AT5-10-257 LM

Form 3160-3
(September 2001)

OCD Artesia

RECEIVED
APR 13 2010
NMOCD ARTESIA

FORM APPROVED
OMB No 1004-0136
Expires January 31, 2004

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No
NMNM 0209083

6 If Indian, Allottee or Tribe Name

1a Type of Work ☑ DRILL ☐ REENTER

7 If Unit or CA Agreement, Name and No

1b. Type of Well ☑ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

8 Lease Name and Well No
Burton 4 Federal #3H

2 Name of Operator
Mewbourne Oil Company - 14744

9. API Well No
30-015-37816

3a Address	3b Phone No *(include area code)*	10 Field and Pool, or Exploratory
PO Box 5270 Hobbs, NM 88241	575-393-5905	Parkway Bone Spring 49622

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

At surface 810' FNL & 200' FEL (SL) Unit A

At proposed prod. zone 660' FNL & 330' FWL (BHL) Unit D

UNORTHODOX LOCATION

11 Sec , T , R., M , or Blk and Survey or Area
Sec 4 - T20S - R29E

14 Distance in miles and direction from nearest town or post office*	12. County or Parish	13 State
8 miles S of Loco Hills, NM	Eddy	NM

15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any)	16 No of Acres in lease	17 Spacing Unit dedicated to this well
200'	169.64	169.64

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19 Proposed Depth	20. BLM/BIA Bond No on file
NA	12442 MD 7909' TVD	NM1693, Nationwide

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23 Estimated duration
3330' GL	ASAP	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
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an 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 authorized officer.

25. Signature	Name *(Printed/Typed)*	Date
Jackie Lathan	Jackie Lathan	02/17/10

Title
Hobbs Regulatory

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Don Peterson	/s/ Don Peterson	APR 09 2010

Title	Office
FOR FIELD MANAGER	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

APPROVAL FOR TWO YEARS

Conditions of approval, if any, are attached

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

Well becomes orthodox at 7,765' MD

Capitan Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

DISTRICT I
1625 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

OIL CONSERVATION DIVISION

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

Form C-102
Revised October 15, 2009

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-37816	49622	Parkway Bone Spring

Property Code	Property Name	Well Number
38147	BURTON "4" FEDERAL	3H

OGRID No.	Operator Name	Elevation
14744	MEWBOURNE OIL COMPANY	3330'

Surface Location

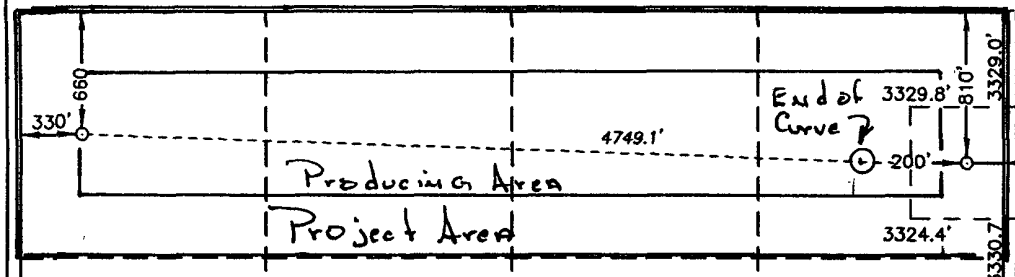
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	4	20 S	29 E		810	NORTH	200	EAST	EDDY

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
D	4	20 S	29 E		660	NORTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
169.64			

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



PROPOSED BOTTOM HOLE LOCATION
Lat - N 32°36'29.20"
Long - W 104°05'13.26"
NMSPCE- N 585030.559
E 575848.906
(NAD-27)

SURFACE LOCATION
Lat - N 32°36'27.46"
Long - W 104°04'17.78"
NMSPCE- N 584865.214
E 580595.102
(NAD-27)

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.

Jackie Lathan 2/17/10
Signature Date

Jackie Lathan
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

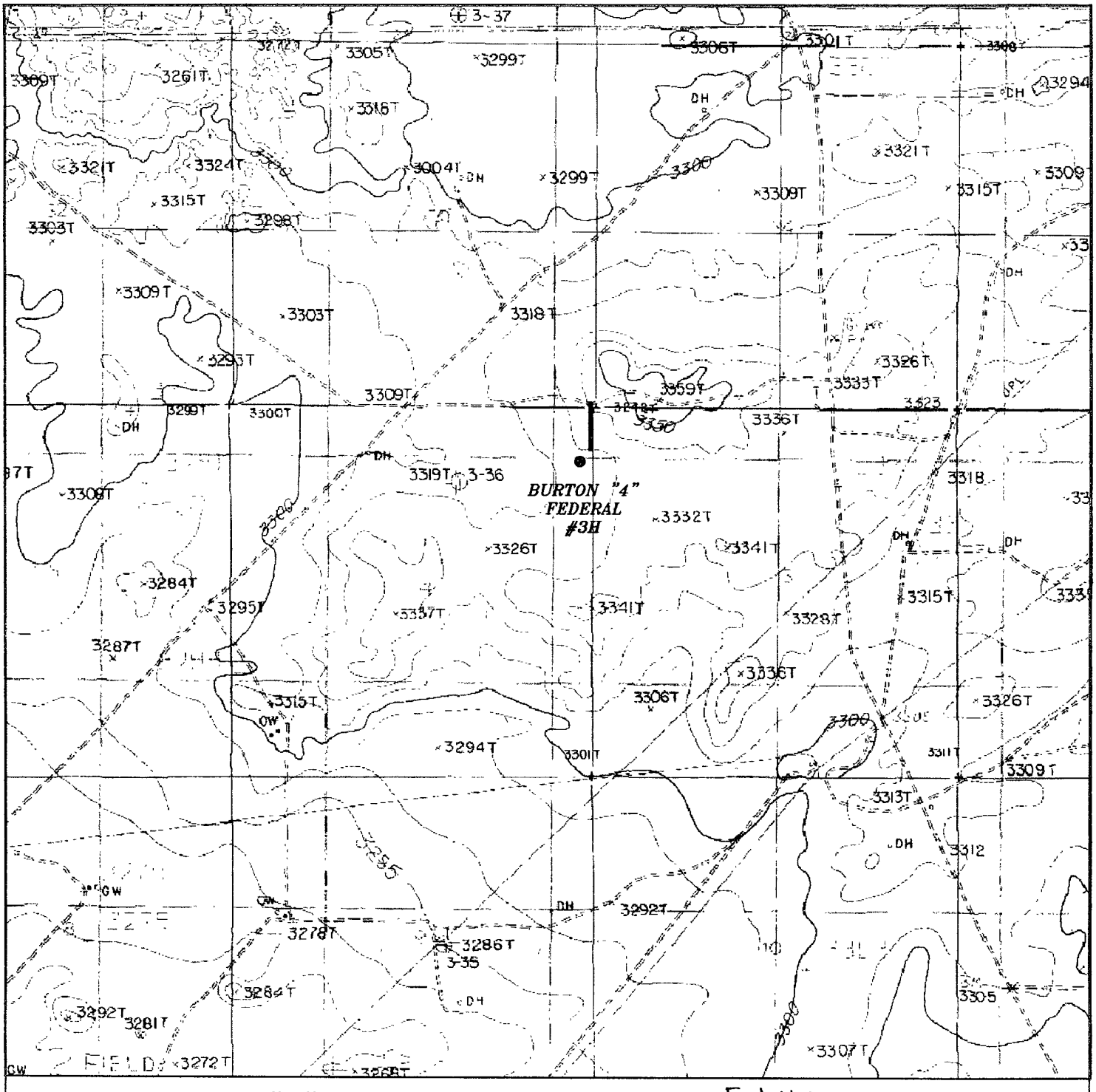
FEBRUARY 2, 2010
Date Surveyed

Signature & Seal of Professional Surveyor

NEW MEXICO 7977 PROFESSIONAL SURVEYOR

Certificate No. Gary L. Jones 7977

BASIN SURVEYS



BURTON "4" FEDERAL #3H

Exhibit 3

Located 810' FNL and 200' FEL

Section 4, 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 22325

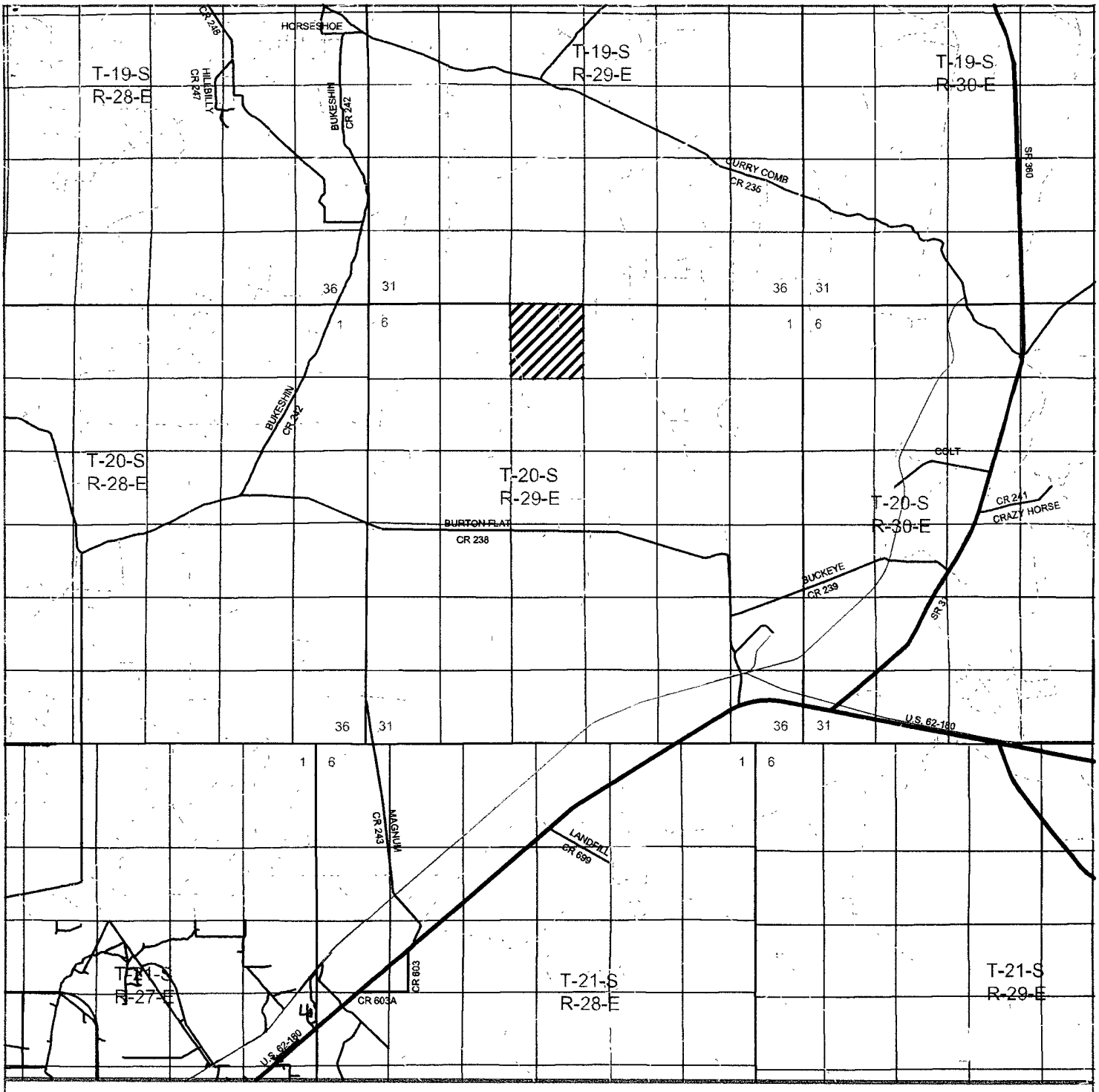
Survey Date: 02-02-2010

Scale: 1" = 2000'

Date: 02-03-2010

N

MEWBOURNE OIL COMPANY



BURTON "4" FEDERAL #3H

Exhibit 3A

Located 810' FNL and 200' FEL
Section 4, 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 22325
Survey Date:	02-02-2010
Scale:	1" = 2 Miles
Date:	02-03-2010

N

MEWBOURNE OIL COMPANY

Exhibit #4
Status of Wells in Immediate Vicinity
Mewbourne Oil Company
Burton 4 Federal #3H
810' FNL & 200' FEL (SHL)
660' FNL & 330' FWL (BHL)
Sec 4-T20S-R29E
Eddy County, New Mexico

Section 4-T20S-R29E

Operator:	Mewbourne Oil Company
Well Name:	Burton 4 Fed Com #2
Unit letter:	P
Status:	Flowing
Field:	East Burton Flat Morrow

Operator:	Mewbourne Oil Company
Well Name:	Colt 4 Federal Com #1
Unit letter:	F
Status:	Producing
Field:	East Burton Flat Morrow

Operator:	Mewbourne Oil Company
Well Name:	Wesson 33 Federal #1
Unit letter:	P
Status:	Producing
Field:	Morrow

Drilling Program
Mewbourne Oil Company
Burton 4 Federal #3H
810' FNL & 200' FEL (SHL)
660' FNL & 330' FWL (BHL)
Sec 4-T20S-R29E
Eddy County, New Mexico

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

Salt	800'
*Yates	1350'
Capitan	1450'
*Delaware	3400'
*Bone Springs	5650'

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 ⅜" surface casing. A 3000# WP Double Ram BOP and 3000# WP Annular will be installed after running 9 ⅝" 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 ⅜" BOPE stack and test ~~with rig pump~~ to 70% of burst rate. Will test the 9 ⅝" BOPE to 3000# and Annular to 1500# with a third party testing company before drilling below 9 ⅝" 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:

See COA

Hole Size	Casing	Wt/Ft.	Grade	Depth	Jt Type
26"	20" (new) Conductor	94#	J55	0-~~380'~~ 250'	BT&C
17 ½"	13 ⅜" (new)	48#	H40	0-~~1350'~~ 1100'	ST&C
17 ½"	13 ⅜" (new)	54.5#	K55	1100-1350'	ST&C
12 ¼"	9 ⅝" (new)	40#	J55	0'-3300'	LT&C
8 ¾"	7" (new)	26#	HCP110	0-~~8300'~~ 7,300'	LT&C
8 ¾"	7" (new)	26#	HCP110	7300-8300'	ULTFJ
6 ⅛"	4 ½" (new)	11.6#	HCP110	8000'-12442'	LT&C

Minimum casing design factors: Collapse 1.125, Burst 1.0, Tensile strength 1.8.
*Subject to availability of casing.

B. Cementing Program: See COA

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 ½#/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-Plus system with 4 ½" 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'~~ 250'	FW spud mud	8.6-9.4	32-34	NA
~~300~~'-1350'	Brine water	10.0	28-30	NA
1350'-3300'	FW	8.4	28-30	NA
3300'-8300'	Cut Brine	8.4-8.6	28-30	NA
8300'-TD' MD	Cut Brine w/Polymer	8.4-8.6	32-40	8-15

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 7000' 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

Mewbourne Oil Company

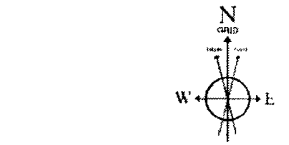
Location: Eddy County, NM
Field: (Burton) Sec 4, T20S, R29E
Facility: Burton 4 Fed Com No. 3H

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

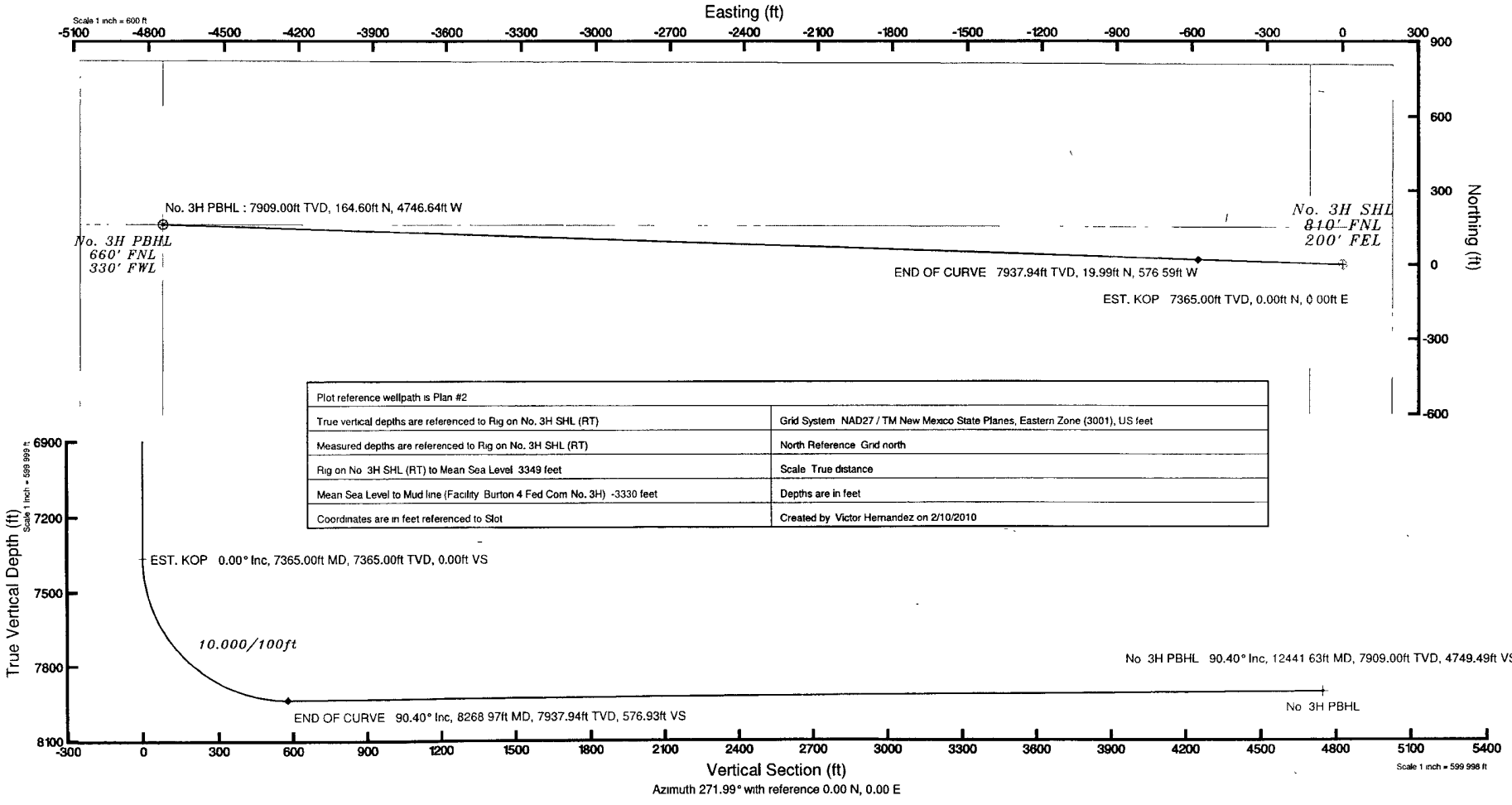
BAKER HUGHES INTEQ

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	271.986	0.00	0.00	0.00	0.00	0.00
EST. KOP	7365.00	0.000	271.986	7365.00	0.00	0.00	0.00	0.00
END OF CURVE	8268.97	90.397	271.986	7937.94	19.99	-576.59	10.00	576.93
No. 3H PBHL	12441.63	90.397	271.986	7909.00	164.60	-4746.64	0.00	4749.49



BGGM (1945 0 to 2011 0) Dip 60 50° Field 48985 2 nT
Magnetic North is 8 05 degrees East of True North (at 2/9/2010)
Grid North is 0 14 degrees East of True North
To correct azimuth from True to Grid subtract 0 14 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



Mewbourne Oil Company

Planned Wellpath Report

Plan #2

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Mewbourne Oil Company**	Slot	**No. 3H SHL**
Area	**Eddy County, NM**	Well	**No. 3H**
Field	**(Burton) Sec 4, T20S, R29E**	Wellbore	**No. 3H PWB**
Facility	**Burton 4 Fed Com 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	**0.999917**	Report Generated	**2/10/2010** at **1:18:20 PM**
Convergence at slot	**0.14° 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**	580595.10	584865.21	32°36'27.455"N	104°04'17.776"W
Facility Reference Pt			**580595.10**	**584865.21**	32°36'27.455"N	104°04'17.776"W
Field Reference Pt			**580595.10**	**584865.21**	32°36'27.455"N	104°04'17.776"W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Rig on No. 3H SHL (RT) to GL	**19.00ft**
Horizontal Reference Pt	**Slot**	Rig on No. 3H SHL (RT) to Mean Sea Level	**3349.00ft**
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	**271.99°**

Mewbourne Oil Company

Planned Wellpath Report

Plan #2

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Mewbourne Oil Company**	Slot	**No. 3H SHL**
Area	**Eddy County, NM**	Well	**No. 3H**
Field	**(Burton) Sec 4, T20S, R29E**	Wellbore	**No. 3H PWB**
Facility	**Burton 4 Fed Com 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	271.986	0.00	0.00	0.00	0.00	580595.10	584865.21	32°36'27.455"N	104°04'17.776"W	0.00	Tie On
7365.00	0.000	271.986	7365.00	0.00	0.00	0.00	580595.10	584865.21	32°36'27.455"N	104°04'17.776"W	0.00	EST. KOP
7465.00†	10.000	271.986	7464.49	8.70	0.30	-8.70	580586.40	584865.51	32°36'27.458"N	104°04'17.878"W	10.00	
7565.00†	20.000	271.986	7560.96	34.55	1.20	-34.53	580560.57	584866.41	32°36'27.468"N	104°04'18.179"W	10.00	
7665.00†	30.000	271.986	7651.48	76.76	2.66	-76.72	580518.39	584867.87	32°36'27.483"N	104°04'18.673"W	10.00	
7765.00†	40.000	271.986	7733.29	134.05	4.65	-133.97	580461.15	584869.86	32°36'27.504"N	104°04'19.342"W	10.00	
7865.00†	50.000	271.986	7803.91	204 67	7.09	-204.54	580390.57	584872.30	32°36'27.530"N	104°04'20.167"W	10.00	
7965.00†	60.000	271.986	7861.20	286.48	9.93	-286.31	580308.82	584875.14	32°36'27.560"N	104°04'21.122"W	10 00	
8065.00†	70.000	271.986	7903.40	376.99	13.07	-376.77	580218.36	584878.27	32°36'27.593"N	104°04'22.180"W	10.00	
8165.00†	80.000	271.986	7929.25	473.46	16.41	-473.18	580121.96	584881.62	32°36'27.629"N	104°04'23.307"W	10.00	
8265.00†	90.000	271.986	7937.96	572.96	19.86	-572.61	580022.54	584885.07	32°36'27.665"N	104°04'24.469"W	10 00	
8268.97	90.397	271.986	7937.94	576.93	19.99	-576 59	580018.56	584885.20	32°36'27.667"N	104°04'24.515"W	10.00	END OF CURVE
8365.00†	90.397	271.986	7937 28	672.96	23.32	-672 55	579922.61	584888.53	32°36'27.702"N	104°04'25.637"W	0.00	
8465.00†	90.397	271.986	7936 58	772.95	26.79	-772.49	579822.68	584892.00	32°36'27.739"N	104°04'26.805"W	0.00	
8565.00†	90.397	271.986	7935.89	872.95	30.25	-872.43	579722.75	584895.46	32°36'27.776"N	104°04'27.973"W	0.00	
8665.00†	90.397	271.986	7935.20	972.95	33.72	-972.36	579622.82	584898.93	32°36'27.812"N	104°04'29.142"W	0.00	
8765.00†	90.397	271.986	7934.50	1072.95	37.18	-1072.30	579522.89	584902.39	32°36'27.849"N	104°04'30.310"W	0.00	
8865.00†	90.397	271.986	7933.81	1172.94	40.65	-1172.24	579422.96	584905.86	32°36'27.886"N	104°04'31.478"W	0 00	
8965.00†	90.397	271.986	7933.12	1272.94	44.12	-1272.18	579323.03	584909.32	32°36'27.922"N	104°04'32.646"W	0.00	
9065.00†	90.397	271.986	7932.42	1372.94	47.58	-1372.11	579223.10	584912.79	32°36'27.959"N	104°04'33.814"W	0.00	
9165.00†	90.397	271.986	7931.73	1472 94	51.05	-1472 05	579123.17	584916.25	32°36'27.996"N	104°04'34.982"W	0.00	
9265.00†	90.397	271.986	7931 03	1572.93	54.51	-1571.99	579023.25	584919.72	32°36'28.032"N	104°04'36.150"W	0.00	
9365.00†	90.397	271.986	7930 34	1672 93	57.98	-1671.93	578923.32	584923.18	32°36'28.069"N	104°04'37.319"W	0.00	
9465.00†	90.397	271.986	7929.65	1772.93	61.44	-1771.86	578823.39	584926.65	32°36'28.106"N	104°04'38.487"W	0.00	
9565.00†	90.397	271.986	7928.95	1872.93	64.91	-1871.80	578723.46	584930.11	32°36'28.142"N	104°04'39.655"W	0.00	
9665.00†	90.397	271.986	7928 26	1972.92	68.38	-1971.74	578623.53	584933.58	32°36'28.179"N	104°04'40.823"W	0.00	
9765.00†	90.397	271.986	7927 57	2072.92	71.84	-2071.68	578523.60	584937.04	32°36'28.216"N	104°04'41.991"W	0 00	
9865.00†	90.397	271.986	7926 87	2172.92	75.31	-2171.61	578423.67	584940.51	32°36'28.252"N	104°04'43.159"W	0.00	
9965.00†	90.397	271.986	7926.18	2272 92	78.77	-2271 55	578323.74	584943.98	32°36'28.289"N	104°04'44.327"W	0 00	
10065.00†	90.397	271.986	7925.49	2372.91	82.24	-2371.49	578223.81	584947.44	32°36'28.326"N	104°04'45.496"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Mewbourne Oil Company**	Slot	**No. 3H SHL**
Area	**Eddy County, NM**	Well	**No. 3H**
Field	**(Burton) Sec 4, T20S, R29E**	Wellbore	**No. 3H PWB**
Facility	**Burton 4 Fed Com 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
10165.00†	90.397	271.986	7924.79	2472.91	85.70	-2471.43	578123.88	584950.91	32°36'28.362"N	104°04'46.664"W	0.00	
10265.00†	90.397	271.986	7924.10	2572.91	89.17	-2571.36	578023.96	584954.37	32°36'28.399"N	104°04'47.832"W	0.00	
10365.00†	90.397	271.986	7923.40	2672.91	92.63	-2671.30	577924.03	584957.84	32°36'28.436"N	104°04'49.000"W	0.00	
10465.00†	90.397	271.986	7922.71	2772.90	96.10	-2771.24	577824.10	584961.30	32°36'28.472"N	104°04'50.168"W	0.00	
10565.00†	90.397	271.986	7922.02	2872.90	99.57	-2871.18	577724.17	584964.77	32°36'28.509"N	104°04'51.336"W	0.00	
10665.00†	90.397	271.986	7921.32	2972.90	103.03	-2971.11	577624.24	584968.23	32°36'28.546"N	104°04'52.505"W	0.00	
10765.00†	90.397	271.986	7920.63	3072.90	106.50	-3071.05	577524.31	584971.70	32°36'28.582"N	104°04'53.673"W	0.00	
10865.00†	90.397	271.986	7919.94	3172.90	109.96	-3170.99	577424.38	584975.16	32°36'28.619"N	104°04'54.841"W	0.00	
10965.00†	90.397	271.986	7919.24	3272.89	113.43	-3270.93	577324.45	584978.63	32°36'28.655"N	104°04'56.009"W	0.00	
11065.00†	90.397	271.986	7918.55	3372.89	116.89	-3370.86	577224.52	584982.09	32°36'28.692"N	104°04'57.177"W	0.00	
11165.00†	90.397	271.986	7917.86	3472.89	120.36	-3470.80	577124.59	584985.56	32°36'28.729"N	104°04'58.345"W	0.00	
11265.00†	90.397	271.986	7917.16	3572.89	123.82	-3570.74	577024.67	584989.02	32°36'28.765"N	104°04'59.513"W	0.00	
11365.00†	90.397	271.986	7916.47	3672.88	127.29	-3670.68	576924.74	584992.49	32°36'28.802"N	104°05'00.682"W	0.00	
11465.00†	90.397	271.986	7915.77	3772.88	130.76	-3770.61	576824.81	584995.95	32°36'28.839"N	104°05'01.850"W	0.00	
11565.00†	90.397	271.986	7915.08	3872.88	134.22	-3870.55	576724.88	584999.42	32°36'28.875"N	104°05'03.018"W	0.00	
11665.00†	90.397	271.986	7914.39	3972.88	137.69	-3970.49	576624.95	585002.89	32°36'28.912"N	104°05'04.186"W	0.00	
11765.00†	90.397	271.986	7913.69	4072.87	141.15	-4070.43	576525.02	585006.35	32°36'28.948"N	104°05'05.354"W	0.00	
11865.00†	90.397	271.986	7913.00	4172.87	144.62	-4170.36	576425.09	585009.82	32°36'28.985"N	104°05'06.522"W	0.00	
11965.00†	90.397	271.986	7912.31	4272.87	148.08	-4270.30	576325.16	585013.28	32°36'29.022"N	104°05'07.691"W	0.00	
12065.00†	90.397	271.986	7911.61	4372.87	151.55	-4370.24	576225.23	585016.75	32°36'29.058"N	104°05'08.859"W	0.00	
12165.00†	90.397	271.986	7910.92	4472.86	155.02	-4470.18	576125.30	585020.21	32°36'29.095"N	104°05'10.027"W	0.00	
12265.00†	90.397	271.986	7910.23	4572.86	158.48	-4570.11	576025.38	585023.68	32°36'29.131"N	104°05'11.195"W	0.00	
12365.00†	90.397	271.986	7909.53	4672.86	161.95	-4670.05	575925.45	585027.14	32°36'29.168"N	104°05'12.363"W	0.00	
12441.63	90.397	271.986	7909.00[1]	4749.49	164.60	-4746.64	575848.87	585029.80	32°36'29.196"N	104°05'13.258"W	0.00	No. 3H PBHL

Mewbourne Oil Company

Planned Wellpath Report

Plan #2

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Mewbourne Oil Company**	Slot	**No. 3H SHL**
Area	**Eddy County, NM**	Well	**No. 3H**
Field	**(Burton) Sec 4, T20S, R29E**	Wellbore	**No. 3H PWB**
Facility	**Burton 4 Fed Com 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. 3H PBHL	12441.63	7909.00	164.60	-4746.64	**575848.87**	**585029.80**	32°36'29.196"N	104°05'13.258"W	point

SURVEY PROGRAM Ref Wellbore: No. 3H PWB Ref Wellpath: Plan #2

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.00	12441.63	NaviTrak (Standard)		No. 3H PWB

Closed Loop Pad Dimensions 280' x 320'

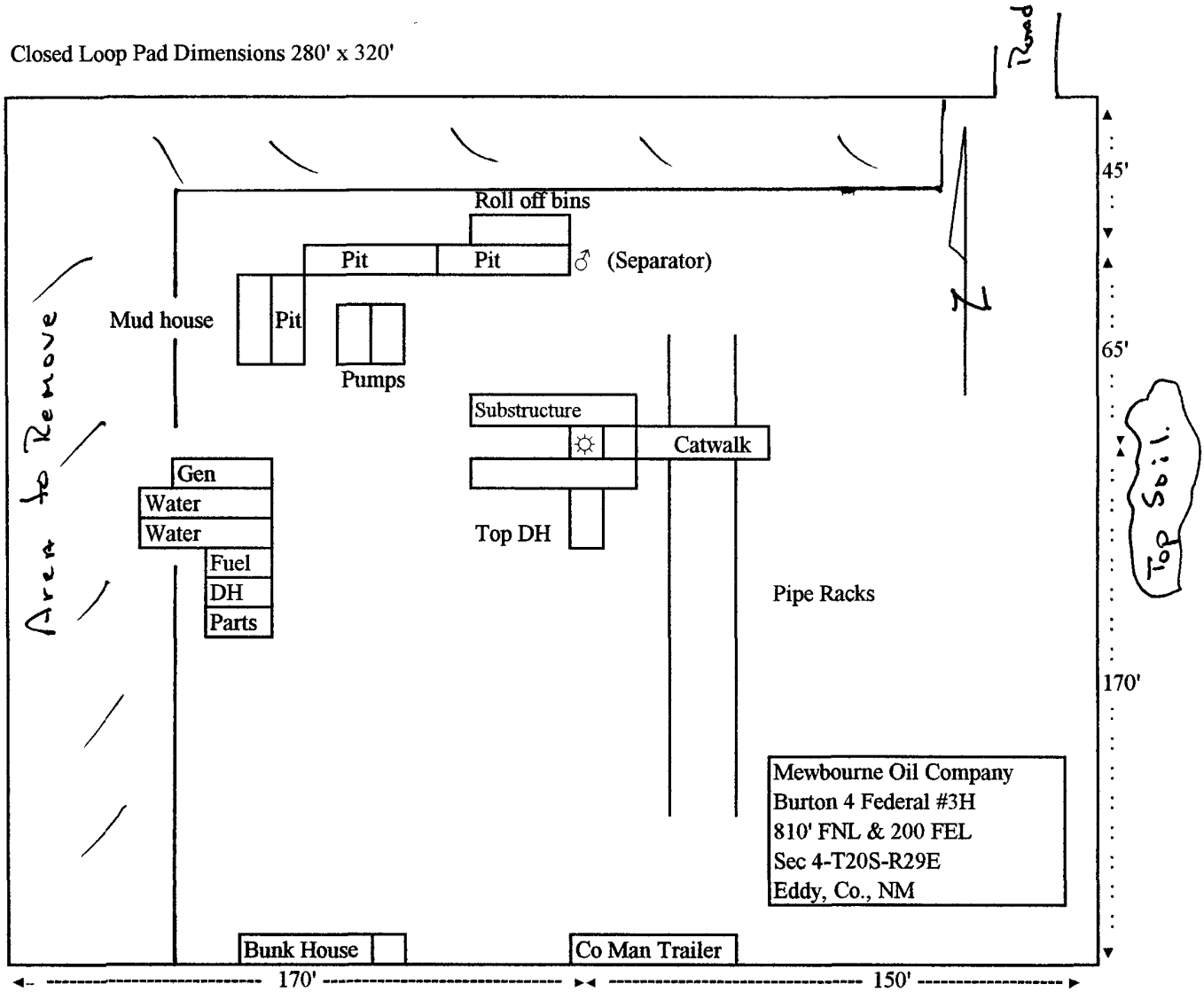
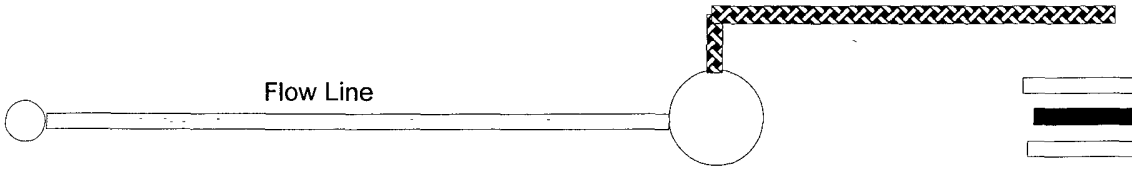


Exhibit 5

Proposed Production Facilities Schematic

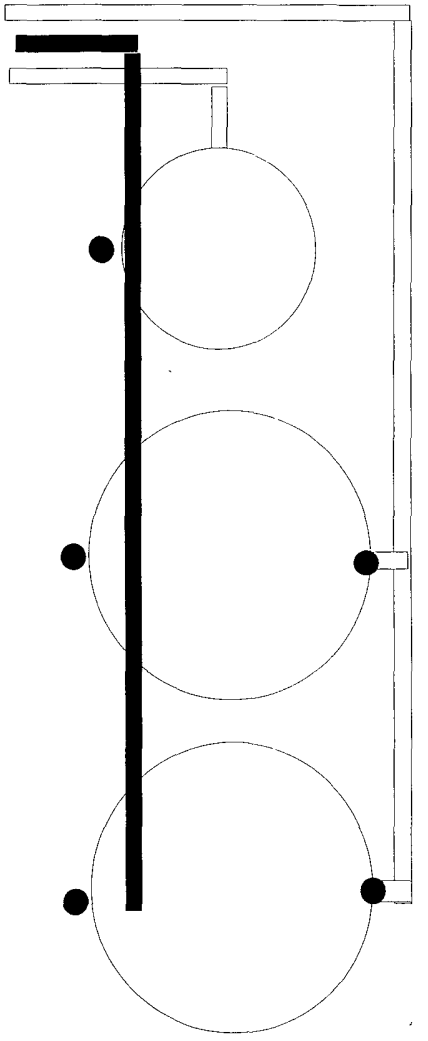


To Gas Sales

Water Tank

Stock Tank

Stock Tank



Flow Line

Water Line

Oil Dump Line

Gas Sales Line

Sealing Valve

Non Sealing Valve

Mewbourne Oil Company

Exhibit # 6

Proposed Production Facilities Schematic

Burton 4 Federal #3H
810' FNL & 200' FEL (SHL)
660' FNL & 330' FWL (BHL)
Sec 4-T20S-R29E
Eddy, County NM

Notes Regarding Blowout Preventer

Mewbourne Oil Company

Burton 4 Federal #3H
810' FNL & 200' FEL (SHL)
660' FNL & 330' FWL (BHL)
Sec 4-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 ⅜" casing and 3000 psi working pressure on 9 ⅝" & 7" casing.

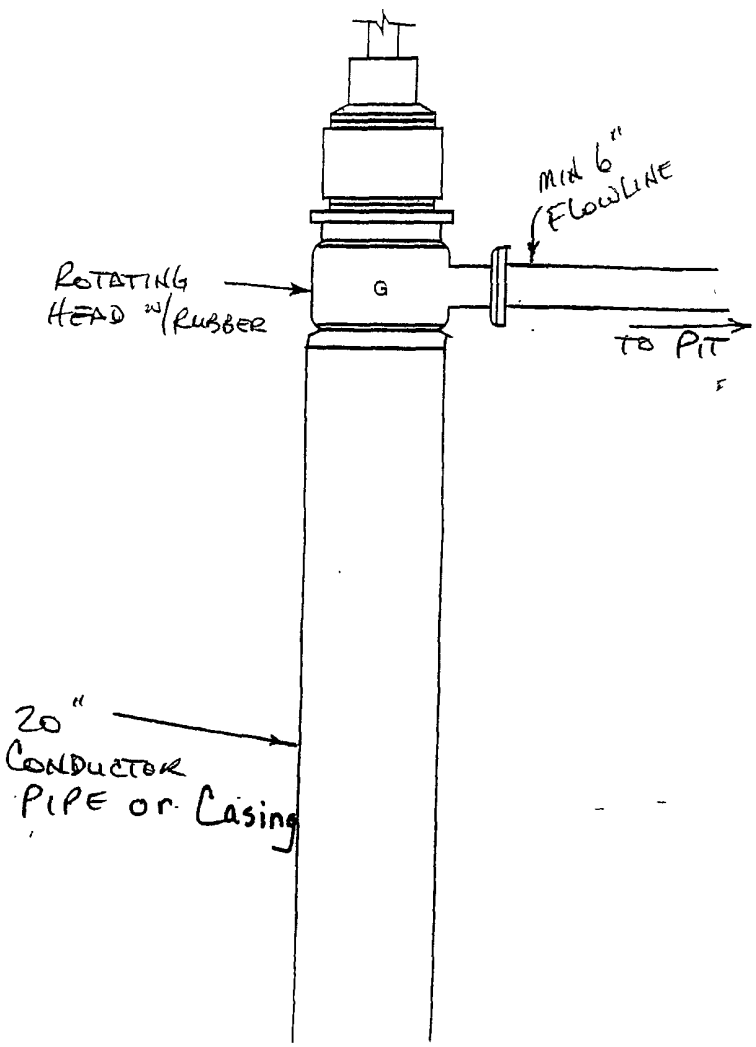
III. Safety valve must be available on the rig floor at all times with proper connections to install in the drill string. Valve must be full bore with minimum 3000 psi working pressure.

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



Burton 4 Fed #3H
Sec 4 T20S-R29E
Eddy Co., NM

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

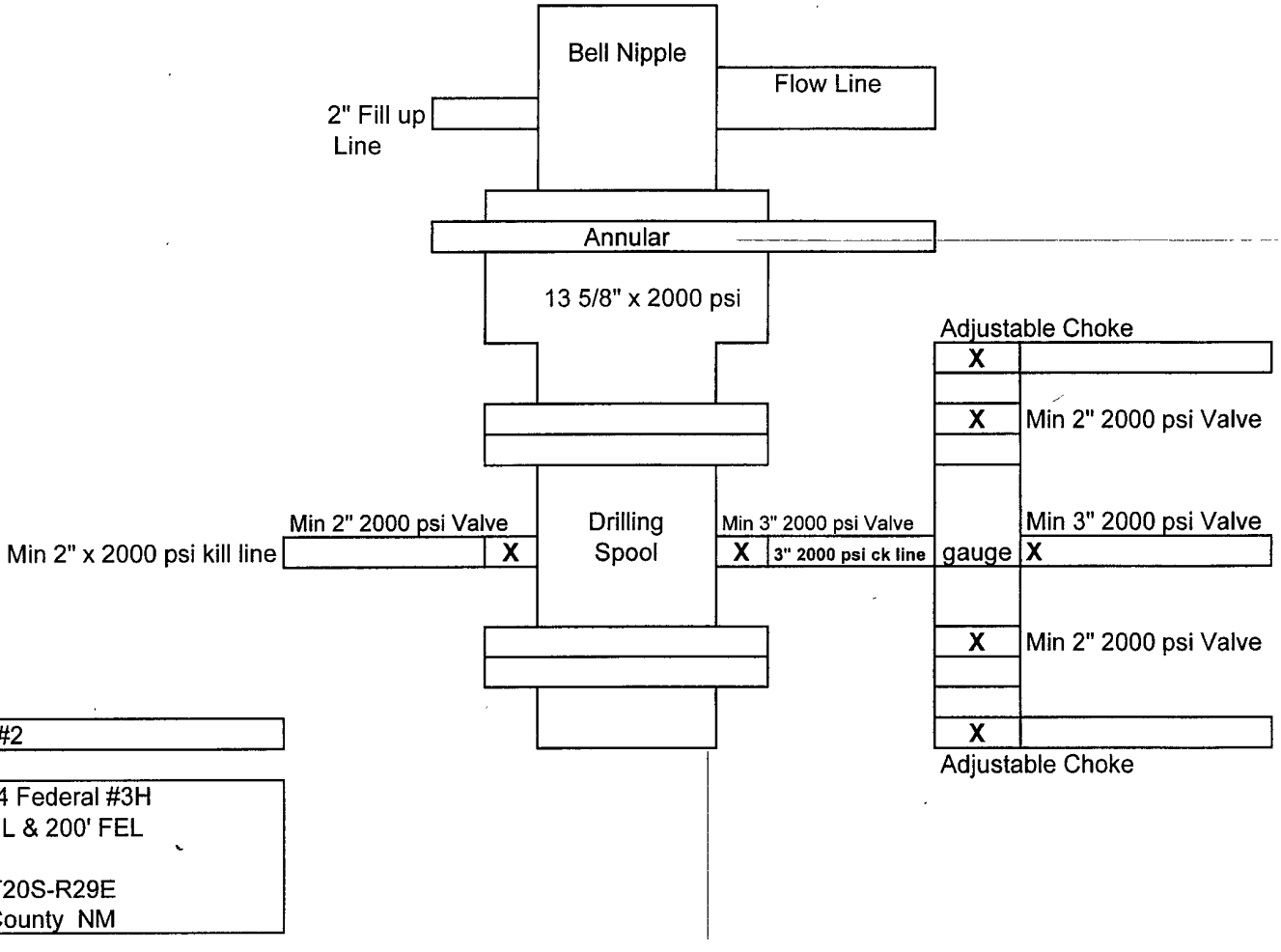


Exhibit #2

Burton 4 Federal #3H
810' FNL & 200' FEL

Sec 4-T20S-R29E
Eddy, County NM

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

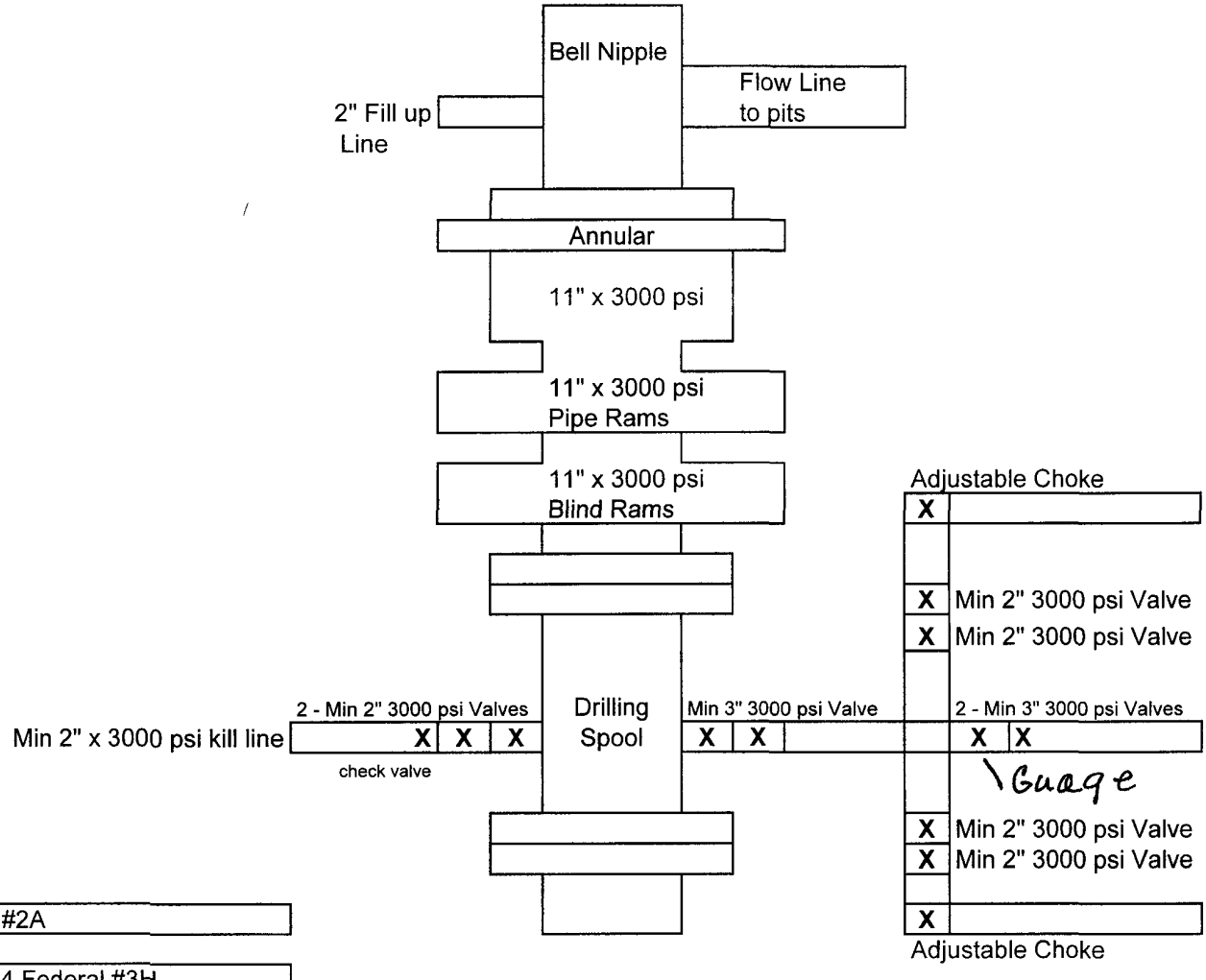


Exhibit #2A

Burton 4 Federal #3H
660' FNL & 200' FEL
Sec 4-T20S-R29E
Eddy, County
New Mexico

Hydrogen Sulfide Drilling Operations Plan

Mewbourne Oil Company

Burton 4 Federal #3H

810' FNL & 200' FEL (SL)

660' FNL & 330' FWL (BHL)

Sec 4-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 know 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

Burton 4 Federal #3H
810' FNL & 200' FEL (SHL)
660' FNL & 330' FWL (BHL)
Sec 4-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: Go NE of Carlsbad on Hwy 62/180 14 miles. Turn left on CR238 (Burton Flat Road) & continue north 2.0 miles & paved road will turn left. Continue north 3.7 miles on lease road. Turn left & continue west 0.7 miles. Turn left & continue south approx 700' to location.

2. Proposed Access Road:

A Approx 700' 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.

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 East 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.
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.

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

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-0209083

Legal Description of Land: Section 4, T-20S, R-29E Eddy County, New Mexico.
Location @ 810' FNL & 200' FEL.

Formation (if applicable):

Bond Coverage: $150,000

BLM Bond File: NM1693, Nationwide

Authorized Signature: _____

Name: NM (Micky) Young
Title: District Manager
Date: February 17, 2010

Mewbourne Oil Company

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

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route for the Burton 4 Federal #3H, 810' FNL & 200' FEL of Sec 4-T20S- R29E, Eddy County, New Mexico; that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by Mewbourne Oil Company, its contractors and subcontractors, in accordance with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Signature: _____ Date: 2/22/10

Print: **NM Young**

Hobbs District Manager

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MEWBOURNE OIL COMPANY
LEASE NO.:	NM0209083
WELL NAME & NO.:	BURTON 4 FEDERAL # 3H
SURFACE HOLE FOOTAGE:	810' FNL & 200' FEL
BOTTOM HOLE FOOTAGE	660' FNL & 330' FWL
LOCATION:	Section 4, 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.

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)

Protecting a Playa Ecosystem:

- The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.
- Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion.
- Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control.
- Exhaust noise from pump jack engines must be muffled or otherwise controlled.

Tank Battery COAs Only:

- 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.

Avoiding Fence Line

The fence line about 25 feet east of the proposed project shall be avoided by construction and operational activities.

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.

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 in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is 6 inches in depth. The topsoil will be used for interim and final reclamation. The topsoil for the access road shall be stockpiled as well along the entire length 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 theCarlsbad 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.

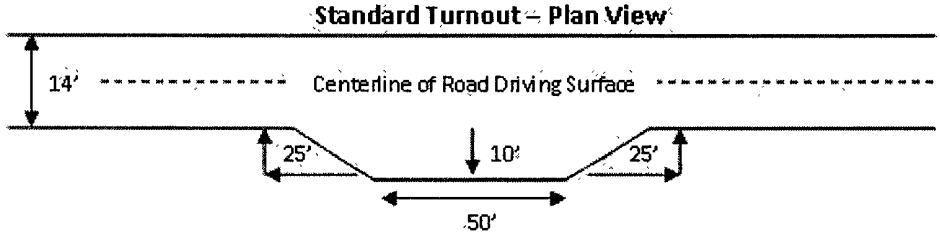
Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

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.

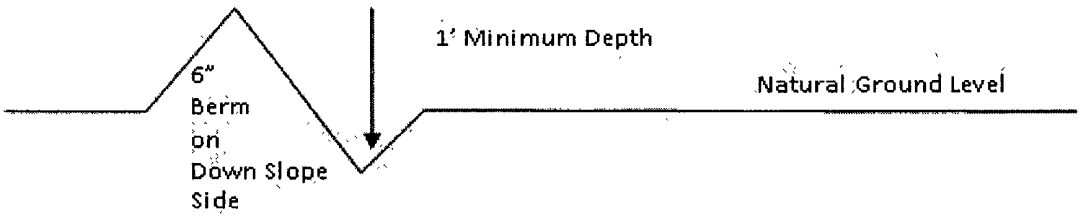
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



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

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

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

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

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

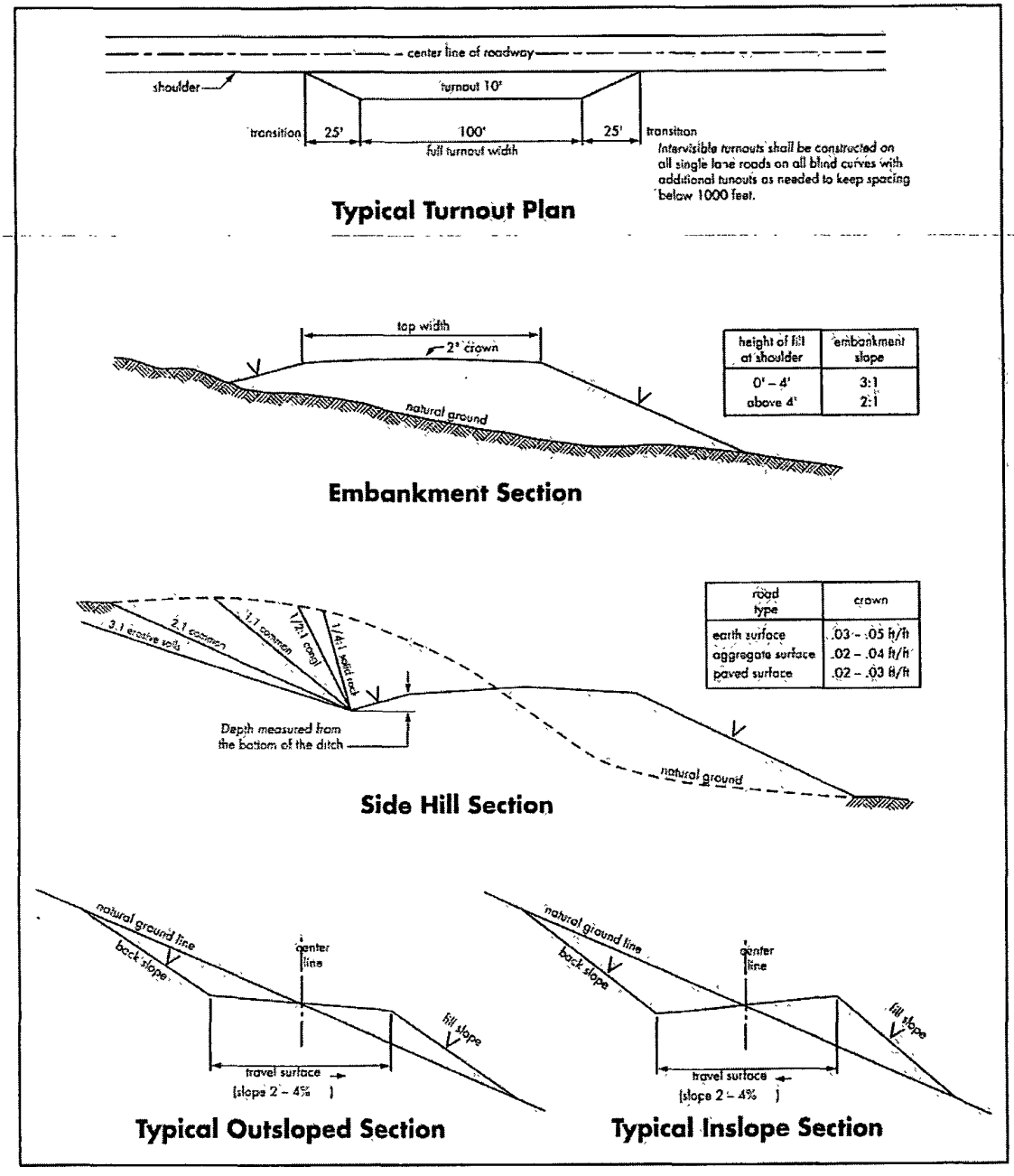
Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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

Public Access

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

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

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

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

1. **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.

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. 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 and Delaware Groups and the Bone Spring formation.

1. The **20** inch surface casing shall be set **at approximately 250 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 first 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 not required on the **4-1/2"** casing. **Packer system 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"** first intermediate casing shoe shall be **2000 (2M)** psi.

   a. **For first 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"** 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 utilizing 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.

CRW 032210

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:

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed