

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

OCD-ARTESIA

RECEIVED
JUL 16 2010
NMOC-ARTESIA

AT 5-10-539

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM 044698 NM 0144698	
1b. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Mewbourne Oil Company 14744		7. If Unit or CA Agreement, Name and No.	
3a. Address PO Box 5270 Hobbs, NM 88241		8. Lease Name and Well No. Colt 5 Federal #3H 37756	
3b. Phone No. (include area code) 575-393-5905		9. API Well No. 30-015-38064	
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 330' FSL & 990' FEL Unit P At proposed prod zone 330' FNL & 400' FEL (BHL) Unit A		10. Field and Pool, or Exploratory Winchester Bone Spring 65010	
14. Distance in miles and direction from nearest town or post office* 8 miles S of Loco Hills, NM		11. Sec, T, R, M., or Blk. and Survey or Area Sec 5 - T20S - R29E	
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) 330'		12. County or Parish Eddy	
16. No. of Acres in lease 640		13. State NM	
17. Spacing Unit dedicated to this well 163.06			
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft NA		20. BLM/BIA Bond No. on file NM1693, Nationwide	
21. Elevations (Show whether DF, KDB, RT, GL, etc) 3291' GL		22. Approximate date work will start* ASAP	
		23. Estimated duration 45	

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

25. Signature Jackie Lathan	Name (Printed/Typed) Jackie Lathan	Date 05/04/10
Title Hobbs Regulatory		
Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed)	Date JUL 15 2010
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 conduct 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 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 reverse)

Capitan Controlled Water Basin

KZ

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

DISTRICT I
1636 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 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 30-015-38064	Pool Code 65010	Pool Name Winchester Bone Spring
Property Code 37756	Property Name COLT "5" FEDERAL	Well Number 3H
OGRID No. 14744	Operator Name MEWBOURNE OIL COMPANY	Elevation 3291'

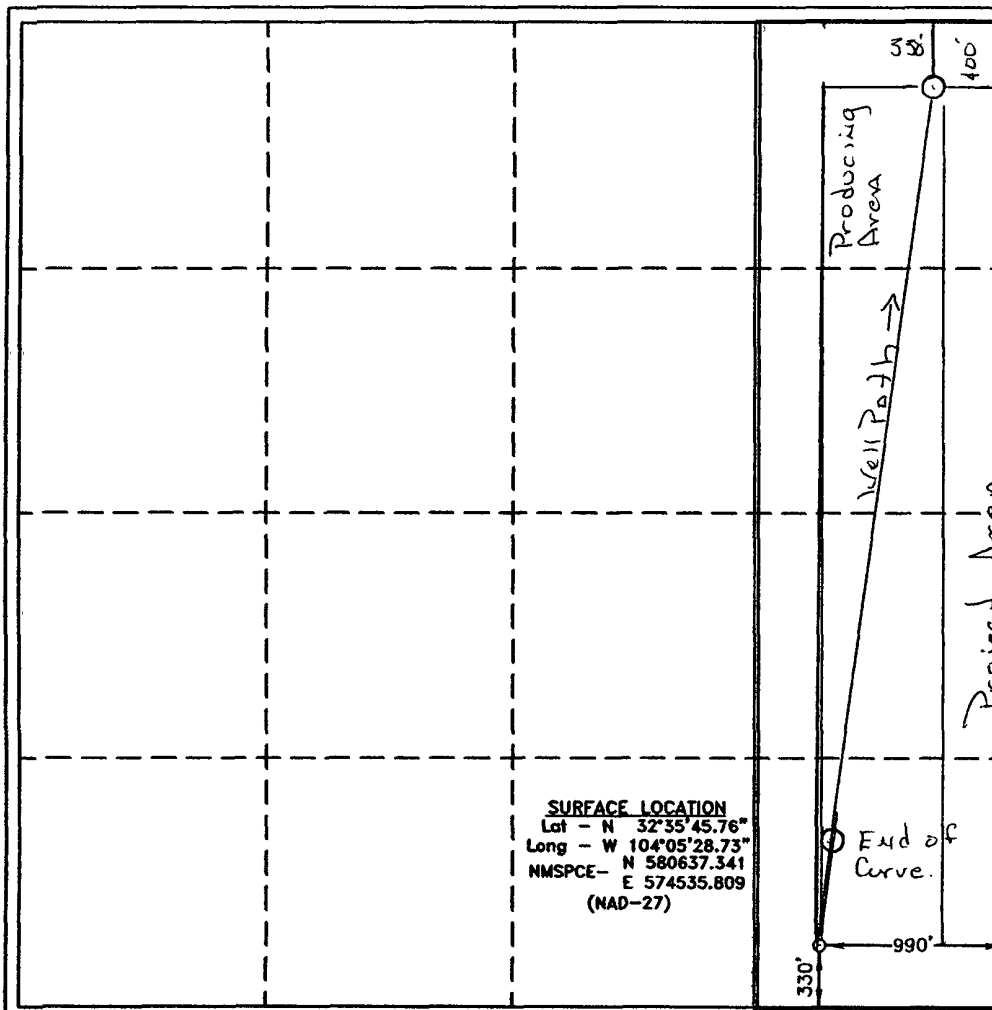
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	5	20 S	29 E		330	SOUTH	990	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	5	20 S	29 E		330	North	400	East	Eddy
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

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

 <p>SURFACE LOCATION Lat - N 32°55'45.76" Long - W 104°05'28.73" NMSPC - N 580637.341 E 574535.809 (NAD-27)</p>	<p>OPERATOR CERTIFICATION</p> <p>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 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.</p> <p>Jackie Lathan 4/29/10 Signature Date</p> <p>Jackie Lathan Printed Name</p> <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>GARY L. JONES Date Surveyed Signature & Seal of Professional Surveyor</p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p>
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Cimarex Energy Co. of Colorado

600 N. Maricfeld St. ♦ Suite 600 ♦ Midland, TX 79701 ♦ (432) 620-1938 ♦ Fax (432) 620-1940
A subsidiary of Cimarex Energy Co. • A NYSE Listed Company • "AEC"

Date: August 16, 2010

New Mexico Oil Conservation Division
1625 N French Dr
Hobbs, NM 88240
Attn: Ms. Donna Mull

Re: Colt 5 Federal No. 3H
P-5-20S-29E
Mewbourne Oil Company
Eddy County, New Mexico

Dear Ms. Mull:

Please be advised that Cimarex Energy Co. of Colorado has no objections to Mewbourne Oil Company drilling the proposed Colt 5 Federal No. 3H well from unit letter P horizontally to unit letter A.

If additional information is required for assignment of an API No. to the Mewbourne Colt 5 Federal No. 1 well please advise.

Sincerely,

A handwritten signature in black ink that reads "Zeno Farris". The signature is written in a cursive, flowing style.

Zeno Farris
Manager, Operations Administration
Permian Basin Region
Phone: 432-620-1938
Fax: 432-620-1940

**United States Department of the Interior
Bureau of Land Management
Carlsbad Field Office
620 E Greene Street
Carlsbad, New Mexico 88201-1287**

Statement Accepting Responsibility for Operations

Operator Name: Mewbourne Oil Company
Street or Box: P.O. Box 5270
City, State: Hobbs, New Mexico
Zip Code: 88241

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted of the leased land or portion thereof, as described below.

Lease Number: Lease Number #NMNM-0144698

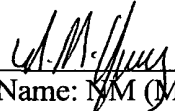
Legal Description of Land: Section 5, T-20S, R-29E Eddy County, New Mexico.
Location @ 330' FSL & 990' FEL.

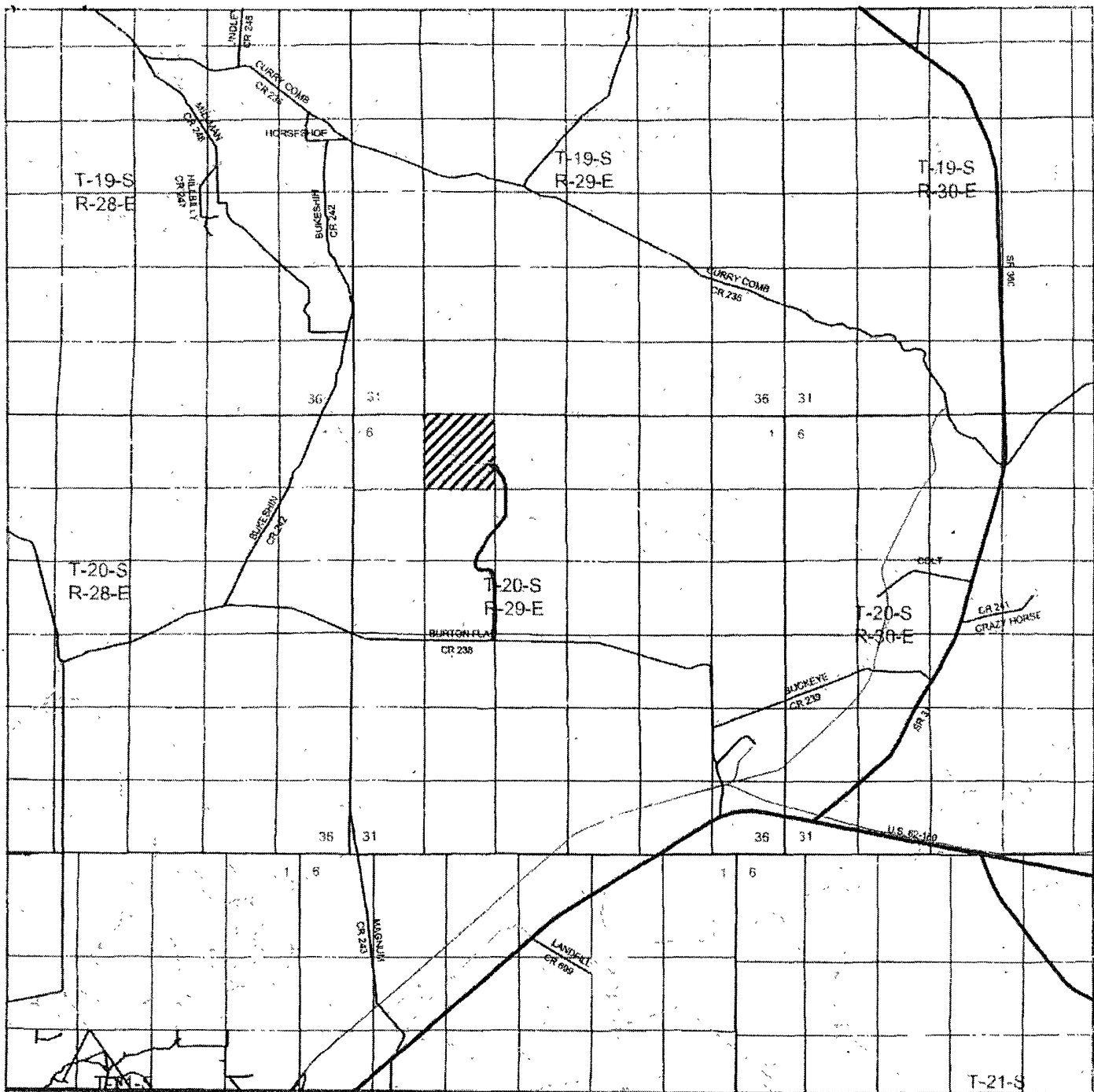
Formation (if applicable):

Bond Coverage: \$150,000

BLM Bond File: NM1693, Nationwide

Authorized Signature: _____


Name: NM (Micky) Young
Title: District Manager
Date: April 30, 2010



COLT "5" FEDERAL #3H

Exhibit 3A

Located 330' FSL and 990' FEL

Section 5, Township 20 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 21792

Survey Date: 10-05-2009

Scale: 1" = 2 Miles

Date: 10-07-2009

MEWBOURNE
OIL COMPANY

Exhibit #4
Status of Wells in Immediate Vicinity

Mewbourne Oil Company
Colt 4 Federal #3H
330' FSL & 990' FEL (SL)
330' FNL & 400' FEL (BHL)
Sec 5-T20S-R29E
Eddy County, New Mexico

Section 5-T20S-R29E

Operator: Mewbourne Oil Company
Well Name: Colt 5 Fed Com #1
Unit letter: G
Status: Flowing
Field: Burton Flat Atoka East

Section 5-T20S-R29E

Operator: Mewbourne Oil Company
Well Name: Gatuna Canyon 5 #3
Unit letter: Lot 3
Status: Pumping
Field: Winchester Bone Spring

Section 5-T20S-R29E

Operator: Cimarex Energy of Colorado
Well Name: Superior Fed #4
Unit letter: I
Status: Plugged
Field: Winchester, Bone Spring

Drilling Program
Mewbourne Oil Company
 Colt 5 Federal #3H
 330' FSL & 990' FEL (SHL)
 330' FNL & 400' FEL (BHL)
 Sec 5-T20S-R29E
 Eddy County, New Mexico

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

Salt	640'
Yates	1100'
Capitan	1300'
*Delaware	3400'
*Bone Springs	5710'

2. Estimated depths of anticipated fresh water, oil, or gas:

Water	Fresh water will be protected by setting surface casing at 300' and cementing to surface.
Hydrocarbons	Oil and gas are anticipated in the above (*) formations. These zones will be protected by casing as necessary.

3. Pressure control equipment:

A 2M diverter system will be installed after running 20" casing.
 A 2000# working pressure annular BOP will be installed on the 13 3/8" surface casing. A 3000# WP Double Ram BOP and 3000# WP Annular will be installed after running 9 5/8" casing.
 Pressure tests will be conducted prior to drilling out under all casing strings. BOP controls will be installed prior to drilling under deep surface casing and will remain in use until completion of drilling operations. BOP's will be inspected and operated as recommended in Onshore Order #2.
 A Kelly cock and a sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position when the Kelly is not in used.
 MOC would like to ~~waive the low pressure test on the 13 3/8" BOPE stack and test with rig pump~~ to 70% of burst rate. Will test the 9 5/8" BOPE to 3000# and Annular to 1500# with a third party testing company before drilling below 9 5/8" shoe, but will test again, if needed, in 30 days from the 1st test as per BLM Onshore Oil and Gas Order #2. Will test the 7" BOPE to 3000# and Annular to 1500# with a third party testing company before drilling below 7" shoe, but will test again, if needed, in 30 days from the 1st test as per BLM Onshore Oil and Gas Order #2.

See COA

***4. Proposed casing and cementing program:**

A. Casing Program:

Hole Size	Casing	Wt/Ft.	Grade	Depth	Jt Type
26"	20" (new) Conductor	94#	J55	0-300'	BT&C
17 1/2"	13 3/8" (new)	48#	H40	0-1100'	ST&C
17 1/2"	13 3/8" (new)	54.5#	K55	1100-1250'	ST&C
12 1/4"	9 5/8" (new)	40#	J55	0'-3300'	LT&C
8 3/4"	7" (new)	26#	HCP110	0-7300'	LT&C
8 3/4"	7" (new)	26#	HCP110	7300-8300'	UFor BTC
6 1/8"	4 1/2" (new)	11.6#	HCP110	8000'-12500'	LT&C

Minimum casing design factors: Collapse 1.125, Burst 1.0, Tensile strength 1.8.

*Subject to availability of casing.

See
COA

B. Cementing Program:

- i. Surface Conductor Pipe: 500 sks Class C cement containing 2% CaCl. Yield at 1.34 cuft/sk. Cmt circulated to surface.
- ii. Surface Casing: 500 sacks 35:65 Class "C" light cement containing 1/2#/sk cellophane flakes & 5 lbs/sack gilsonite. Yield at 1.98 cuft/sk. 400 sacks Class "C" cement containing 2% CaCl. Yield at 1.34 cuft/sk. Cmt circulated to surface.
- iii. Intermediate Casing: 500 sacks 35:65 poz mix cement containing 6% gel, 5#/sack gilsonite. Yield at 1.98 cuft/sk. 400 sacks Class C cement containing 2% CaCl. Yield at 1.34 cuft/sk. Cmt circulated to surface.
- iv. Deep Intermediate Casing: 600 sacks 50:50 poz mix cement w/additives. Yield at 2.54 cuft/sk. 400 sacks Class H cement. Yield at 1.28 cuft/sk. Cmt circulated to surface.
- v. Production Casing: Plans are to use a Packer/Port system with 4 1/2" casing. Will run Packer type liner @ 8000'.

See COA — *Mewbourne Oil Company reserves the right to change cement designs as hole conditions may warrant.

5. Mud Program:

Interval	Type System	Weight	Viscosity	Fluid Loss
0'-300'	FW spud mud	8.6-9.4	32-34	NA
300'-1250'	Brine water	10.0	28-30	NA
1250'-3300'	FW	8.4	28-30	NA
3300'-8300'	Cut Brine	8.4-8.6	28-30	NA
8300'-TD	Cut Brine w/Polymer	8.4-8.6	32-40	8-15

See COA — It may become necessary to drill thru the Capitan reef with air-assist to maintain circulation.

6. Evaluation Program:

See COA — Samples: 10' samples from surface casing to TD
 Logging: Gyro from KOP (7300') to surface. GR from 7300' to TD.

7. Downhole Conditions

Zones of abnormal pressure:	None anticipated
Zones of lost circulation:	Anticipated in surface and intermediate holes
Maximum bottom hole temperature:	130 degree F
Maximum bottom hole pressure:	8.3 lbs/gal gradient or less

8. Anticipated Starting Date:

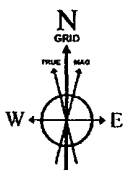
Mewbourne Oil Company intends to drill this well as soon as possible after receiving approval with approximately 45 days involved in drilling operations and an additional 10 days involved in completion operations on the project.

Mewbourne Oil Company	
Location: Eddy County, NM	Skid: No. 3H SHL
Field: (Colt) Sec 6, T20S, R29E	Well: No. 3H
Facility: Colt 5 Fed No. 3H	Wellbore: No. 3H PWB

Location: Eddy County, NM
Field: (Colt) Sec 5, T20S, R29E
Facility: Colt 5 Fed No. 3H

Slot	No 3H SHL
Well	No 3H
Wellbore	No 3H PWB

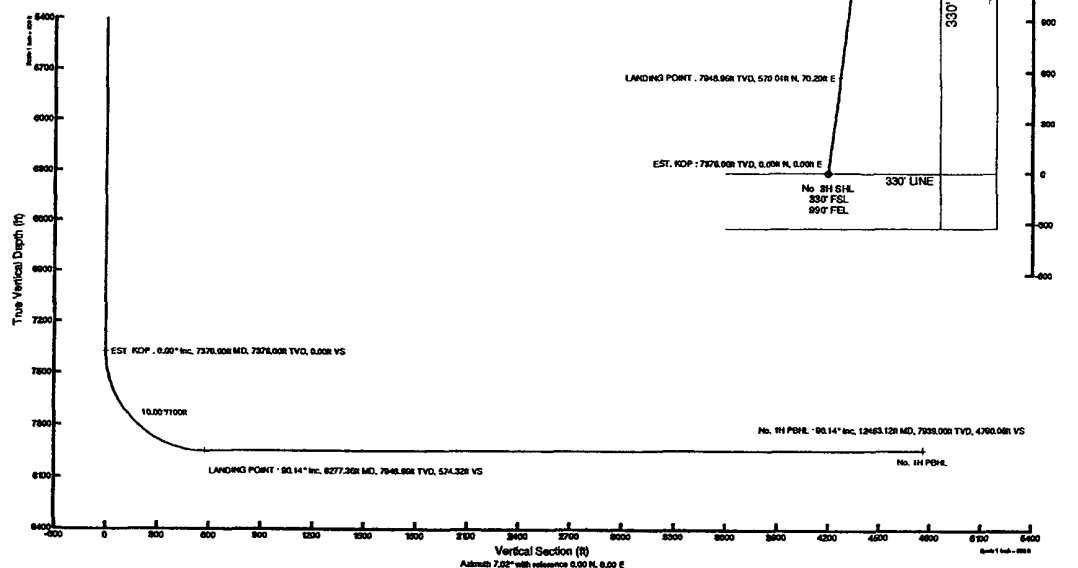
Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°100ft)	VS (ft)
Tie On	0.00	0.000	7.021	0.00	0.00	0.00	0.00	0.00
EST. N.O.P	7376.00	0.000	7.021	7376.00	0.00	0.00	0.00	0.00
LANDING POINT	8277.36	90.136	7.021	7948.96	570.01	70.20	10.00	574.32
No. 1H PBH/L	12463.12	90.136	7.021	7939.00	4724.37	581.84	0.00	4760.06



BGGM (1945.0 to 2011.0) Dip: 60.48° Field 48959.4 nT
Magnetic North is 8.04 degrees East of True North (at 4/19/2010)
Grid North is 0.13 degrees East of True North
To correct azimuth from True to Grid subtract 0.13 degrees
To correct azimuth from Magnetic to Grid add 7.91 degrees
For example, if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = $90 + 7.91 = 97.91$

File reference filepath is Plan #1

True vertical depths are referenced to Peg on No. 3H SHM (RT)	Grid System: NAD83 / TM Mexico State Plane, Eastern Zone 0001, US feet
Measured depths are referenced to Peg on No. 3H SHM (RT)	North Reference: Grid north
Peg on No. 3H SHM (RT) to Mean Sea Level 3300 feet	Scale: True distance
Mean Sea Level to Macd Inc Facility Cell 6 Flat No. 340 -3291 feet	Depths are in feet
Coordinates are in feet referenced to Cell 6	Created by Victor Hernandez on 4/18/2010



Planned Wellpath Report

Plan #1
Page 1 of 4



REFERENCE WELLPATH IDENTIFICATION

Operator	Mewbourne Oil Company	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Colt) Sec 5, T20S, R29E	Wellbore	No. 3H PWB
Facility	Colt 5 Fed No. 3H		

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.999915	Report Generated	4/19/2010 at 4:29:32 PM
Convergence at slot	0.13° East	Database/Source file	WA_Midland/No._3H_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	574535.81	580637.34	32°35'45.759"N	104°05'28.726"W
Facility Reference Pt			574535.81	580637.34	32°35'45.759"N	104°05'28.726"W
Field Reference Pt			574535.81	580637.34	32°35'45.759"N	104°05'28.726"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 3H SHL (RT) to GL	18.00ft
Horizontal Reference Pt	Slot	Rig on No. 3H SHL (RT) to Mean Sea Level	3309.00ft
Vertical Reference Pt	Rig on No. 3H SHL (RT)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 3H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	7.02°

Planned Wellpath Report

Plan #1
Page 2 of 4

REFERENCE WELLPATH IDENTIFICATION

Operator	Mewbourne Oil Company	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Colt) Sec 5, T20S, R29E	Wellbore	No. 3H PWB
Facility	Colt 5 Fed No. 3H		

WELLPATH DATA (54 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	7.021	0.00	0.00	0.00	0.00	574535.81	580637.34	32°35'45.759"N	104°05'28.726"W	0.00	Tie On
7376.00	0.000	7.021	7376.00	0.00	0.00	0.00	574535.81	580637.34	32°35'45.759"N	104°05'28.726"W	0.00	EST. KOP
7476.00†	10.000	7.021	7475.49	8.70	8.64	1.06	574536.87	580645.98	32°35'45.845"N	104°05'28.713"W	10.00	
7576.00†	20.000	7.021	7571.96	34.55	34.29	4.22	574540.03	580671.63	32°35'46.099"N	104°05'28.676"W	10.00	
7676.00†	30.000	7.021	7662.48	76.76	76.19	9.38	574545.19	580713.52	32°35'46.513"N	104°05'28.614"W	10.00	
7776.00†	40.000	7.021	7744.29	134.05	133.04	16.39	574552.19	580770.37	32°35'47.075"N	104°05'28.531"W	10.00	
7876.00†	50.000	7.021	7814.91	204.67	203.13	25.02	574560.82	580840.46	32°35'47.769"N	104°05'28.428"W	10.00	
7976.00†	60.000	7.021	7872.20	286.48	284.33	35.02	574570.82	580921.65	32°35'48.572"N	104°05'28.309"W	10.00	
8076.00†	70.000	7.021	7914.40	376.99	374.17	46.08	574581.89	581011.48	32°35'49.461"N	104°05'28.177"W	10.00	
8176.00†	80.000	7.021	7940.25	473.46	469.91	57.87	574593.68	581107.21	32°35'50.408"N	104°05'28.037"W	10.00	
8276.00†	90.000	7.021	7948.96	572.96	568.66	70.03	574605.84	581205.95	32°35'51.385"N	104°05'27.892"W	10.00	
8277.36	90.136	7.021	7948.96	574.32	570.01	70.20	574606.00	581207.31	32°35'51.398"N	104°05'27.890"W	10.00	LANDING POINT
8376.00†	90.136	7.021	7948.72	672.96	667.91	82.26	574618.06	581305.19	32°35'52.366"N	104°05'27.747"W	0.00	
8476.00†	90.136	7.021	7948.48	772.96	767.16	94.48	574630.28	581404.44	32°35'53.348"N	104°05'27.601"W	0.00	
8576.00†	90.136	7.021	7948.25	872.96	866.41	106.71	574642.50	581503.68	32°35'54.330"N	104°05'27.456"W	0.00	
8676.00†	90.136	7.021	7948.01	972.96	965.66	118.93	574654.73	581602.92	32°35'55.312"N	104°05'27.310"W	0.00	
8776.00†	90.136	7.021	7947.77	1072.96	1064.91	131.15	574666.95	581702.16	32°35'56.294"N	104°05'27.165"W	0.00	
8876.00†	90.136	7.021	7947.53	1172.96	1164.16	143.38	574679.17	581801.40	32°35'57.275"N	104°05'27.019"W	0.00	
8976.00†	90.136	7.021	7947.29	1272.96	1263.41	155.60	574691.39	581900.64	32°35'58.257"N	104°05'26.874"W	0.00	
9076.00†	90.136	7.021	7947.06	1372.96	1362.66	167.82	574703.62	581999.88	32°35'59.239"N	104°05'26.728"W	0.00	
9176.00†	90.136	7.021	7946.82	1472.96	1461.91	180.05	574715.84	582099.12	32°36'00.221"N	104°05'26.583"W	0.00	
9276.00†	90.136	7.021	7946.58	1572.95	1561.16	192.27	574728.06	582198.37	32°36'01.202"N	104°05'26.437"W	0.00	
9376.00†	90.136	7.021	7946.34	1672.95	1660.41	204.49	574740.28	582297.61	32°36'02.184"N	104°05'26.291"W	0.00	
9476.00†	90.136	7.021	7946.11	1772.95	1759.66	216.72	574752.51	582396.85	32°36'03.166"N	104°05'26.146"W	0.00	
9576.00†	90.136	7.021	7945.87	1872.95	1858.91	228.94	574764.73	582496.09	32°36'04.148"N	104°05'26.000"W	0.00	
9676.00†	90.136	7.021	7945.63	1972.95	1958.16	241.16	574776.95	582595.33	32°36'05.130"N	104°05'25.855"W	0.00	
9776.00†	90.136	7.021	7945.39	2072.95	2057.41	253.39	574789.17	582694.57	32°36'06.111"N	104°05'25.709"W	0.00	
9876.00†	90.136	7.021	7945.15	2172.95	2156.66	265.61	574801.39	582793.81	32°36'07.093"N	104°05'25.564"W	0.00	
9976.00†	90.136	7.021	7944.92	2272.95	2255.91	277.83	574813.62	582893.05	32°36'08.075"N	104°05'25.418"W	0.00	
10076.00†	90.136	7.021	7944.68	2372.95	2355.16	290.06	574825.84	582992.30	32°36'09.057"N	104°05'25.273"W	0.00	

Planned Wellpath Report

Plan #1
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Mewbourne Oil Company	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Colt) Sec 5, T20S, R29E	Wellbore	No. 3H PWB
Facility	Colt 5 Fed No. 3H		

WELLPATH DATA (54 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10176.00†	90.136	7.021	7944.44	2472.95	2454.41	302.28	574838.06	583091.54	32°36'10.039"N	104°05'25.127"W	0.00	
10276.00†	90.136	7.021	7944.20	2572.95	2553.66	314.50	574850.28	583190.78	32°36'11.020"N	104°05'24.982"W	0.00	
10376.00†	90.136	7.021	7943.96	2672.95	2652.91	326.73	574862.51	583290.02	32°36'12.002"N	104°05'24.836"W	0.00	
10476.00†	90.136	7.021	7943.73	2772.95	2752.16	338.95	574874.73	583389.26	32°36'12.984"N	104°05'24.691"W	0.00	
10576.00†	90.136	7.021	7943.49	2872.95	2851.41	351.17	574886.95	583488.50	32°36'13.966"N	104°05'24.545"W	0.00	
10676.00†	90.136	7.021	7943.25	2972.95	2950.66	363.40	574899.17	583587.74	32°36'14.947"N	104°05'24.400"W	0.00	
10776.00†	90.136	7.021	7943.01	3072.95	3049.91	375.62	574911.40	583686.98	32°36'15.929"N	104°05'24.254"W	0.00	
10876.00†	90.136	7.021	7942.78	3172.95	3149.16	387.84	574923.62	583786.23	32°36'16.911"N	104°05'24.109"W	0.00	
10976.00†	90.136	7.021	7942.54	3272.95	3248.41	400.07	574935.84	583885.47	32°36'17.893"N	104°05'23.963"W	0.00	
11076.00†	90.136	7.021	7942.30	3372.95	3347.66	412.29	574948.06	583984.71	32°36'18.875"N	104°05'23.817"W	0.00	
11176.00†	90.136	7.021	7942.06	3472.95	3446.91	424.51	574960.28	584083.95	32°36'19.856"N	104°05'23.672"W	0.00	
11276.00†	90.136	7.021	7941.82	3572.95	3546.16	436.74	574972.51	584183.19	32°36'20.838"N	104°05'23.526"W	0.00	
11376.00†	90.136	7.021	7941.59	3672.95	3645.41	448.96	574984.73	584282.43	32°36'21.820"N	104°05'23.381"W	0.00	
11476.00†	90.136	7.021	7941.35	3772.95	3744.66	461.18	574996.95	584381.67	32°36'22.802"N	104°05'23.235"W	0.00	
11576.00†	90.136	7.021	7941.11	3872.95	3843.91	473.41	575009.17	584480.91	32°36'23.784"N	104°05'23.090"W	0.00	
11676.00†	90.136	7.021	7940.87	3972.95	3943.16	485.63	575021.40	584580.16	32°36'24.765"N	104°05'22.944"W	0.00	
11776.00†	90.136	7.021	7940.63	4072.95	4042.41	497.85	575033.62	584679.40	32°36'25.747"N	104°05'22.799"W	0.00	
11876.00†	90.136	7.021	7940.40	4172.95	4141.66	510.08	575045.84	584778.64	32°36'26.729"N	104°05'22.653"W	0.00	
11976.00†	90.136	7.021	7940.16	4272.95	4240.91	522.30	575058.06	584877.88	32°36'27.711"N	104°05'22.508"W	0.00	
12076.00†	90.136	7.021	7939.92	4372.95	4340.16	534.52	575070.29	584977.12	32°36'28.692"N	104°05'22.362"W	0.00	
12176.00†	90.136	7.021	7939.68	4472.95	4439.41	546.75	575082.51	585076.36	32°36'29.674"N	104°05'22.216"W	0.00	
12276.00†	90.136	7.021	7939.45	4572.95	4538.66	558.97	575094.73	585175.60	32°36'30.656"N	104°05'22.071"W	0.00	
12376.00†	90.136	7.021	7939.21	4672.95	4637.91	571.19	575106.95	585274.84	32°36'31.638"N	104°05'21.925"W	0.00	
12463.12	90.136	7.021	7939.00†	4760.06	4724.37	581.84	575117.60	585361.30	32°36'32.493"N	104°05'21.799"W	0.00	No. 1H PBHL

Planned Wellpath Report

Plan #1
Page 4 of 4



REFERENCE WELLPATH IDENTIFICATION

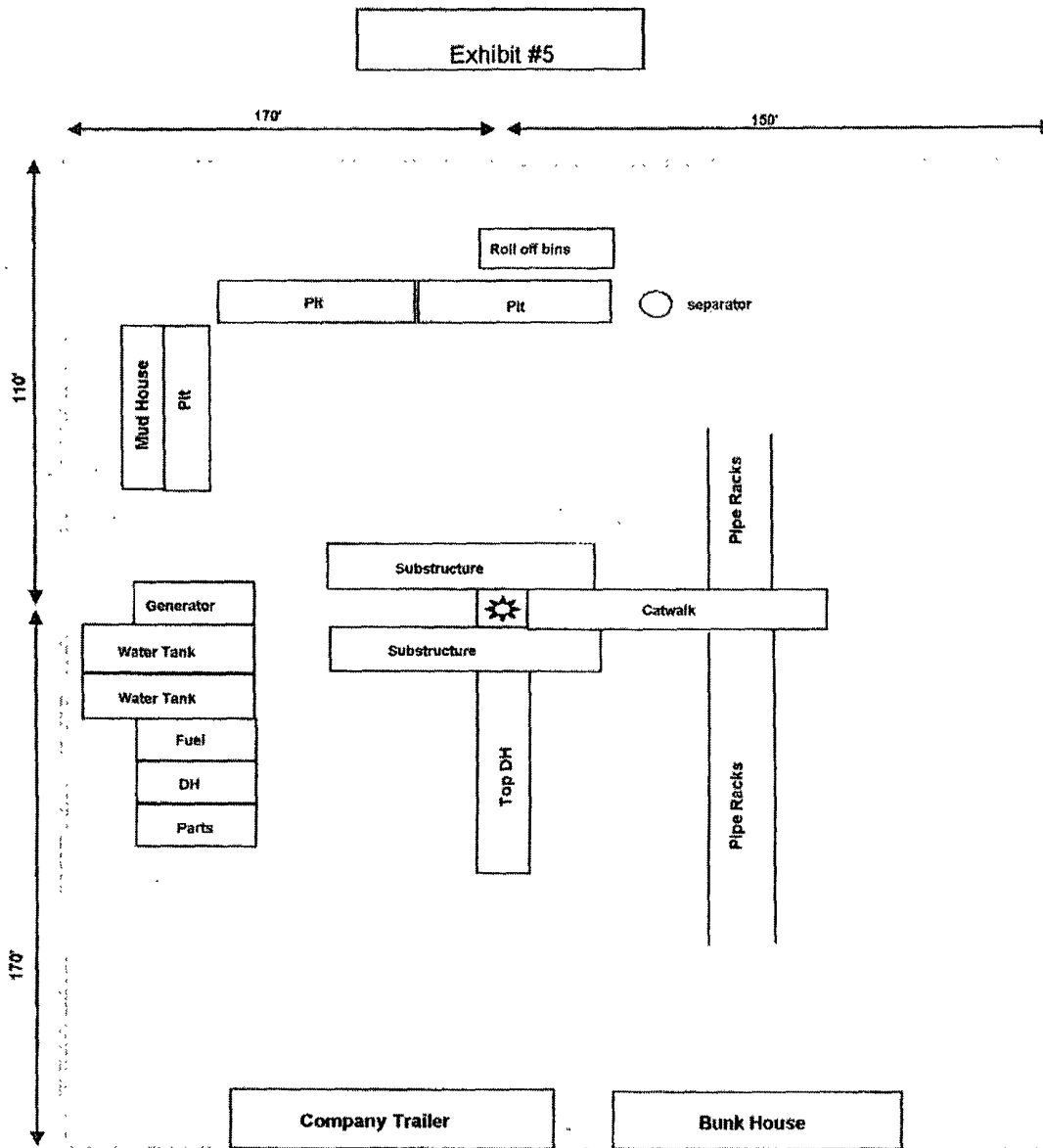
Operator	Mewbourne Oil Company	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Colt) Sec 5, T20S, R29E	Wellbore	No. 3H PWB
Facility	Colt 5 Fed No. 3H		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 1H PBHL	12463.12	7939.00	4724.37	581.84	575117.60	585361.30	32°36'32.493"N	104°05'21.799"W	point

SURVEY PROGRAM Ref Wellbore: No. 3H PWB Ref Wellpath: Plan #1

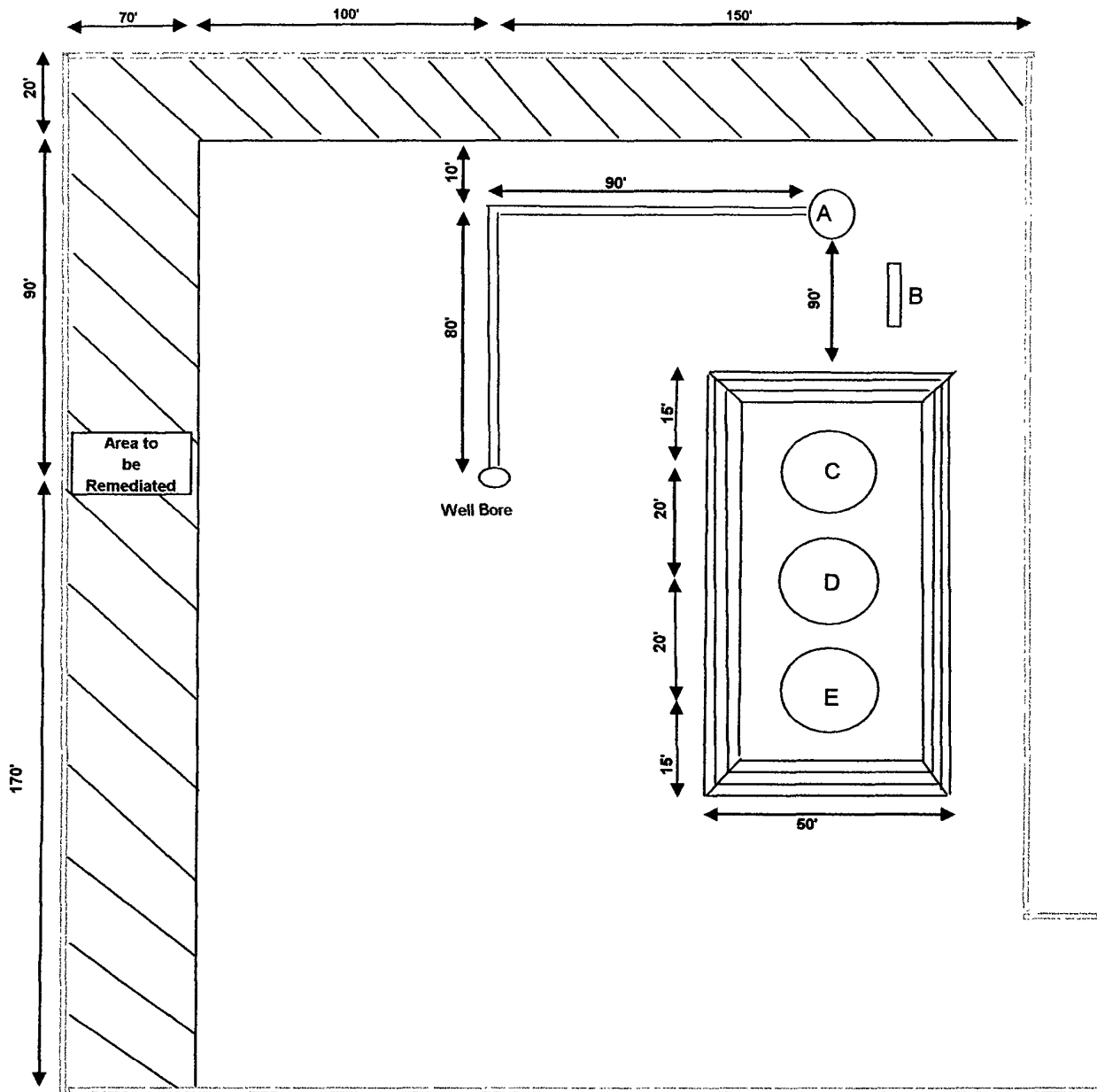
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
18.00	12463.12	NaviTrak (Standard)		No. 3H PWB



Colt 5 Fed. #3H
Planned Drilling Location
With Closed Loop Design



Exhibit #6



Colt 5 Fed. #3H	
Planned Completion Location After Remediation	
Mark	Description
A	6' x 20' 75# WP Heater
B	3" Meter Run
D	500 bbl fiberglass water Tank
C	500 bbl steel water Tank
E	500 bbl steel water Tank



TEN
6/25/10

Notes Regarding Blowout Preventer

Mewbourne Oil Company

Colt 5 Federal #3H

330' FSL & 990' FEL (SHL)

330' FNL & 400' FEL (BHL)

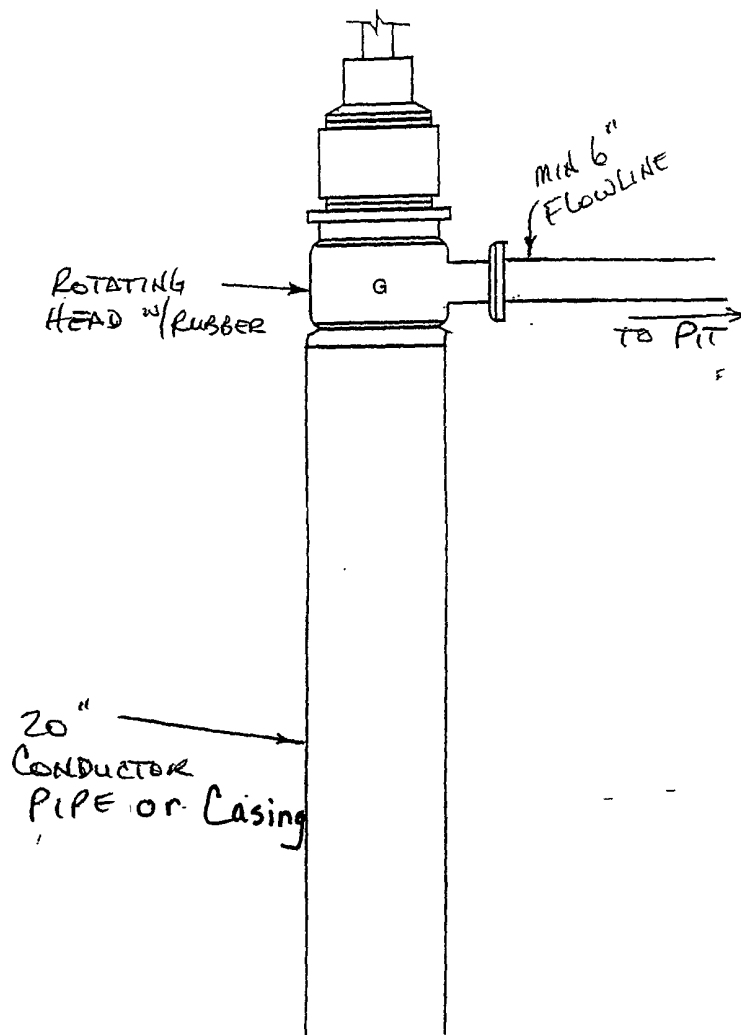
Sec 5-T20S-R29E

Eddy County, New Mexico

- I. Drilling nipple (bell nipple) to be constructed so that it can be removed without the use of a welder through the opening of the rotary table, with minimum internal diameter equal to blowout preventer bore.
- II. Blowout preventer and all fittings must be in good condition with a minimum 2000 psi working pressure on 13 $\frac{3}{8}$ " casing and 3000 psi working pressure on 9 $\frac{5}{8}$ " & 7" casing.
- III. Safety valve must be available on the rig floor at all times with proper connections to install in the drill string. Valve must be full bore with minimum 3000 psi working pressure.
- IV. Equipment through which bit must pass shall be at least as large as internal diameter of the casing.
- V. A kelly cock shall be installed on the kelly at all times.

Blowout preventer closing equipment to include and accumulator of at least 40 gallon capacity, two independent sources of pressure on closing unit, and meet all other API specifications.

20" DIVERTER SYSTEM



Colt 5 Fed # 3H

330' FSL + 990' FEL

Eddy Co., NM

Mewbourne Oil Company
BOP Schematic for
12 1/4" Hole

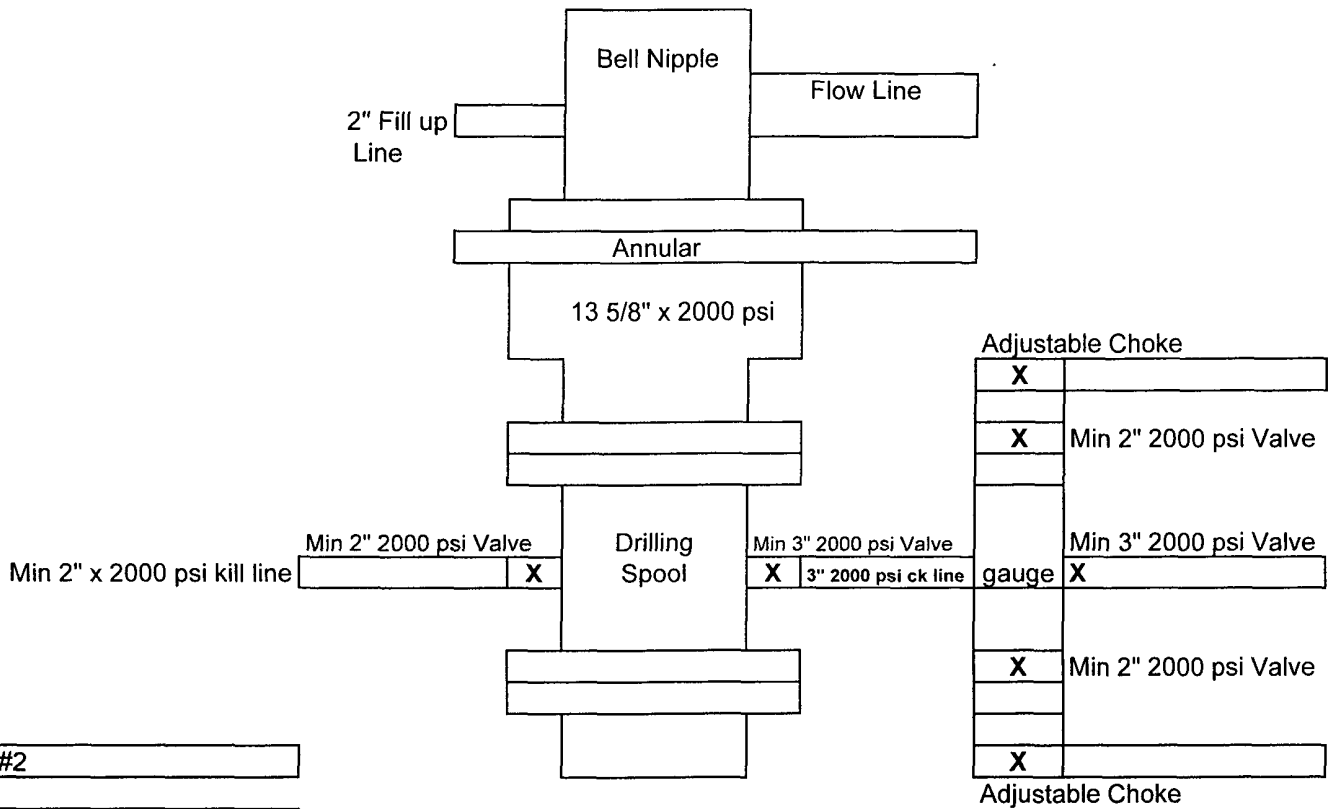


Exhibit #2

Colt 5 Federal #3H
330' FSL & 990' FEL
Sec 5-T20S-R29E
Eddy, County NM

Mewbourne Oil Company
BOP Schematic for
8 3/4" & 6 1/8" Hole

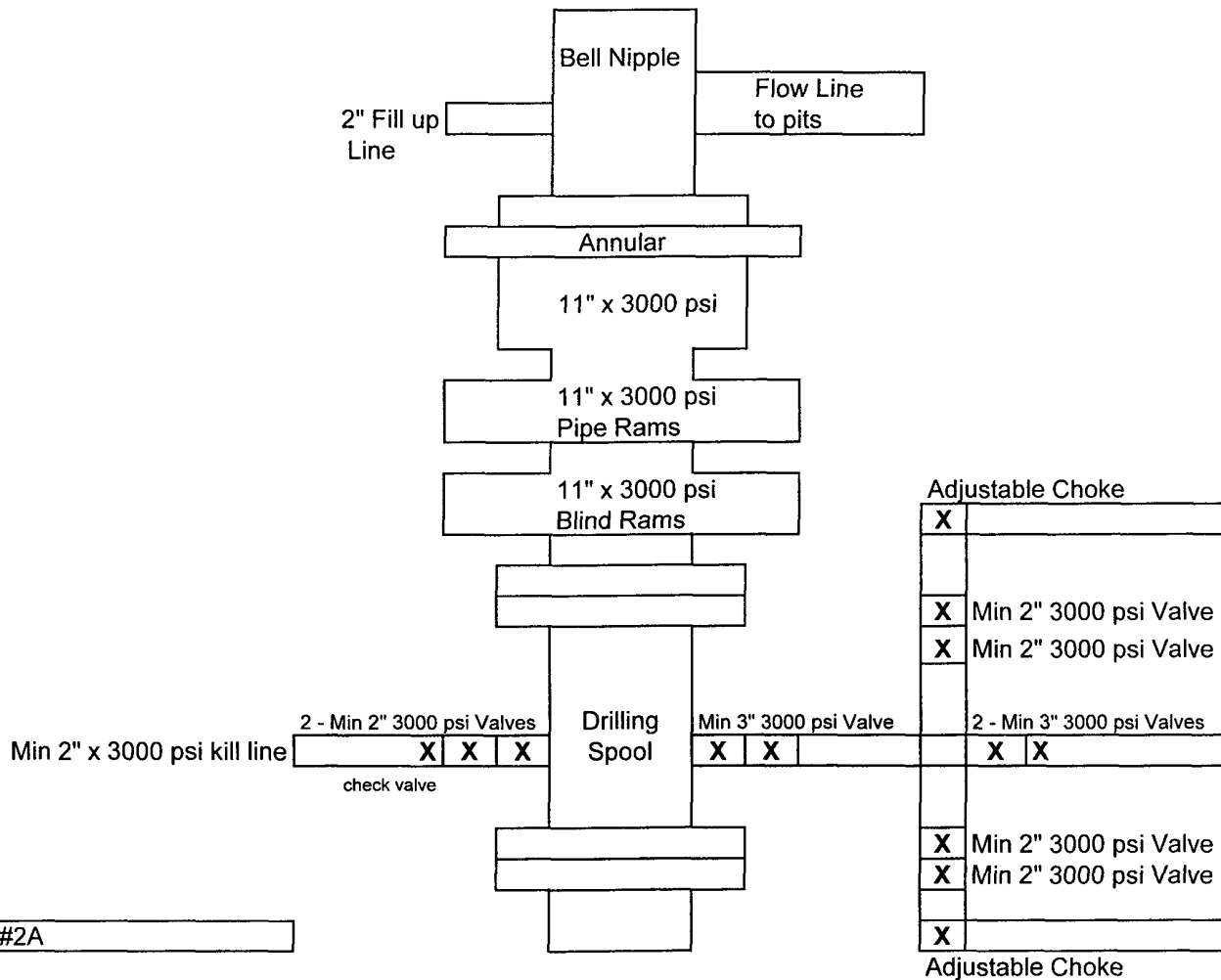
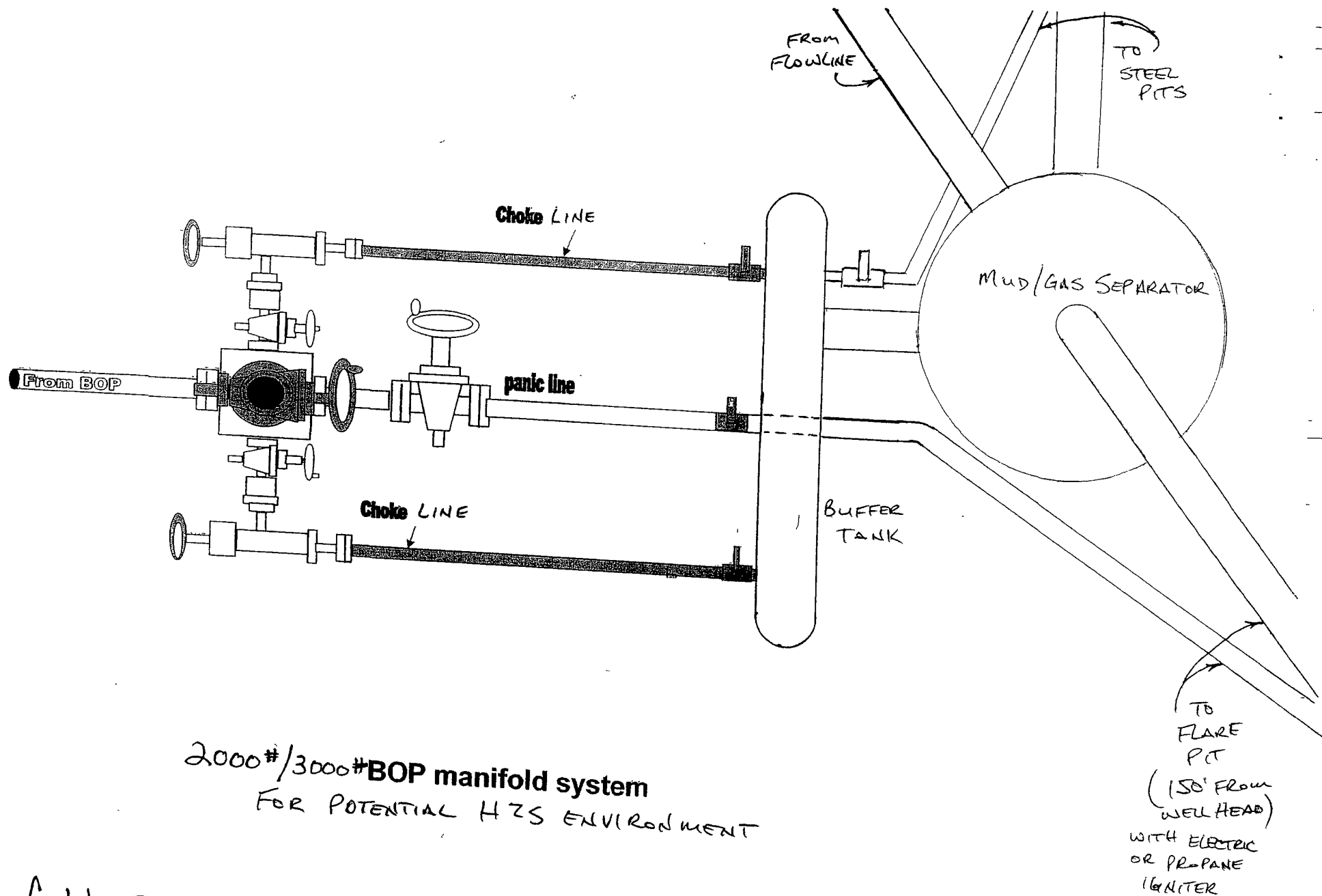


Exhibit #2A

Colt 5 Federal #3H
330' FSL & 990' FEL
Sec 5-T20S-R29E
Eddy, County
New Mexico



2000#/3000# BOP manifold system
FOR POTENTIAL H₂S ENVIRONMENT

Colt 5 Fed #34
330' FSL + 990' FEL
Sec 5, T20S, R29E
Eddy Co., NM

Hydrogen Sulfide Drilling Operations Plan

Mewbourne Oil Company

Colt 5 Federal #3H

330' FSL & 990' FEL (SL)

330' FNL & 400' FEL (BHL)

Sec 5-T20S-R29E

Eddy County, New Mexico

1. General Requirements

Rule 118 does not apply to this well because MOC has researched this area and no high concentrations of H₂S were found. MOC will have on location and working all H₂S safety equipment before the Yates formation for purposes of safety and insurance requirements.

2. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will have received training from a qualified instructor in the following areas prior to entering the drilling pad area of the well:

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

Additionally, supervisory personnel will be trained in the following areas:

- 1 The effects of hydrogen sulfide on metal components. If high tensile tubular systems are utilized, supervisory personnel will be trained in their special maintenance requirements.
- 2 Corrective action and shut in procedures, blowout prevention, and well control procedures while drilling a well.
- 3 The contents of the Hydrogen Sulfide Drilling Operations Plan.

There will be an initial training session prior to encountering a known hydrogen sulfide source. The initial training session shall include a review of the site specific Hydrogen Sulfide Drilling Operations Plan.

3. Hydrogen Sulfide Safety Equipment and Systems

All hydrogen sulfide safety equipment and systems will be installed, tested, and operational prior to drilling below the intermediate casing.

1. Well Control Equipment

- A. Flare line with automatic igniter or continuous ignition source.
- B. Choke manifold with minimum of one adjustable choke.
- C. Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- D. Auxiliary equipment including rotating head and annular type blowout preventer.

2. Protective Equipment for Essential Personnel

Thirty minute self contained work unit located at briefing area as indicated on wellsite diagram.

3. Hydrogen Sulfide Protection and Monitoring Equipment

Two portable hydrogen sulfide monitors positioned on location for optimum coverage and detection. The units shall have audible sirens to notify personnel when hydrogen sulfide levels exceed 20 PPM.

4. Visual Warning Systems

A. Wind direction indicators as indicated on the wellsite diagram.

B. Caution signs shall be posted on roads providing access to location. Signs shall be painted a high visibility color with lettering of sufficient size to be readable at reasonable distances from potentially contaminated areas.

4. **Mud Program**

The mud program has been designed to minimize the amount of hydrogen sulfide entrained in the mud system. Proper mud weight, safe drilling practices, and the use of hydrogen sulfide scavengers will minimize hazards while drilling the well.

5. **Metallurgy**

All tubular systems, wellheads, blowout preventers, drilling spools, kill lines, choke manifolds, and valves shall be suitable for service in a hydrogen sulfide environment when chemically treated.

6. **Communications**

State & County Officials phone numbers are posted on rig floor and supervisors trailer. Communications in company vehicles and toolpushers are either two way radios or cellular phones.

7. **Well Testing**

Drill stem testing is not an anticipated requirement for evaluation of this well. A drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

8. **Emergency Phone Numbers**

Eddy County Sheriff's Office	911 or 575-887-7551
Ambulance Service	911 or 575-885-2111
Carlsbad Fire Dept	911 or 575-885-2111
Loco Hills Volunteer Fire Dept.	911 or 575-677-3266
Closest Medical Facility - Columbia Medical Center of Carlsbad	575-492-5000

Mewbourne Oil Company	Hobbs District Office	575-393-5905
	Fax	575-397-6252
	2nd Fax	575-393-7259

District Manager	Micky Young	575-390-0999
Drilling Superintendent	Frosty Lathan	575-390-4103
Drilling Foreman	Wesley Noseff	575-441-0729

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

MEWBOURNE OIL COMPANY

Colt 5 Federal #3H

330' FSL & 990' FEL (SHL)

330' FNL & 400' FEL (BHL)

Sec 5-T20S-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 restoring the surface so that a complete appraisal can be made of the environmental impact associated with the proposed operations.

1. Existing Roads:

- A. Exhibit #3 is a road map showing the location of the proposed well. Existing roads are highlighted in black and proposed road is highlighted in blue. Exhibit #3A is a topographic map showing the location of the proposed well and access road. Existing and proposed roads are highlighted in black.
- B. **Directions to location from Carlsbad, NM: Go East on US62/180 13.8 miles to Eddy Co 238 (Burton Flat Road). Turn north and continue North 2.1 miles. Turn left west 3 miles. Turn north and continue north, then west 1.3 miles. Turn north and continue north 0.8 miles. Road will turn east. Turn north and continue north 0.25 miles. Turn west on lease road 0.25 mile. Turn north on new lease road .25 mile to location.**

2. Proposed Access Road:

- A. Approx 1200' of new road will be needed.
- B. The access to the location will be limited to 14' in width and will adequately drain runoff and control erosion as presently constructed.
- C. An off lease ROW has been applied for.

3. Location of Existing Wells:

There are producing wells within the immediate vicinity of the well site. Exhibit #4 shows the proposed well and existing wells within a one mile radius.

4. Location of Existing and/or Proposed Facilities:

- A. There are no production facilities on this lease at the present time.
- B. In the event that the well is productive, production facilities will be located on the South side of well pad.
- C. All production vessels left on location will be painted to conform with BLM painting stipulations within 180 days of installation.

5. Location and Type of Water Supply

The well will be drilled with a combination of fresh water and brine water based mud systems. The water will be obtained from commercial suppliers in the area and/or hauled to the location by transport trucks over existing and proposed roads as indicated in Exhibit #3.

6. Source of Construction Materials

All material required for construction of the drill pad and access roads will be obtained from private, state, or federal pits. The construction contractor will be solely responsible for securing construction materials required for this operation and paying any royalties that may be required on those materials.

7. Methods of Handling Waste Disposal:

- A. Drill cuttings not retained for evaluation purposed will be hauled to approved land fill.
- B. Water produced during operations will be hauled to an approved SWD (Whistle Shop).
- C. If any liquid hydrocarbons are produced during operations, those liquids will be stored in suitable tanks until sold.
- D. Current regulations regarding the proper disposal of human waste will be followed.
- E. All trash, junk, and other waste materials will be stored in proper containers to prevent dispersal and will be removed to an appropriate facility within one week of cessation of drilling and completion activities.

8. Ancillary Facilities

There are no ancillary facilities within the immediate vicinity of the proposed well site.

9. Well Site Layout

- A. A diagram of the drill pad is shown in Exhibit #5. Dimensions of the pad and location of major rig components are shown.
- B. The pad dimension of 280' x 320' has been staked and flagged.
- C. An archaeological survey is in the process of being conducted on the proposed location pad.

10. Plans for Restoration of Surface

- A. Upon cessation of the proposed operations, if the well is abandoned, the location and road will be ripped and re-seeded. The entire location will be restored to the original contour as much as reasonable possible. All trash and garbage will be hauled to appropriate disposal to assure the location is aesthetically pleasing as reasonable possible. All restoration work will be completed within 180 days of cessation of activities.
- B. The disturbed area will be restored by re-seeding during the proper growing season.
- C. Any additional caliche required for production facilities will be obtained from a source as described in Section 6.

- D. Within 90 days of cessation of drilling and completion operations, all equipment not necessary for production operations will be removed. The location will be cleaned of all trash and junk to assure the well site is left as aesthetically pleasing as reasonably possible.
- E. A diagram of Production equipment & down sizing in shown in exhibit 6.

11. Surface Ownership:

The surface is owned by: BLM

12. Other Information:

- A. Topography: Refer to the archaeological report for a detailed description of flora, fauna, soil characteristics, dwellings, and historical or cultural sites.
- B. The primary use of the surface at the location is for grazing of livestock.

13. Operator's Representative:

- A. Through APD approval, drilling, completion and production operations:

N.M. Young, District Manager
Mewbourne Oil Company
PO Box 5270
Hobbs, NM 88241
575-393-5905

Mewbourne Oil Company

PO Box 5270
Hobbs, NM 88241
(575) 393-5905

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 I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 30 day of April, 2010.

Name: NM Young

Signature: 

Position Title: Hobbs District Manager

Address: PO Box 5270, Hobbs NM 88241

Telephone: 575-393-5905

E-mail: myoung@mewbourne.com

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MEWBOURNE OIL COMPANY
LEASE NO.:	NM0144698
WELL NAME & NO.:	COLT 5 FEDERAL # 3H
SURFACE HOLE FOOTAGE:	0330' FSL & 0990' FEL
BOTTOM HOLE FOOTAGE	0330' FNL & 0440' FEL
LOCATION:	Section 5, T. 20 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**
 - Fence Crossing/Cattleguard
 - Cave/Karst
- ☒ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - High cave/karst
 - Logging Requirements
 - Waste Material and Fluids
- ☒ **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)

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. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

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 on one side of the cattleguard and fastened securely to H-braces.

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, situate 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 for the road and well pad 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. Topsoil stockpiled for the road will be spread along the perimeter of the road after construction of the road.

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 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

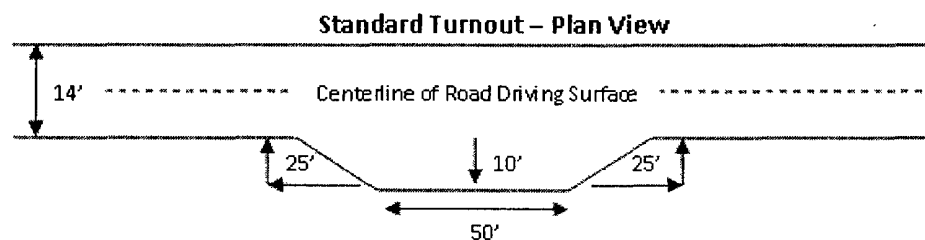
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

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:

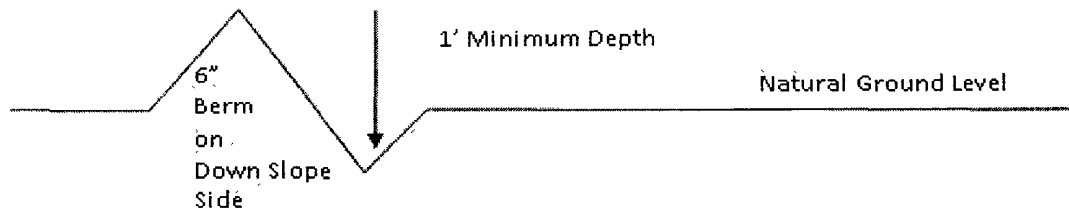


Drainage

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:

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

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

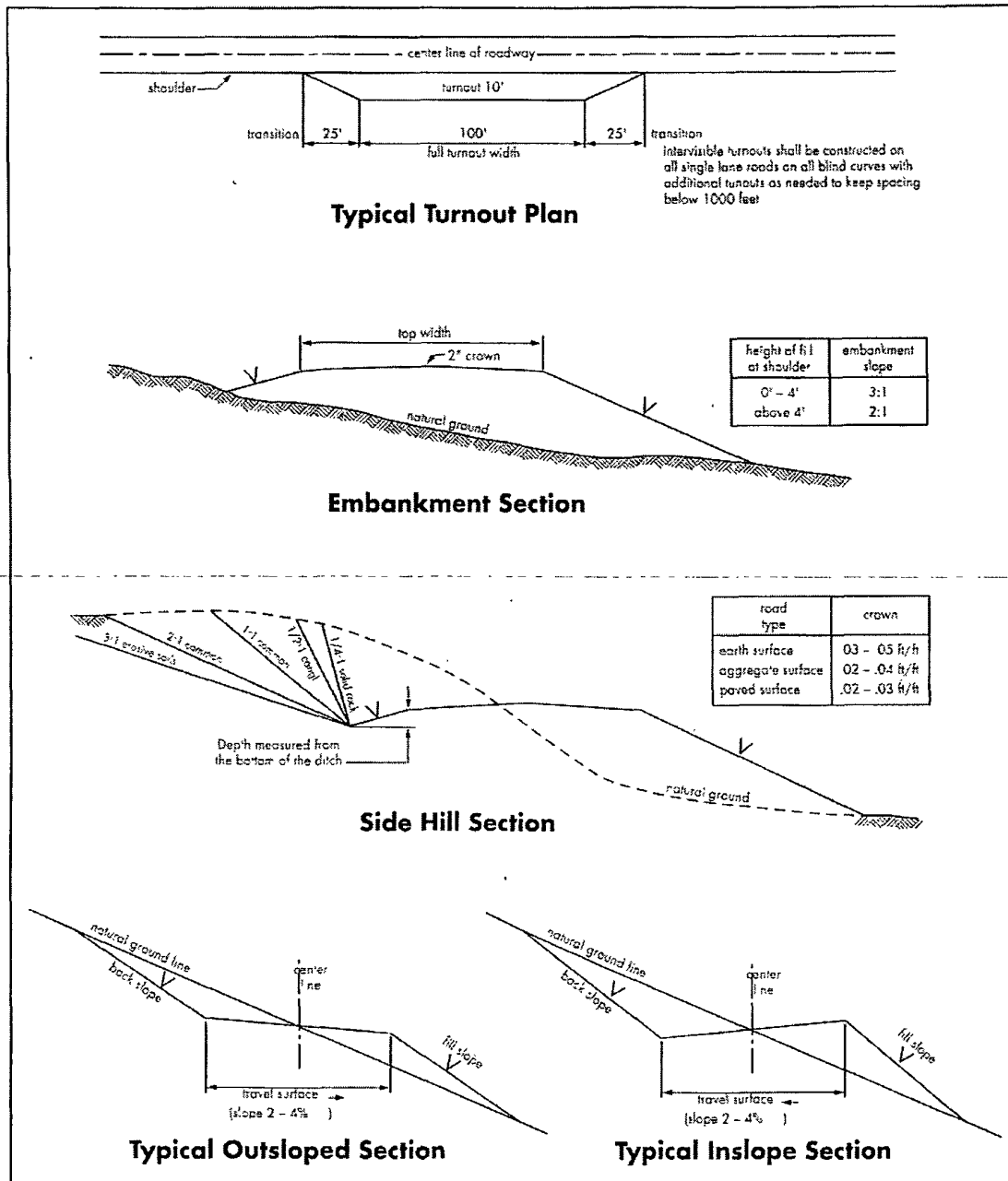
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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. **Hydrogen Sulfide has been reported as a hazard, but no measurements have been recorded. It is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide. If Hydrogen Sulfide is encountered, please report measurements 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 will 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 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 Artesia & Delaware Groups and the Bone Spring formation.

1. The **20 inch** surface casing shall be set **at approximately 300 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** 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.

2. The minimum required fill of cement behind the **13-3/8 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 high cave/karst and Capitan Reef.

3. The minimum required fill of cement behind the **9-5/8 inch** second 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 Capitan Reef.

4. The minimum required fill of cement behind the 7 inch production casing is:
☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.
5. Cement is not required on the 4-1/2" production liner. Packer/Port completion system is being used.
6. 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. **A variance is granted for the use of a diverter on the 20" surface casing.**
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 13-3/8" intermediate casing shoe shall be **2000 (2M) psi.**
 - a. **For 13-3/8" intermediate casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8" second intermediate casing shoe shall be **3000 (3M) psi.**

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
- a. Casing cut-off and BOP installation will not be initiated until the cement has had a minimum of 8 hours setup time for a water basin. The casing shall remain stationary and under pressure for at least eight hours after the operator places the cement. In the potash area, the minimum time is 12 hours and the casing shall remain stationary and under pressure during this time period. Casing shall be under pressure if the operator uses some acceptable means of holding pressure or if the operator employs one or more float valves to hold the cement in place. Testing the BOP/BOPE against a plug can commence after meeting the above conditions plus the BOP installation time.
 - b. The tests shall be done by an independent service company using a test plug.
 - c. The results of the test shall be reported to the appropriate BLM office.
 - d. 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.**
-
- e. 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.
 - f. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

D. DRILLING MUD

Approved for aerated mud in the Capitan Reef, but not air drilling.

E. DRILL STEM TEST

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

RGH 062910

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.

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

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

Containment Structures

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

IX. INTERIM RECLAMATION

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 1, for Loamy 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 regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/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 lovegrass (<i>Eragrostis intermedia</i>)	0.5
Sand dropseed (<i>Sporobolus cryptandrus</i>)	1.0
Sideoats 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