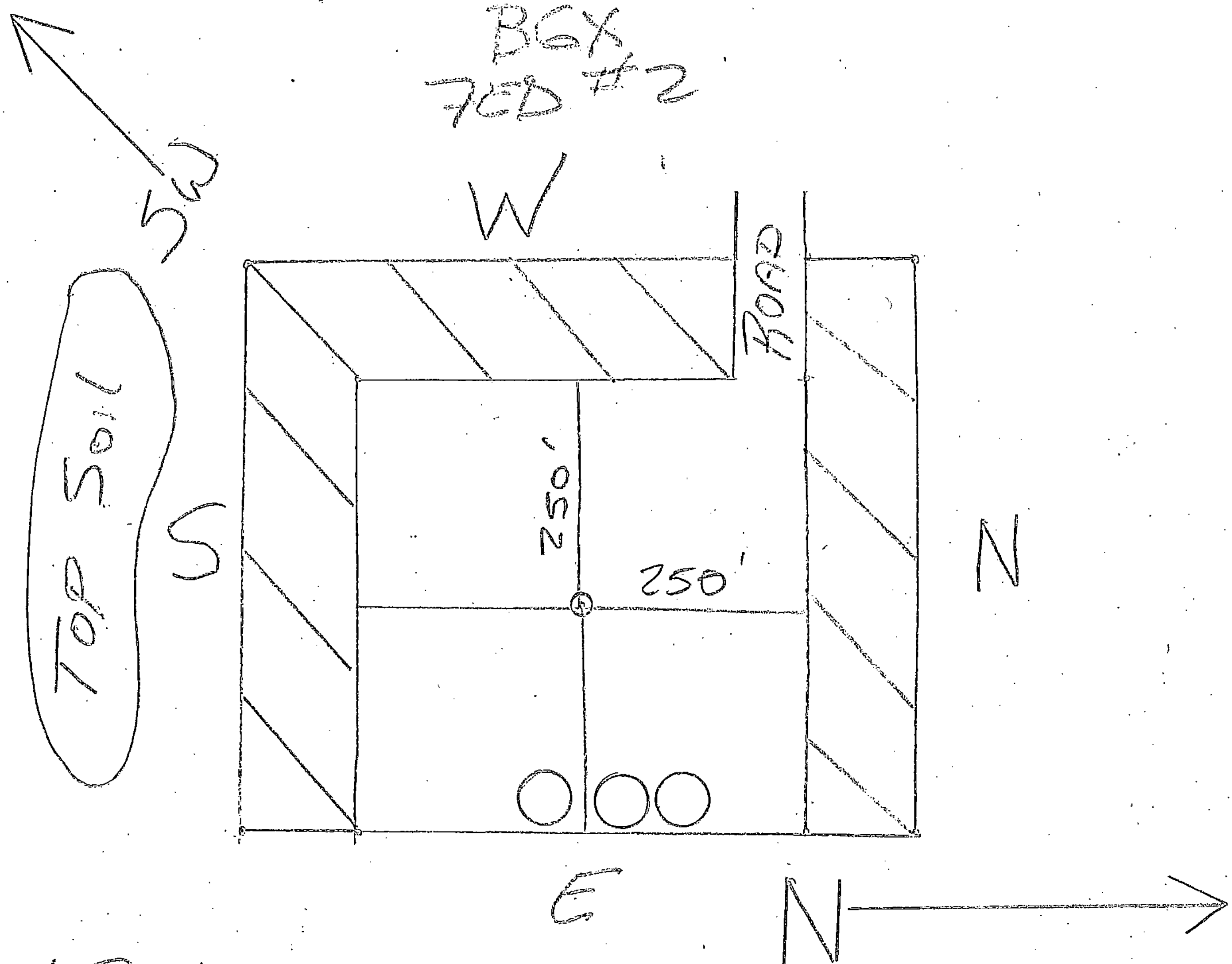


PAD LAYOUT

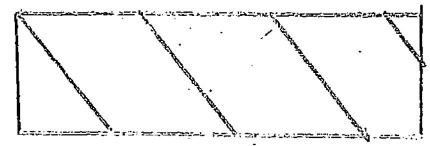
Scale: 1 inch = 60 feet

V Door Southwest

Relaimation PLAT
Koonunga Hill
BGX
7CD #2



Final Reclaimation may Look Different Than This PLAT.



Possible Reclaimed Area

MULTI-POINT SURFACE USE AND OPERATIONS PLAN
Yates Petroleum Corporation
Koonunga Hill BGX Federal #2
1914' FNL and 940' FWL Surface Location
1980' FSL and 660' FWL Bottom Hole Location
Section 19-T22S-R25E
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 wellsite is located approximately 13 miles southwest of Carlsbad, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

Go north of Carlsbad on Highway 285 for approximately 9.5 miles to Waterhole Road. Turn right on Waterhole Road and go approximately 9.2 miles. Turn left here and follow lease road for approximately .8 of a mile to Nearburg's McKittrick 24 Federal #1 well. Continue south past the #1 well going south to the McKittrick 24 Federal #2. From the northeast corner of the #2 well pad a new portion of road will be built going south for approximately 400 feet to an old two track road. Turn left here on the two track and go approximately .2 of a mile to a cattle guard. Cross cattleguard and follow two track road for approximately .1 of a mile. The new road will start here going southeast up the hill to the northwest corner of the proposed well pad.

2. PLANNED ACCESS ROAD

The new access road will be approximately .1 of a mile in length from the point of origin to the northwest corner of the well pad.

3. LOCATION OF EXISTING WELL

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

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

A. There are ~~no~~ production facilities on this lease at the present time.
B. If the well is productive oil, a gas or diesel self-contained unit will be used to provide the necessary power until an electric line can be built, if needed. Power should not be required if the well is productive of gas.

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 locate closest pit and will obtain any permits and materials for needed for construction.

7. METHODS OF HANDLING WASTE DISPOSAL:

A. Drill cuttings will be collected in tanks until hauled to an approved disposal system.
B. A closed loop system will be constructed, maintained and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division—the "Pit Rule" 19.15.17 NMAC. Form C-144 attached – Exhibit E.
C. Drilling fluids will be removed after drilling and completions are finalized.
D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.
E. Oil produced during operations will be stored in tanks until sold.
F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
G. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not approved.

8. ANCILLARY FACILITIES: None

9. WELLSITE LAYOUT:
A. Exhibit C – C1 shows the relative location and dimensions of the well pad, the closed loop design plan, the location of the drilling equipment, orientation and access road approach
(Approximately 4.5 acres)
B. The closed loop system will be constructed, maintained, and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division – the "Pit Rule" 19.15.17 NMAC. Form C-144 is attached – Exhibit E.
C. A 600' x 600' area has been staked and flagged.

10. PLANS FOR RESTORATION

A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible.
B. If the proposed well is plugged and abandoned, 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: Federal surface, Administered by the Bureau of Land Management, Carlsbad, New Mexico.

12. OTHER INFORMATION:

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

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	YATES PETROLEUM CORPORATION
LEASE NO.:	NM103594
WELL NAME & NO.:	2 KOONUNGA HILL BGX FEDERAL
SURFACE HOLE FOOTAGE:	1914' FNL & 940' FWL
BOTTOM HOLE FOOTAGE	1980' FSL & 660' FWL
LOCATION:	Section 19, T.22 S., R.25 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.

V. SPECIAL REQUIREMENT(S)

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, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

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

Cave/Karst Subsurface Mitigation

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

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

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) 234-6235 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 in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

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

Payment shall be made to the BLM prior to removal of any federal mineral materials. 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 twenty (20) 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.

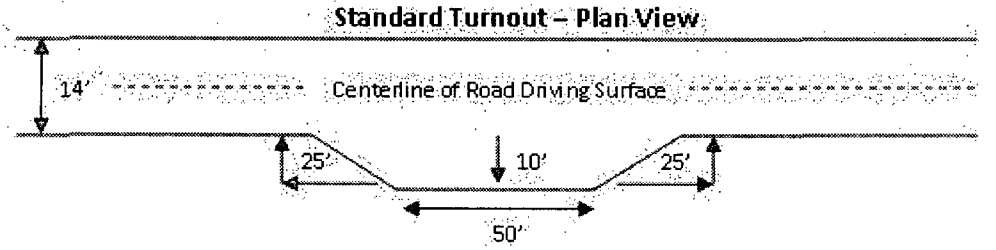
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing 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.

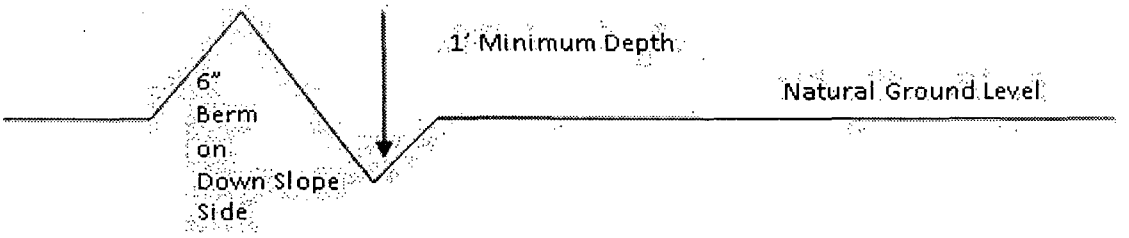
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

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

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

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

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

Fence Requirement

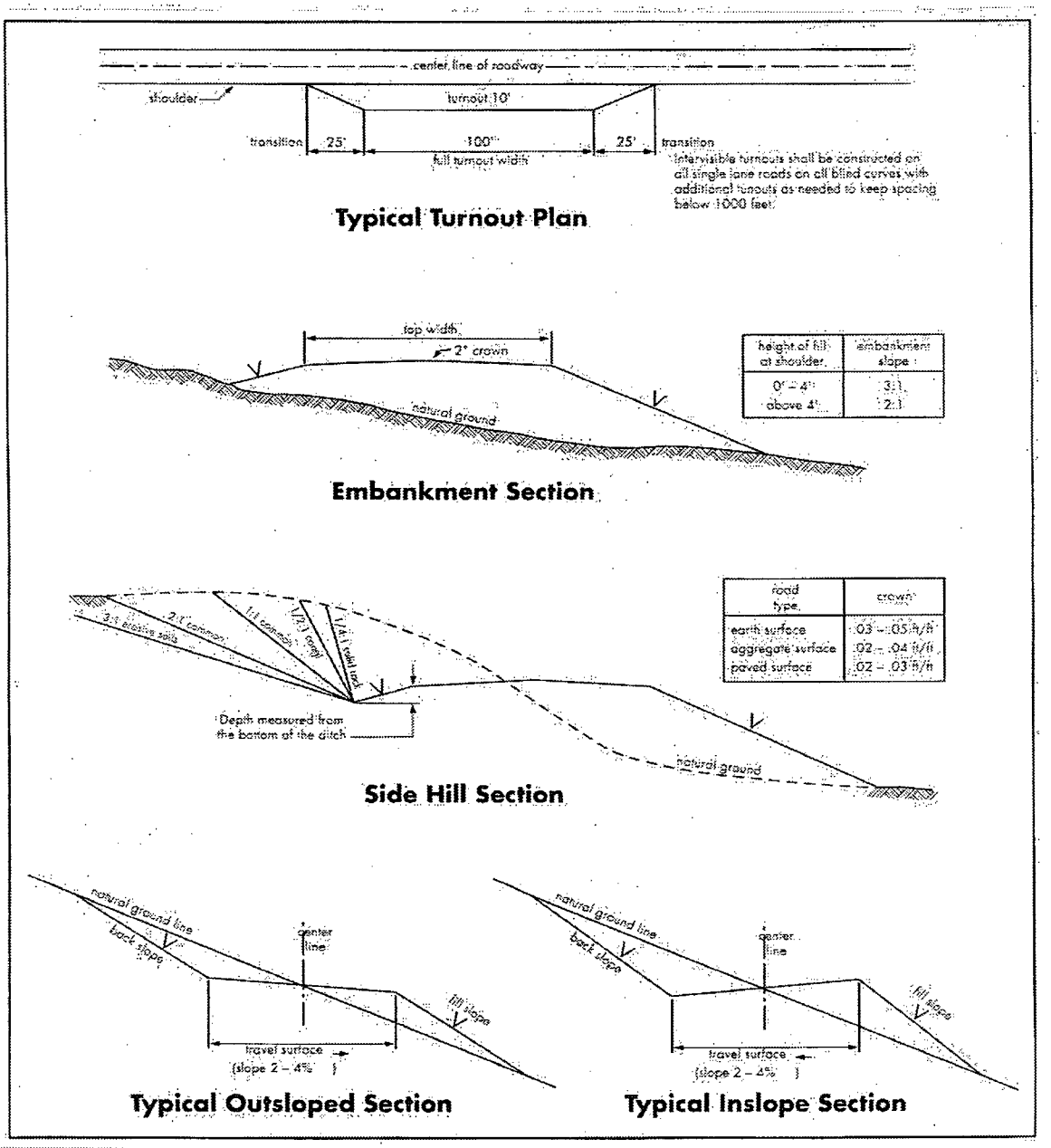
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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

Public Access

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

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

1. A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Wolfcamp** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

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 is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time prior to drilling out 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. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. 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.

CRITICAL CAVE/KARST – A MINIMUM OF THREE CASING STRINGS CEMENTED TO SURFACE IS REQUIRED IN CRITICAL CAVE/KARST AREAS. THE CEMENT MUST BE IN A SOLID SHEATH THEREFORE, ONE INCH OPERATIONS WILL NOT BE PERMITTED. CONTACT BLM WITH MODIFICATIONS TO CEMENT PROGRAM AS NEEDED.

Possible lost circulation in the Capitan Reef.
Possible high pressure in the Wolfcamp and Pennsylvanian section

1. The **13-3/8** inch surface casing shall be set at **approximately 500** feet and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    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.

Formation below the 13-3/8" 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 and the mud weight for the bottom of the hole. Report results to BLM office.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

   ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

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 and the mud weight for the bottom of the hole. Report results to BLM office.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   a. First stage to DV tool:

   ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

   b. Second stage above DV tool:

   ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with third stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

   c. Third stage above DV tool:

   ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

    c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock.

    d. The results of the test shall be reported to the appropriate BLM office.

    e. 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.**

    f. 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. This test shall be performed prior to the test at full stack pressure.

g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

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

F. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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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

B. PIPELINES (not applied for in APD)

C. ELECTRIC LINES (not applied for in APD)

IX. 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.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation 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 that is free of contaminants 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.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

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:

Species	lb/acre
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