13-393

Form 3160-3
(August 2007)

OCD Artesia

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
LC-062052 - SL, LC-029388 (D) - BHL

6. If Indian, Allotee 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.
Tamano 11 MD Fed Com #1H (39886)

2. Name of Operator Mewbourne Oil Company

9. API Well No.
30-015-41349

3a. Address PO Box 5270
Hobbs, NM 88241

3b. Phone No. *(include area code)*
575-393-5905

10. Field and Pool, or Exploratory
Tamano;Bone Spring (58040 / 32678)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 188' FSL & 903' FWL, Sec. 11 T18S R31E
At proposed prod. zone 330' FNL & 850' FWL, Sec. 11 T18S R31E

11. Sec., T. R. M. or Blk. and Survey or Area
Sec. 11 T18S R31E

14. Distance in miles and direction from nearest town or post office*
33 miles SE of Artesia, NM

12. County or Parish
Eddy

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
188'

16. No. of acres in lease
LC-062052- 240 acres
LC-029388 - 320 acres

17. Spacing Unit dedicated to this well
160

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
116' Legacy Tamano BSSC Unit #602

19. Proposed Depth
13120' - MD
8429' - TVD

20. BLM/BIA Bond No. on file
NM-1693 nationwide, NMB-000919

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3719'

22. Approximate date work will start*
04/15/2013

23. Estimated duration
60 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by 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 BLM.

25. Signature Bradley Bishop — Name *(Printed/Typed)* Bradley Bishop — Date 03/06/13

Title

Approved by *(Signature)* /s/George MacDonell — Name *(Printed/Typed)* /s/George MacDonell — Date MAY - 3 2013

Title FIELD MANAGER — Office CARLSBAD FIELD OFFICE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to 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.

(Continued on page 2)

*(Instructions on page 2)

Capitan Controlled Water Basin

RECEIVED
MAY 08 2013
NMOCD ARTESIA

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015- 41349	~~32676~~ 58040	Tamano Bone Spring

Property Code	Property Name	Well Number
39886	TAMANO 11 MD Fed Com	1H

OGRID No.	Operator Name	Elevation
14744	MEWBOURNE OIL COMPANY	3719'

Surface Location

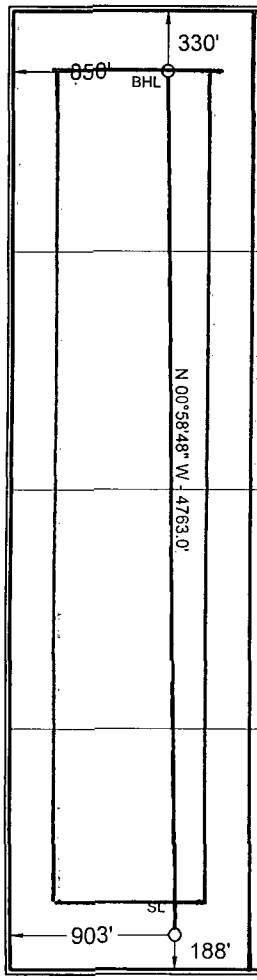
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	11	18 S	31 E		188	SOUTH	903	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	11	18 S	31 E		330	NORTH	850	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidated Code	Order No.
160			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



NW COR SEC 11
NMSP-E (NAD 83)
Y = 643944.3' N
X = 690271.1' E

TAMANO 11MD BHL
NMSP-E (NAD 83)
Y = 643620.6' N
X = 691122.9' E
N LAT.= 32° 46' 06.24"
W LONG.= 103° 50' 45.71"

NMSP-E (NAD 27)
Y = 643556.9' N
X = 649944.2' E
N LAT.= 32.768280571°
W LONG.= 103.845525305°

NE COR SEC 11
NMSP-E (NAD 83)
Y = 643983.2' N
X = 695551.6' E

PROJECT AREA

PRODUCING AREA

TAMANO 11MD SHL
NMSP-E (NAD 83)
Y = 638858.2' N
X = 691204.4' E
N LAT.= 32° 45' 19.11"
W LONG.= 103° 50' 45.01"

NMSP-E (NAD 27)
Y = 638794.7' N
X = 650025.7' E
N LAT.= 32.755189807°
W LONG.= 103.845331785°

SW COR SEC 11
NMSP-E (NAD 83)
Y = 638662.7' N
X = 690302.5' E

SE COR SEC 11
NMSP-E (NAD 83)
Y = 638700.3' N
X = 695582.7' E

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 voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 3-6-13 Date

BRADLEY BISHOP
Print Name

E-mail Address

SURVEYORS CERTIFICATION

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

February 08, 2013
Date of Survey

Signature and Seal of Professional Surveyor:

JAMES E. TOMPKINS
NEW MEXICO
14729
REGISTERED PROFESSIONAL LAND SURVEYOR

Job No.: WTC48906
JAMES E. TOMPKINS 14729
Certificate Number

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 6 day of March, 2013.

Name: NM Young

Signature: FOR NM YOUNG

Position Title: Hobbs District Manager

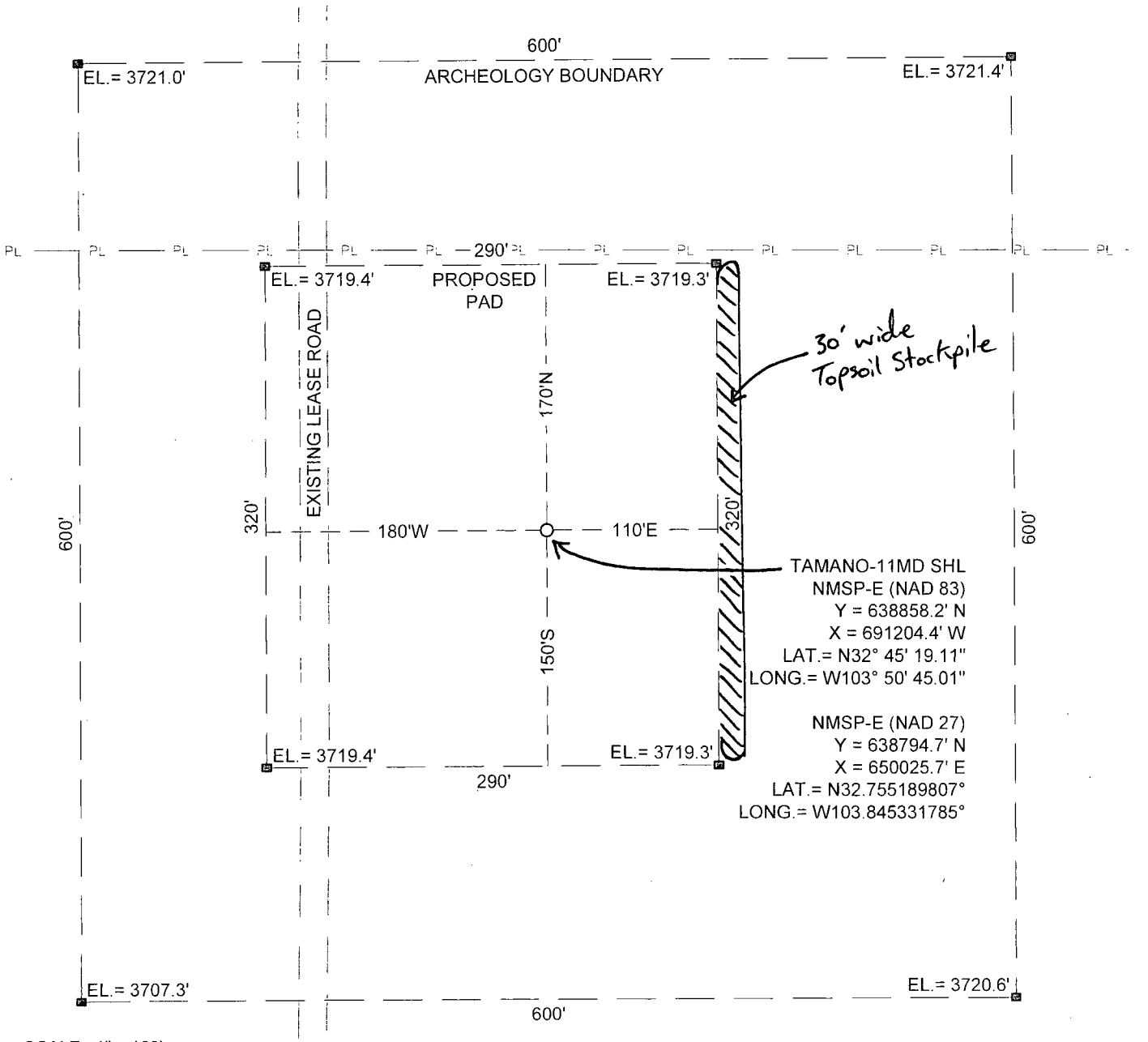
Address: PO Box 5270, Hobbs NM 88241

Telephone: 575-393-5905

E-mail: myoung@mewbourne.com

Exhibit 3

SITE LOCATION



SCALE: 1" = 100'

SECTION 11,T 18 S, R 31 E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 188' FSL & 903' FWL

OPERATOR: MEWBOURNE OIL COMPANY

WELL NAME: TAMANO-11MD

DRIVING DIRECTIONS:

From the Juntion of Highway 82 and County Road 222. Go south on County Road 222 for 4.1 miles to the intersection of County Road 222 and County Road 249. Go left on County Road 249 for 1.5 miles to a lease road left. Go left on lease for 1.2 miles to a lease road left. Go left on lease road for 605 feet and the location flag is on the right.

WEST TEXAS CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
405 S.W. 1st. STREET
ANDREWS, TEXAS 79714
(432) 523-2181

MEWBOURNE OIL COMPANY

TN 4/9/13

JOB No.: WTC48906

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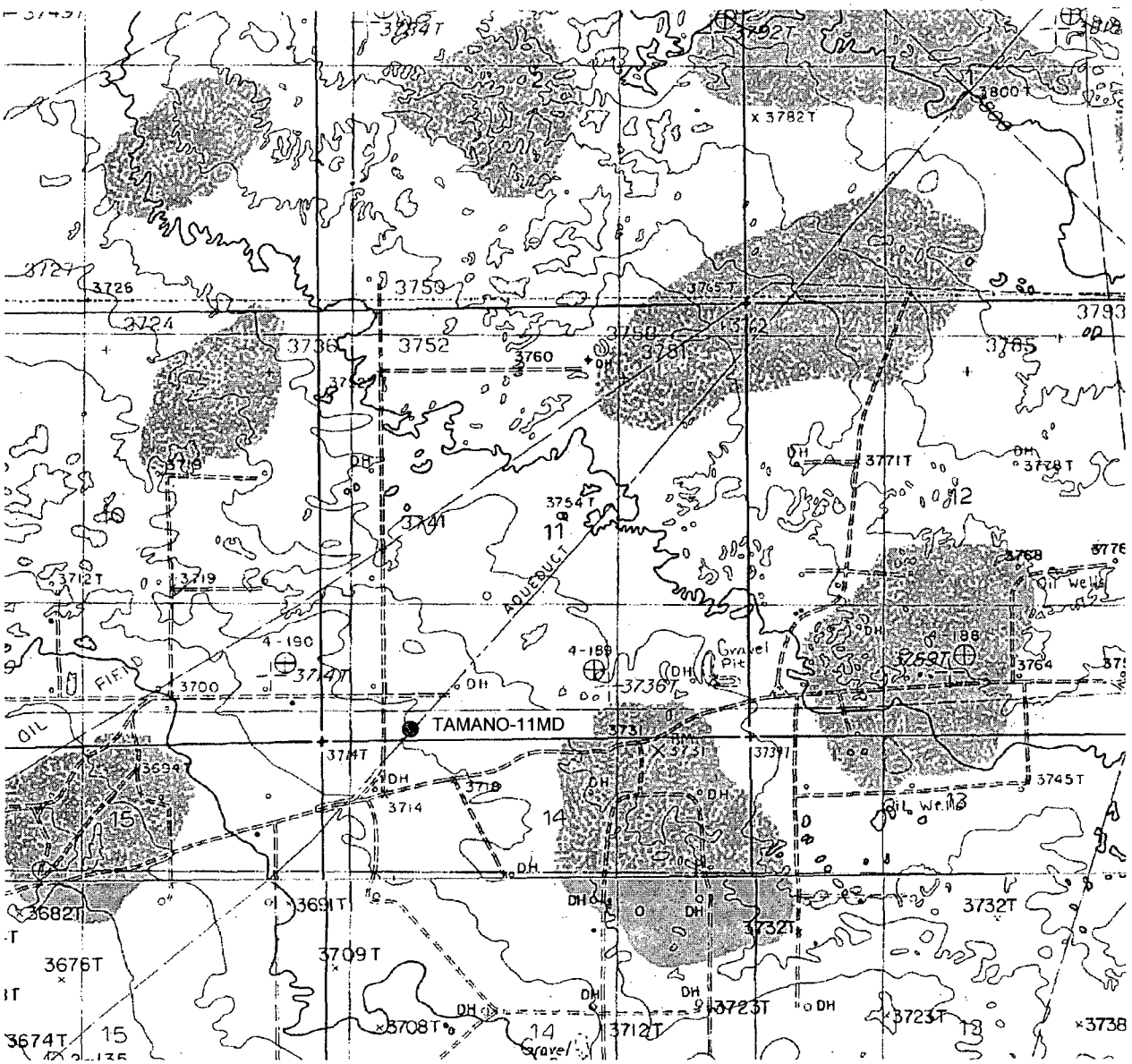
EXHIBIT "3A"

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

SECTION 11,T 18 S, R 31 E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 188' FSL & 903' FWL

OPERATOR: MEWBOURNE OIL COMPANY

WELL NAME: TAMANO-11MD

DRIVING DIRECTIONS:

From the Juntion of Highway 82 and County Road 222. Go south on County Road 222 for 4.1 miles to the intersection of County Road 222 and County Road 249. Go left on County Road 249 for 1.5 miles to a lease road left. Go left on lease for 1.2 miles to a lease road left. Go left on lease road for 605 feet and the location flag is on the right.

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ENGINEERS PLANNERS SURVEYORS
405 S.W. 1st STREET
ANDREWS, TEXAS 79714
(432) 523-2181

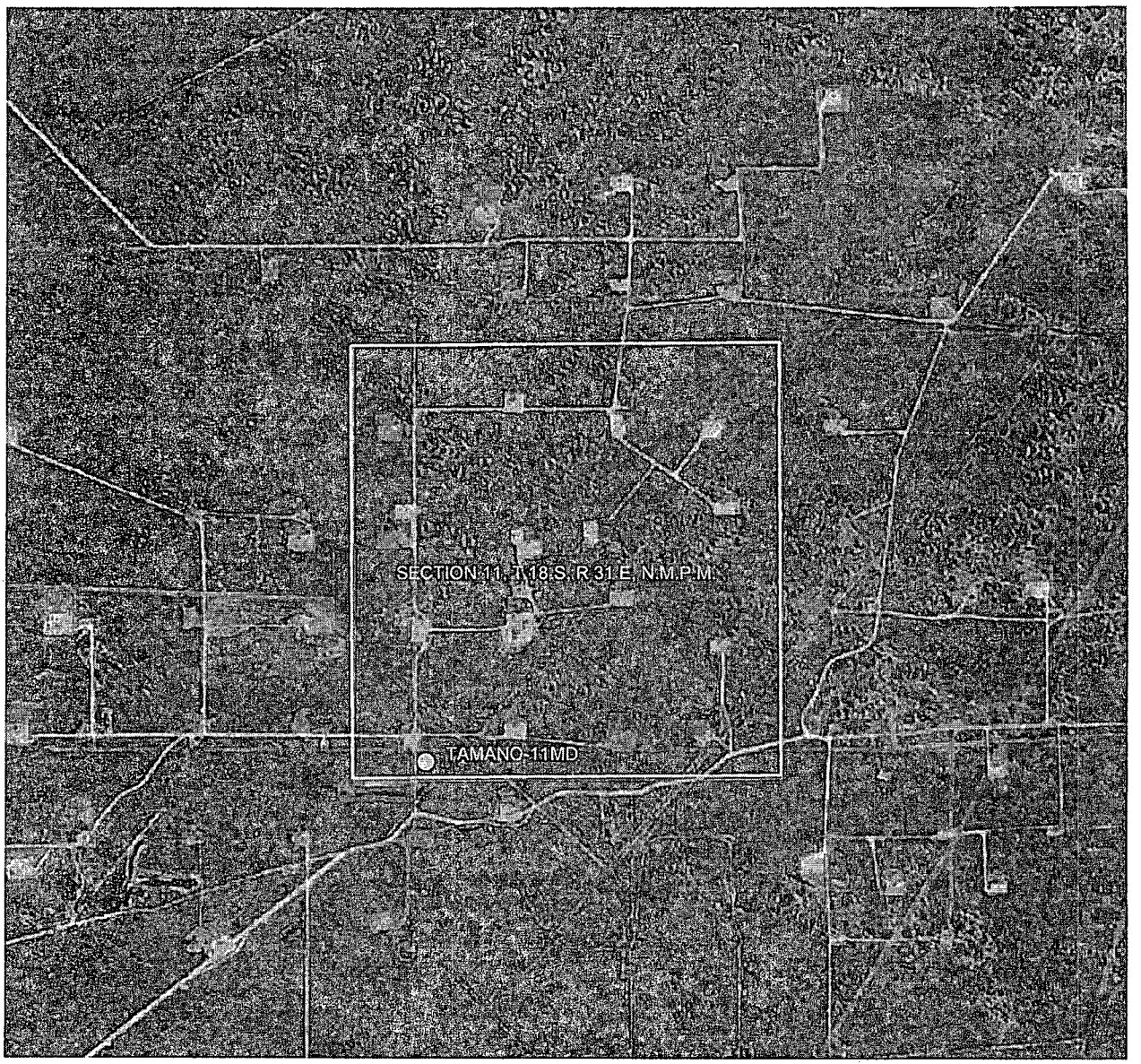
MEWBOURNE OIL COMPANY

JOB No.: WTC48906

Z:\Projects\Oil & Gas Surveys\Mewbourne Oil Company\48906--Mewbourne Oil Company, State # Pad 2 TAMANO WELL LOCATIONS Eddy Co\Drawings\48906 - TAMANO 11MD.dwg

EXHIBIT "3B"

AERIAL MAP



SCALE: 1" = 2000'

SECTION 11,T 18 S, R 31 E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 188' FSL & 903' FWL

OPERATOR: MEWBOURNE OIL COMPANY

WELL NAME: TAMANO-11MD

DRIVING DIRECTIONS:

From the Juntion of Highway 82 and County Road 222. Go south on County Road 222 for 4.1 miles to the intersection of County Road 222 and County Road 249. Go left on County Road 249 for 1.5 miles to a lease road left. Go left on lease for 1.2 miles to a lease road left. Go left on lease road for 605 feet and the location flag is on the right.

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405 S.W. 1st. STREET
ANDREWS, TEXAS 79714
(432) 523-2181

MEWBOURNE OIL COMPANY

JOB No.: WTC48906

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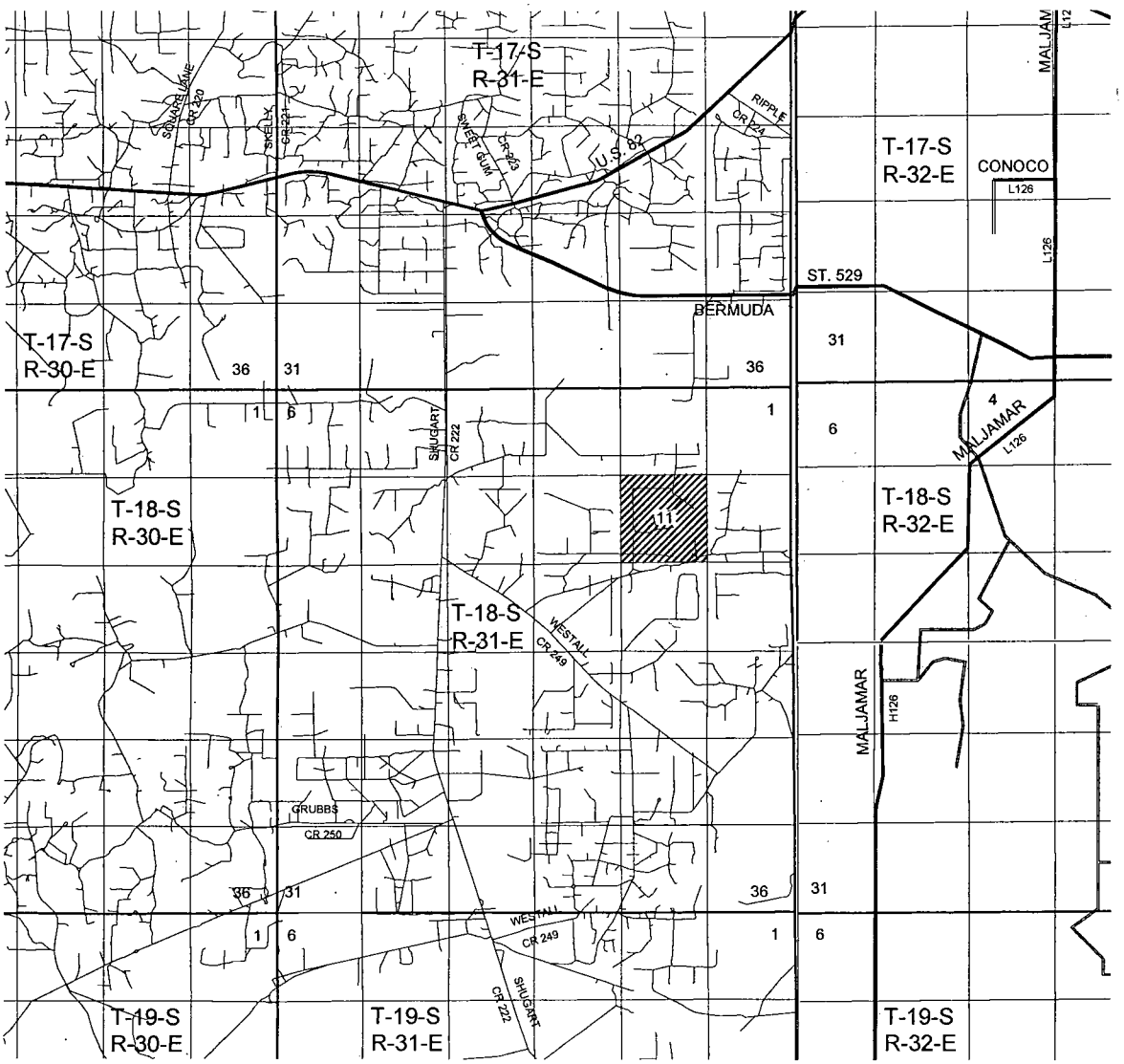
EXHIBIT "3C"

VICINITY MAP



GRAPHIC SCALE OF MILES 1" = 2 MILES

SECTION 11,T 18 S, R 31 E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 188' FSL & 903' FWL

OPERATOR: MEWBOURNE OIL COMPANY

WELL NAME: TAMANO-11MD

DRIVING DIRECTIONS:

From the Juntion of Highway 82 and County Road 222. Go south on County Road 222 for 4.1 miles to the intersection of County Road 222 and County Road 249. Go left on County Road 249 for 1.5 miles to a lease road left. Go left on lease for 1.2 miles to a lease road left. Go left on lease road for 605 feet and the location flag is on the right.

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MEWBOURNE OIL COMPANY

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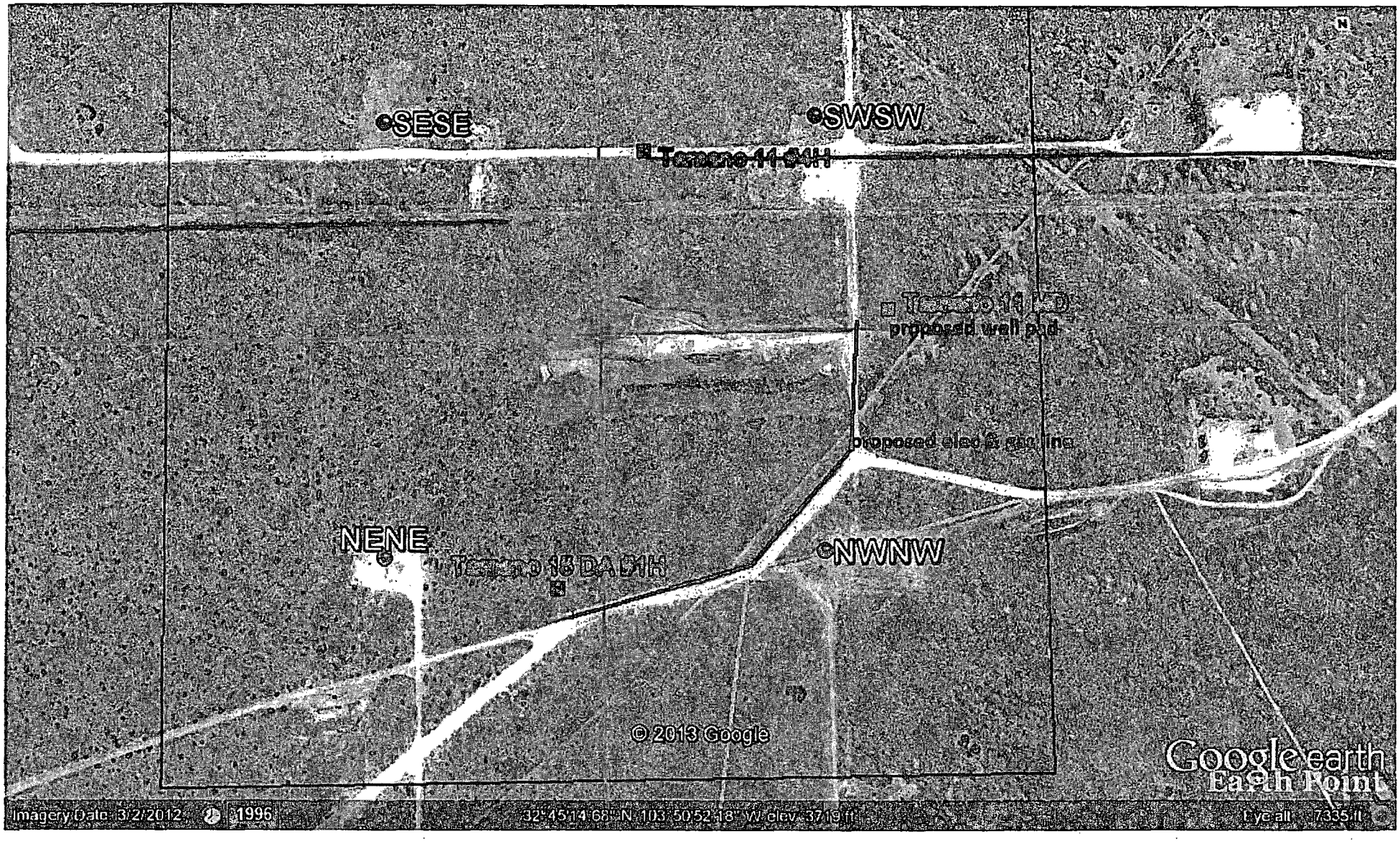
Exhibit "3D"


SESE
SWSW
Terrano 11-44H
proposed well pad
proposed electric line
NENE
NWNW
© 2013 Google
Google earth
Earth Point
Imagery Date: 3/2/2012
1996
32°45'14.68" N 103°50'52.18" W elev 3719 ft
Eye alt 7335 ft

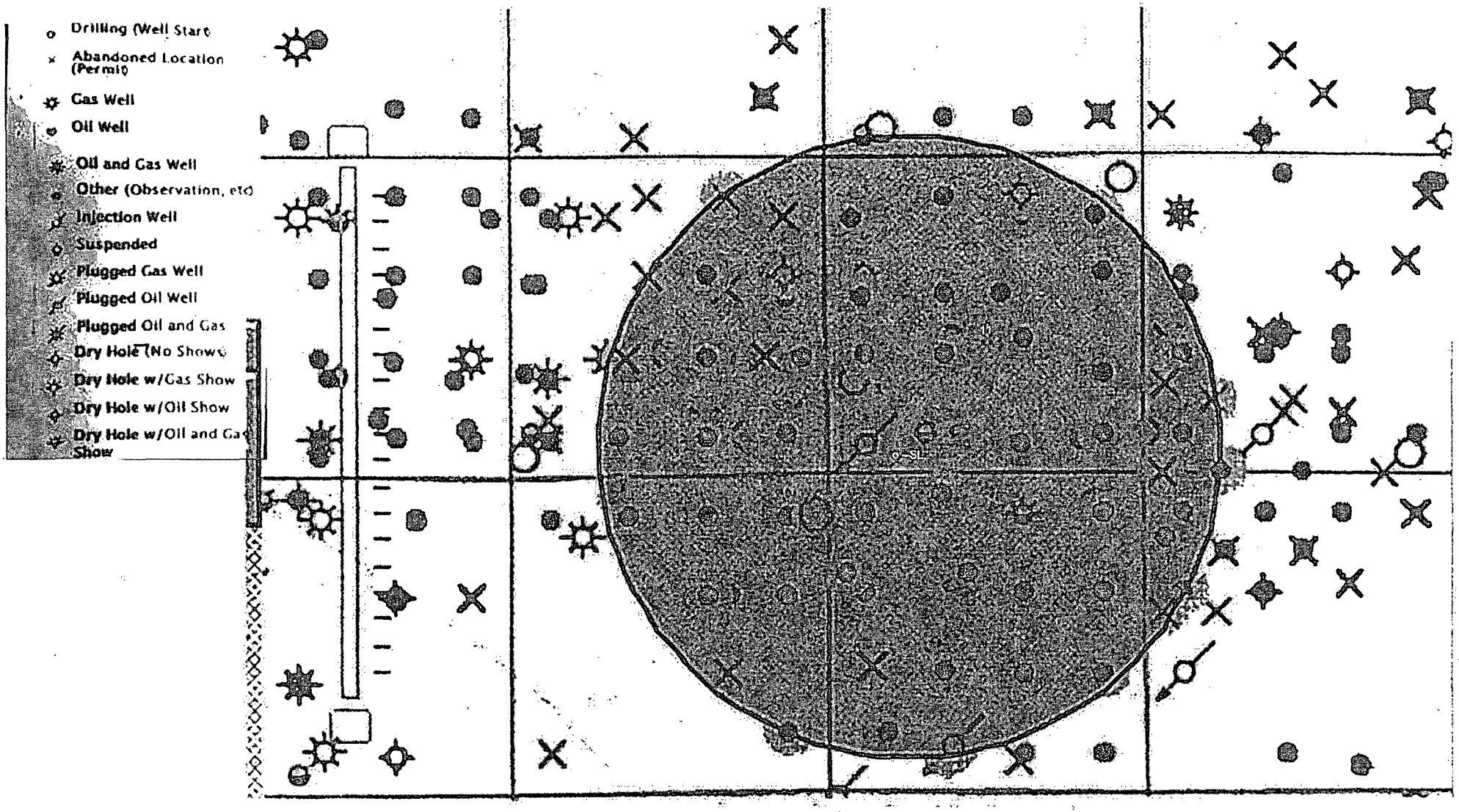


EXHIBIT "4" - SL - Tamano 11 MD Federal #1H - 188' FSL & 903' FWL, Sec. 11 T18S R31E, Eddy Co. NM

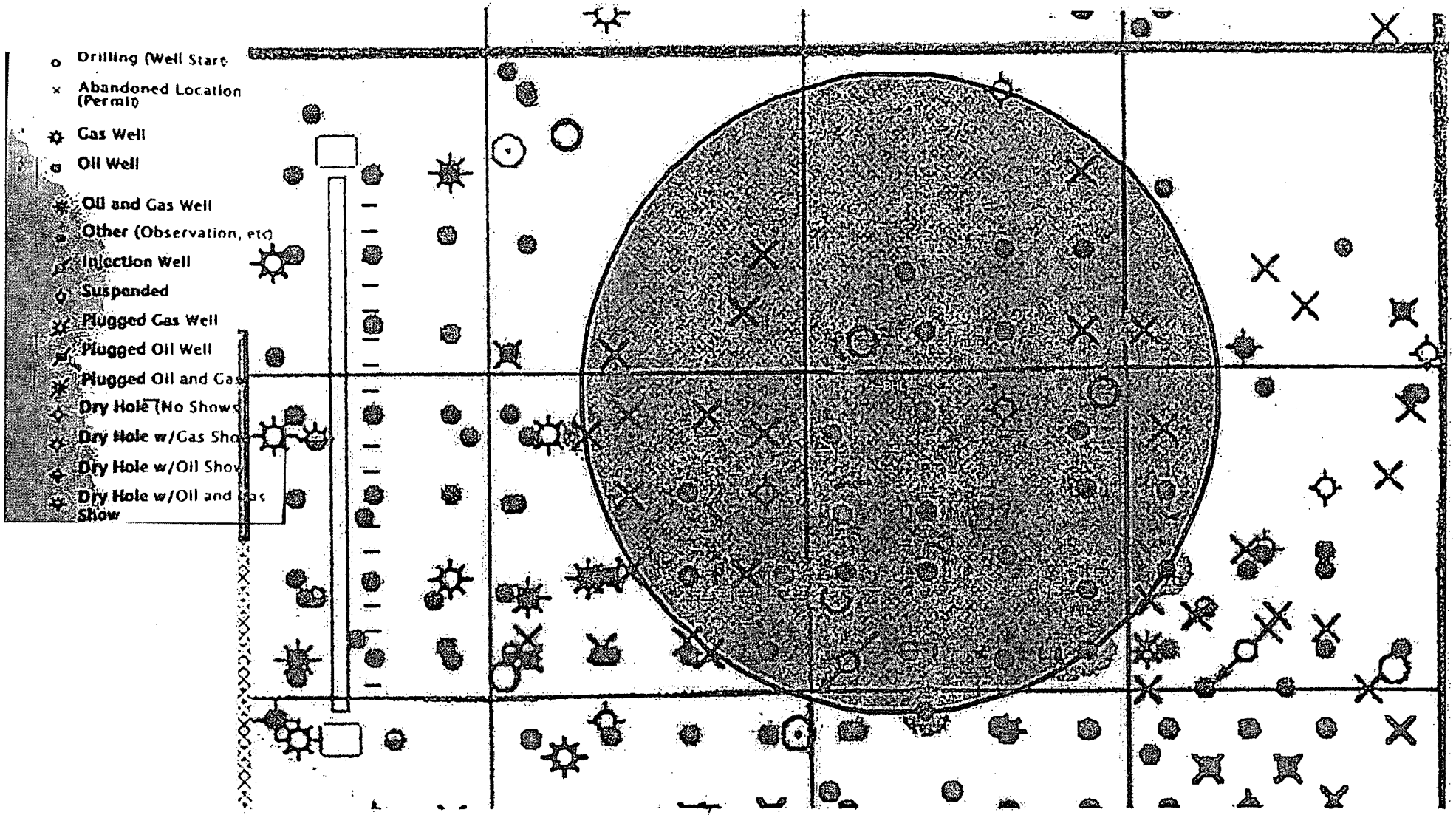


EXHIBIT "4A" - BHL - Tamano 11 MD Federal #1H - 330' FNL & 850' FWL Sec. 11 T18S R31E, Eddy Co. NM

Drilling Program
Mewbourne Oil Company
Tamano 11 MD Fed Com #1H
188' FSL & 903' FWL (SHL)
Sec 11-T18S-R31E
Eddy County, New Mexico

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

Rustler	340'
Top Salt	570'
Base Salt	770'
Yates	1680'
Seven Rivers	1930'
*Queen	2840'
Capitan	NP
*Grayburg	3260
San Andres	NP
Glorieta	NP
Yeso	NP
*Lamar	4400'
*Bone Springs	5650'
*1st Bone Spring Sand	7370'
*2nd Bone Spring Sand	8000'
3rd Bone Spring Sand	Will Not Penetrate
Wolfcamp	Will Not Penetrate

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

Water	Fresh water is anticipated @ 175' & will be protected by setting surface casing at 365' 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 2000# WP annular will be installed after running 13 ⅜" casing. A 3000# WP double ram BOP and 3000# WP Annular will be installed after running 9 ⅝" & 7" casing. Pressure tests will be conducted prior to drilling out under all casing strings. BOP controls will be installed prior to drilling under surface casing and will remain in use until completion of drilling operations. BOPs 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 use.
Will test the 13 ⅜" annular to 1500# and the 9 ⅝" & 7" BOPE to 3000# and annular to 1500# with a third party testing company before drilling below each shoe, but will test again, if needed, in 30 days from the 1st test as per BLM Onshore Oil and Gas Order #2.

4. MOC proposes to drill a vertical wellbore to 7905' & kick off to horizontal @ 8383' TVD. The well will be drilled to12844' MD (8467' TVD). See attached directional plan.

5. Proposed casing and cementing program:

A. Casing Program:

See COA

Hole Size	Casing	Wt/Ft.	Grade	Depth	Jt Type
17 ½"	13 ⅜" (new)	48#	H40	0'-~~785'~~ 820	ST&C
12 ¼"	9 ⅝" (new)	36#	J55	0'-~~2230'~~ 2160	LT&C
8 ¾"	7" (new)	26#	P110	0'-8082' MD	LT&C
8 ¾"	7" (new)	26#	P110	8082'-8846' MD	BT&C
6 1/8"	4 ½" (new)	13.5#	P110	8646'-13120' MD	LT&C

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

B. Cementing Program:

i. 13 3/8 Surface Casing: 410 sks Class C light cement with salt & LCM. Yield at 2.10 cuft/sk. 200 sks Class "C" cement w/ 2% CaCl2. Yield at 1.34 cuft/sk. Cmt circulated to surface w/ 100% excess.

ii. 9 5/8 Intermediate Casing: 550 sacks Class "C" light cement w/ salt & LCM additives. Yield at 2.10 cuft/sk. 200 sacks Class "C" cement w/ 2% CaCl2. Yield at 1.34 cuft/sk. Cmt circulated to surface w/ 25% excess.

See COA

iii 7" Production Casing: 550 sacks *Lite "C" (60:40:0) cement w/salt and fluid loss additives. Yield at 2.12 cuft/sk. 400 sacks Class "H" cement w/ salt & FLA additives. Yield at 1.18 cuft/sk. Cmt circulated to surface w/ 25% excess.

iv. 4 1/2 Production Liner: This will be a Packer/Port completion from TD up inside 7" casing with packer type liner hanger.

*Referring to above blends of light cement: (wt% fly ash : wt% cement : wt% bentonite of the total of first two numbers). Generic names of additives are used since the availability of specific company and products are unknown at this time.

6. Mud Program:

Interval	Type System	Weight	Viscosity	Fluid Loss
0' - ~~785'~~ 820	FW spud mud	8.6-9.0	32-34	NA
~~785'~~ - ~~2230'~~ 2160	Brine water	10.0-10.2	28-30	NA
~~2230'~~ - 8082' (KOP)	FW	8.5-8.7	28-30	15
8082' - TD	FW w/Polymer	8.5-8.7	32-35	15

**Visual mud monitoring system shall be in place to detect volume changes indicating loss or gain of circulation fluid volume. Sufficient mud materials will be kept on location at all times to combat abnormal conditions.

7. Evaluation Program: See COA

Samples: 10' samples from surface casing to TD
Logging: GR & Gyro from KOP -100' (7982') to surface. GR from 7982' to TD.

8. Downhole Conditions

Zones of abnormal pressure: None anticipated
Zones of lost circulation: Anticipated in surface and intermediate holes
Maximum bottom hole temperature: 120 degree F
Maximum bottom hole pressure: 8.3 lbs/gal gradient or less (.43368 x 8559' = 3712 psi)

9. Anticipated Starting Date:

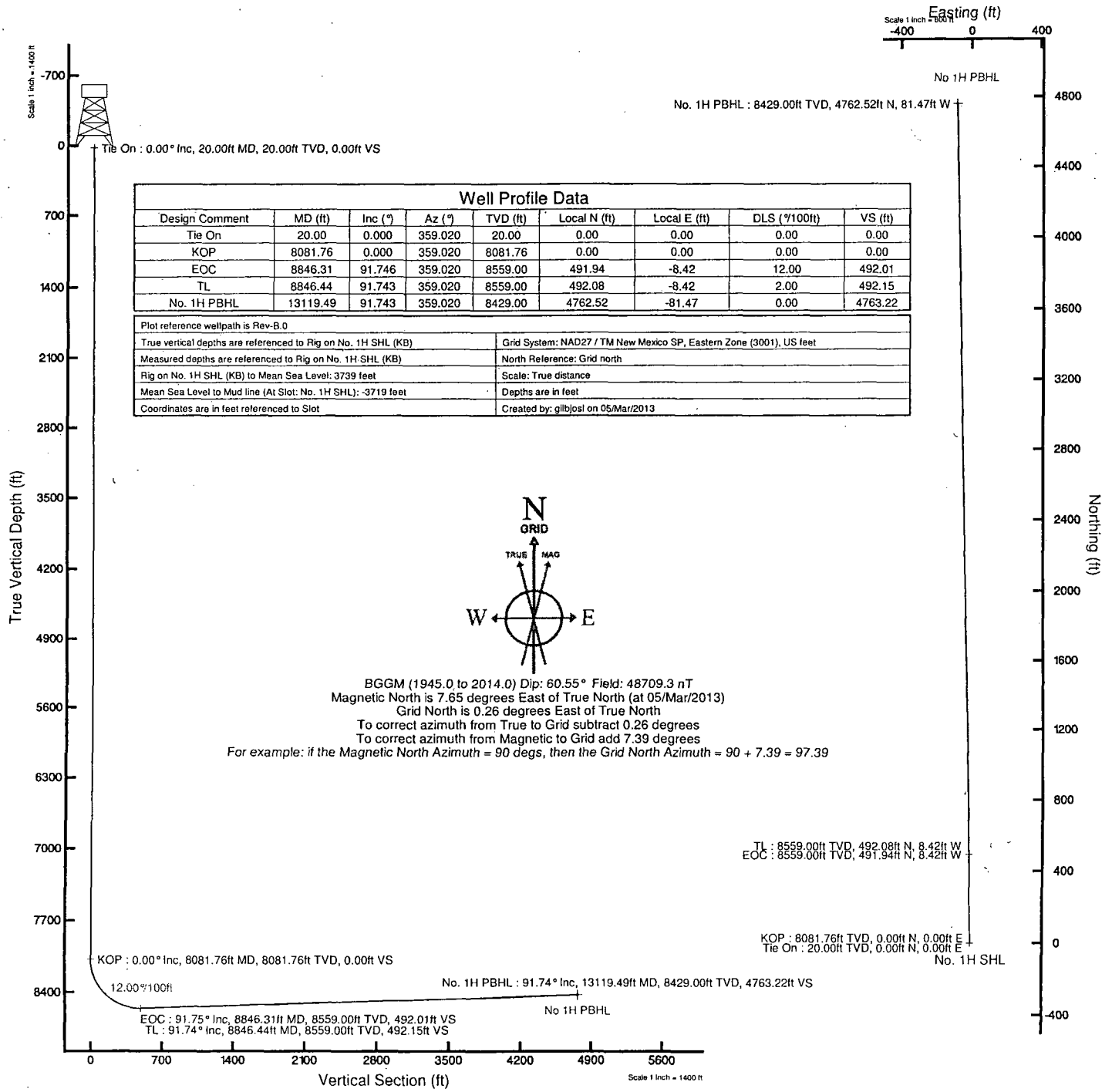
Mewbourne Oil Company intends to drill this well as soon as possible after receiving approval with approximately 40 days involved in drilling operations and an additional 10 days involved in completion operations on the project.

Mewbourne Oil Company

Mewbourne Oil Company

Location:	Eddy County, NM	Slot:	No. 1H SHL
Field:	(Tamano) Sec 11, T18S, R31E	Well:	No. 1H
Facility:	Tamano 11 Fed Com No. 1H	Wellbore:	No. 1H PWB

BAKER HUGHES



Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	20.00	0.000	359.020	20.00	0.00	0.00	0.00	0.00
KOP	8081.76	0.000	359.020	8081.76	0.00	0.00	0.00	0.00
EOC	8846.31	91.746	359.020	8559.00	491.94	-8.42	12.00	492.01
TL	8846.44	91.743	359.020	8559.00	492.08	-8.42	2.00	492.15
No. 1H PBHL	13119.49	91.743	359.020	8429.00	4762.52	-81.47	0.00	4763.22

Plot reference wellpath is Rev-B.0	
True vertical depths are referenced to Rig on No. 1H SHL (KB)	Grid System: NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No. 1H SHL (KB)	North Reference: Grid north
Rig on No. 1H SHL (KB) to Mean Sea Level: 3739 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: No. 1H SHL): -3719 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gilbjosl on 05/Mar/2013

BGGM (1945.0 to 2014.0) Dip: 60.55° Field: 48709.3 nT
Magnetic North is 7.65 degrees East of True North (at 05/Mar/2013)
Grid North is 0.26 degrees East of True North
To correct azimuth from True to Grid subtract 0.26 degrees
To correct azimuth from Magnetic to Grid add 7.39 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.39 = 97.39

Rev-B.0

Mewbourne Oil Company

Planned Wellpath Report

Rev-B.0

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Mewbourne Oil Company**	Slot	**No. 1H SHL**
Area	**Eddy County, NM**	Well	**No. 1H**
Field	**(Tamano) Sec 11, T18S, R31E**	Wellbore	**No. 1H PWB**
Facility	**Tamano 11 Fed Com No. 1H**		

REPORT SETUP INFORMATION			
Projection System	**NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet**	Software System	**WellArchitect® 3.0.0**
North Reference	**Grid**	User	**Gilbjosl**
Scale	**0.999935**	Report Generated	**05/Mar/2013** at **3:36:06 PM**
Convergence at slot	**0.26° East**	Database/Source file	**WA Midland/No._1H_PWB.xml**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[US ft]**	**Northing[US ft]**	**Latitude**	**Longitude**
Slot Location	**0.00**	**0.00**	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W
Facility Reference Pt			**650025.70**	**638794.70**	32°45'18.684"N	103°50'43.194"W
Field Reference Pt			**654049.35**	**643529.06**	32°46'05.345"N	103°49'55.816"W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Rig on No. 1H SHL (KB) to GL	**20.00ft**
Horizontal Reference Pt	**Slot**	Rig on No. 1H SHL (KB) to Mean Sea Level	**3739.00ft**
Vertical Reference Pt	**Rig on No. 1H SHL (KB)**	Rig on No. 1H SHL (KB) to Mud Line at Slot (No. 1H SHL)	**20.00ft**
MD Reference Pt	**Rig on No. 1H SHL (KB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**359.02°**

REFERENCE WELLPATH IDENTIFICATION			
Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Tamano) Sec 11, T18S, R31E	Wellbore	No. 1H PWB
Facility	Tamano 11 Fed Com No. 1H		

WELLPATH DATA (136 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	359.020	0.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
20.00	0.000	359.020	20.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	Tie On
120.00†	0.000	359.020	120.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
220.00†	0.000	359.020	220.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
320.00†	0.000	359.020	320.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
420.00†	0.000	359.020	420.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
520.00†	0.000	359.020	520.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
620.00†	0.000	359.020	620.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
720.00†	0.000	359.020	720.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
820.00†	0.000	359.020	820.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
920.00†	0.000	359.020	920.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
1020.00†	0.000	359.020	1020.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
1120.00†	0.000	359.020	1120.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
1220.00†	0.000	359.020	1220.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
1320.00†	0.000	359.020	1320.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
1420.00†	0.000	359.020	1420.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
1520.00†	0.000	359.020	1520.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
1620.00†	0.000	359.020	1620.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
1720.00†	0.000	359.020	1720.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
1820.00†	0.000	359.020	1820.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
1920.00†	0.000	359.020	1920.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
2020.00†	0.000	359.020	2020.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
2120.00†	0.000	359.020	2120.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
2220.00†	0.000	359.020	2220.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
2320.00†	0.000	359.020	2320.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
2420.00†	0.000	359.020	2420.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
2520.00†	0.000	359.020	2520.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
2620.00†	0.000	359.020	2620.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
2720.00†	0.000	359.020	2720.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
2820.00†	0.000	359.020	2820.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Tamano) Sec 11, T18S, R31E	Wellbore	No. 1H PWB
Facility	Tamano 11 Fed Com No. 1H		

WELLPATH DATA (136 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2920.00†	0.000	359.020	2920.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
3020.00†	0.000	359.020	3020.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
3120.00†	0.000	359.020	3120.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
3220.00†	0.000	359.020	3220.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
3320.00†	0.000	359.020	3320.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
3420.00†	0.000	359.020	3420.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
3520.00†	0.000	359.020	3520.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
3620.00†	0.000	359.020	3620.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
3720.00†	0.000	359.020	3720.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
3820.00†	0.000	359.020	3820.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
3920.00†	0.000	359.020	3920.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
4020.00†	0.000	359.020	4020.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
4120.00†	0.000	359.020	4120.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
4220.00†	0.000	359.020	4220.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
4320.00†	0.000	359.020	4320.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
4420.00†	0.000	359.020	4420.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
4520.00†	0.000	359.020	4520.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
4620.00†	0.000	359.020	4620.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
4720.00†	0.000	359.020	4720.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
4820.00†	0.000	359.020	4820.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
4920.00†	0.000	359.020	4920.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
5020.00†	0.000	359.020	5020.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
5120.00†	0.000	359.020	5120.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
5220.00†	0.000	359.020	5220.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
5320.00†	0.000	359.020	5320.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
5420.00†	0.000	359.020	5420.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
5520.00†	0.000	359.020	5520.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
5620.00†	0.000	359.020	5620.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
5720.00†	0.000	359.020	5720.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
5820.00†	0.000	359.020	5820.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Tamano) Sec 11, T18S, R31E	Wellbore	No. 1H PWB
Facility	Tamano 11 Fed Com No. 1H		

WELLPATH DATA (136 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5920.00†	0.000	359.020	5920.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
6020.00†	0.000	359.020	6020.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
6120.00†	0.000	359.020	6120.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
6220.00†	0.000	359.020	6220.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
6320.00†	0.000	359.020	6320.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
6420.00†	0.000	359.020	6420.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
6520.00†	0.000	359.020	6520.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
6620.00†	0.000	359.020	6620.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
6720.00†	0.000	359.020	6720.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
6820.00†	0.000	359.020	6820.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
6920.00†	0.000	359.020	6920.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
7020.00†	0.000	359.020	7020.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
7120.00†	0.000	359.020	7120.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
7220.00†	0.000	359.020	7220.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
7320.00†	0.000	359.020	7320.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
7420.00†	0.000	359.020	7420.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
7520.00†	0.000	359.020	7520.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
7620.00†	0.000	359.020	7620.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
7720.00†	0.000	359.020	7720.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
7820.00†	0.000	359.020	7820.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
7920.00†	0.000	359.020	7920.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
8020.00†	0.000	359.020	8020.00	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	
8081.76	0.000	359.020	8081.76	0.00	0.00	0.00	650025.70	638794.70	32°45'18.684"N	103°50'43.194"W	0.00	KOP
8120.00†	4.589	359.020	8119.96	1.53	1.53	-0.03	650025.67	638796.23	32°45'18.699"N	103°50'43.194"W	12.00	
8220.00†	16.589	359.020	8218.08	19.87	19.87	-0.34	650025.36	638814.57	32°45'18.880"N	103°50'43.197"W	12.00	
8320.00†	28.589	359.020	8310.24	58.22	58.21	-1.00	650024.70	638852.90	32°45'19.260"N	103°50'43.202"W	12.00	
8420.00†	40.589	359.020	8392.41	114.88	114.86	-1.96	650023.74	638909.56	32°45'19.820"N	103°50'43.211"W	12.00	
8520.00†	52.589	359.020	8461.01	187.39	187.37	-3.21	650022.50	638982.05	32°45'20.538"N	103°50'43.221"W	12.00	
8620.00†	64.589	359.020	8513.03	272.58	272.54	-4.66	650021.04	639067.22	32°45'21.380"N	103°50'43.234"W	12.00	
8720.00†	76.589	359.020	8546.20	366.73	366.67	-6.27	650019.43	639161.35	32°45'22.312"N	103°50'43.248"W	12.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Tamano) Sec 11, T18S, R31E	Wellbore	No. 1H PWB
Facility	Tamano 11 Fed Com No. 1H		

WELLPATH DATA (136 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8820.00†	88.589	359.020	8559.08	465.71	465.64	-7.97	650017.74	639260.31	32°45'23.291"N	103°50'43.262"W	12.00	
8846.31	91.746	359.020	8559.00	492.01	491.94	-8.42	650017.29	639286.61	32°45'23.551"N	103°50'43.266"W	12.00	EOC
8846.44	91.743	359.020	8559.00	492.15	492.08	-8.42	650017.28	639286.74	32°45'23.553"N	103°50'43.266"W	2.00	TL
8920.00†	91.743	359.020	8556.76	565.67	565.59	-9.67	650016.03	639360.25	32°45'24.280"N	103°50'43.277"W	0.00	
9020.00†	91.743	359.020	8553.72	665.63	665.53	-11.38	650014.32	639460.18	32°45'25.269"N	103°50'43.291"W	0.00	
9120.00†	91.743	359.020	8550.67	765.58	765.47	-13.09	650012.61	639560.12	32°45'26.258"N	103°50'43.306"W	0.00	
9220.00†	91.743	359.020	8547.63	865.53	865.41	-14.80	650010.90	639660.05	32°45'27.247"N	103°50'43.321"W	0.00	
9320.00†	91.743	359.020	8544.59	965.49	965.35	-16.51	650009.19	639759.98	32°45'28.236"N	103°50'43.335"W	0.00	
9420.00†	91.743	359.020	8541.55	1065.44	1065.28	-18.22	650007.48	639859.91	32°45'29.225"N	103°50'43.350"W	0.00	
9520.00†	91.743	359.020	8538.50	1165.39	1165.22	-19.93	650005.77	639959.85	32°45'30.214"N	103°50'43.364"W	0.00	
9620.00†	91.743	359.020	8535.46	1265.35	1265.16	-21.64	650004.06	640059.78	32°45'31.203"N	103°50'43.379"W	0.00	
9720.00†	91.743	359.020	8532.42	1365.30	1365.10	-23.35	650002.35	640159.71	32°45'32.192"N	103°50'43.394"W	0.00	
9820.00†	91.743	359.020	8529.38	1465.26	1465.04	-25.06	650000.64	640259.64	32°45'33.181"N	103°50'43.408"W	0.00	
9920.00†	91.743	359.020	8526.34	1565.21	1564.98	-26.77	649998.93	640359.57	32°45'34.169"N	103°50'43.423"W	0.00	
10020.00†	91.743	359.020	8523.29	1665.16	1664.92	-28.48	649997.22	640459.51	32°45'35.158"N	103°50'43.438"W	0.00	
10120.00†	91.743	359.020	8520.25	1765.12	1764.86	-30.19	649995.51	640559.44	32°45'36.147"N	103°50'43.452"W	0.00	
10220.00†	91.743	359.020	8517.21	1865.07	1864.80	-31.90	649993.80	640659.37	32°45'37.136"N	103°50'43.467"W	0.00	
10320.00†	91.743	359.020	8514.17	1965.02	1964.74	-33.61	649992.09	640759.30	32°45'38.125"N	103°50'43.481"W	0.00	
10420.00†	91.743	359.020	8511.12	2064.98	2064.68	-35.32	649990.38	640859.24	32°45'39.114"N	103°50'43.496"W	0.00	
10520.00†	91.743	359.020	8508.08	2164.93	2164.61	-37.03	649988.67	640959.17	32°45'40.103"N	103°50'43.511"W	0.00	
10620.00†	91.743	359.020	8505.04	2264.88	2264.55	-38.74	649986.97	641059.10	32°45'41.092"N	103°50'43.525"W	0.00	
10720.00†	91.743	359.020	8502.00	2364.84	2364.49	-40.45	649985.26	641159.03	32°45'42.081"N	103°50'43.540"W	0.00	
10820.00†	91.743	359.020	8498.96	2464.79	2464.43	-42.16	649983.55	641258.97	32°45'43.070"N	103°50'43.555"W	0.00	
10920.00†	91.743	359.020	8495.91	2564.75	2564.37	-43.87	649981.84	641358.90	32°45'44.059"N	103°50'43.569"W	0.00	
11020.00†	91.743	359.020	8492.87	2664.70	2664.31	-45.58	649980.13	641458.83	32°45'45.048"N	103°50'43.584"W	0.00	
11120.00†	91.743	359.020	8489.83	2764.65	2764.25	-47.28	649978.42	641558.76	32°45'46.037"N	103°50'43.598"W	0.00	
11220.00†	91.743	359.020	8486.79	2864.61	2864.19	-48.99	649976.71	641658.70	32°45'47.026"N	103°50'43.613"W	0.00	
11320.00†	91.743	359.020	8483.74	2964.56	2964.13	-50.70	649975.00	641758.63	32°45'48.014"N	103°50'43.628"W	0.00	
11420.00†	91.743	359.020	8480.70	3064.51	3064.07	-52.41	649973.29	641858.56	32°45'49.003"N	103°50'43.642"W	0.00	
11520.00†	91.743	359.020	8477.66	3164.47	3164.01	-54.12	649971.58	641958.49	32°45'49.992"N	103°50'43.657"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Tamano) Sec 11, T18S, R31E	Wellbore	No. 1H PWB
Facility	Tamano 11 Fed Com No. 1H		

WELLPATH DATA (136 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11620.00†	91.743	359.020	8474.62	3264.42	3263.94	-55.83	649969.87	642058.43	32°45'50.981"N	103°50'43.672"W	0.00	
11720.00†	91.743	359.020	8471.58	3364.38	3363.88	-57.54	649968.16	642158.36	32°45'51.970"N	103°50'43.686"W	0.00	
11820.00†	91.743	359.020	8468.53	3464.33	3463.82	-59.25	649966.45	642258.29	32°45'52.959"N	103°50'43.701"W	0.00	
11920.00†	91.743	359.020	8465.49	3564.28	3563.76	-60.96	649964.74	642358.22	32°45'53.948"N	103°50'43.715"W	0.00	
12020.00†	91.743	359.020	8462.45	3664.24	3663.70	-62.67	649963.03	642458.15	32°45'54.937"N	103°50'43.730"W	0.00	
12120.00†	91.743	359.020	8459.41	3764.19	3763.64	-64.38	649961.32	642558.09	32°45'55.926"N	103°50'43.745"W	0.00	
12220.00†	91.743	359.020	8456.36	3864.14	3863.58	-66.09	649959.61	642658.02	32°45'56.915"N	103°50'43.759"W	0.00	
12320.00†	91.743	359.020	8453.32	3964.10	3963.52	-67.80	649957.91	642757.95	32°45'57.904"N	103°50'43.774"W	0.00	
12420.00†	91.743	359.020	8450.28	4064.05	4063.46	-69.51	649956.20	642857.88	32°45'58.893"N	103°50'43.789"W	0.00	
12520.00†	91.743	359.020	8447.24	4164.01	4163.40	-71.22	649954.49	642957.82	32°45'59.882"N	103°50'43.803"W	0.00	
12620.00†	91.743	359.020	8444.20	4263.96	4263.34	-72.93	649952.78	643057.75	32°46'00.870"N	103°50'43.818"W	0.00	
12720.00†	91.743	359.020	8441.15	4363.91	4363.27	-74.64	649951.07	643157.68	32°46'01.859"N	103°50'43.832"W	0.00	
12820.00†	91.743	359.020	8438.11	4463.87	4463.21	-76.35	649949.36	643257.61	32°46'02.848"N	103°50'43.847"W	0.00	
12920.00†	91.743	359.020	8435.07	4563.82	4563.15	-78.06	649947.65	643357.55	32°46'03.837"N	103°50'43.862"W	0.00	
13020.00†	91.743	359.020	8432.03	4663.77	4663.09	-79.77	649945.94	643457.48	32°46'04.826"N	103°50'43.876"W	0.00	
13119.49	91.743	359.020	8429.00	4763.22	4762.52	-81.47	649944.24	643556.90	32°46'05.810"N	103°50'43.891"W	0.00	No. 1H PBHL

REFERENCE WELLPATH IDENTIFICATION			
Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Tamano) Sec 11, T18S, R31E	Wellbore	No. 1H PWB
Facility	Tamano 11 Fed Com No. 1H		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) No 1H PBHL	13119.49	8429.00	4762.52	-81.51	649944.20	643556.90	32°46'05.810"N	103°50'43.891"W	point

SURVEY PROGRAM - Ref Wellbore: No. 1H PWB Ref Wellpath: Rev-B.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
20.00	13119.49	NaviTrak (Standard)		No. 1H PWB

Notes Regarding Blowout Preventer

Mewbourne Oil Company

Tamano 11 MD Fed Com #1H
188' FSL & 903' FWL (SHL)
Sec 11-T18S-R31E
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 3/8" casing and 3000 psi working pressure on 9 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.

13 ⅝" 2M BOPE & Closed Loop Equipment Schematic

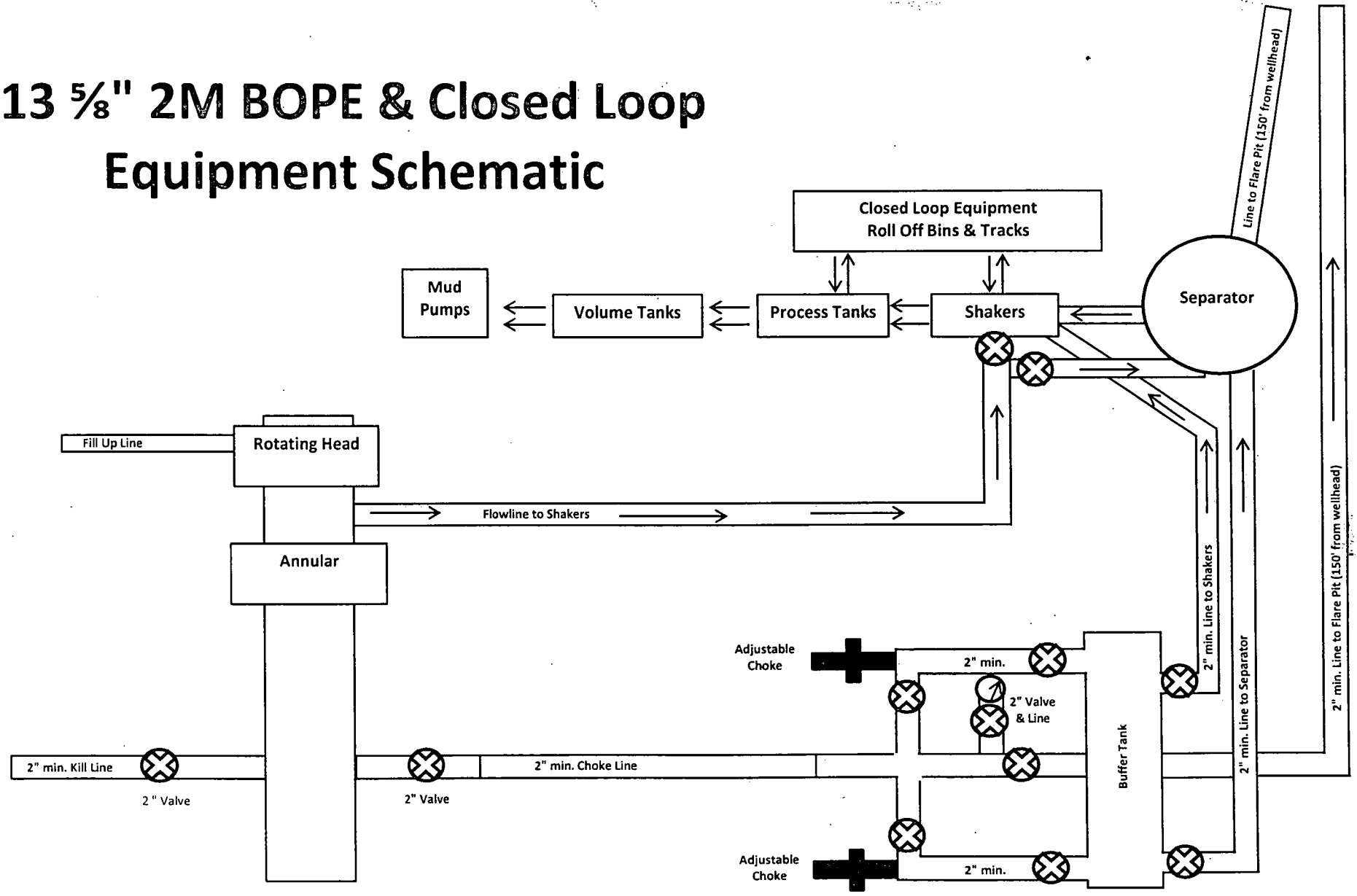


Exhibit 2A
Well Name: Tamano 11 MD Fed Com #1H

11" 3M BOPE & Closed Loop Equipment Schematic

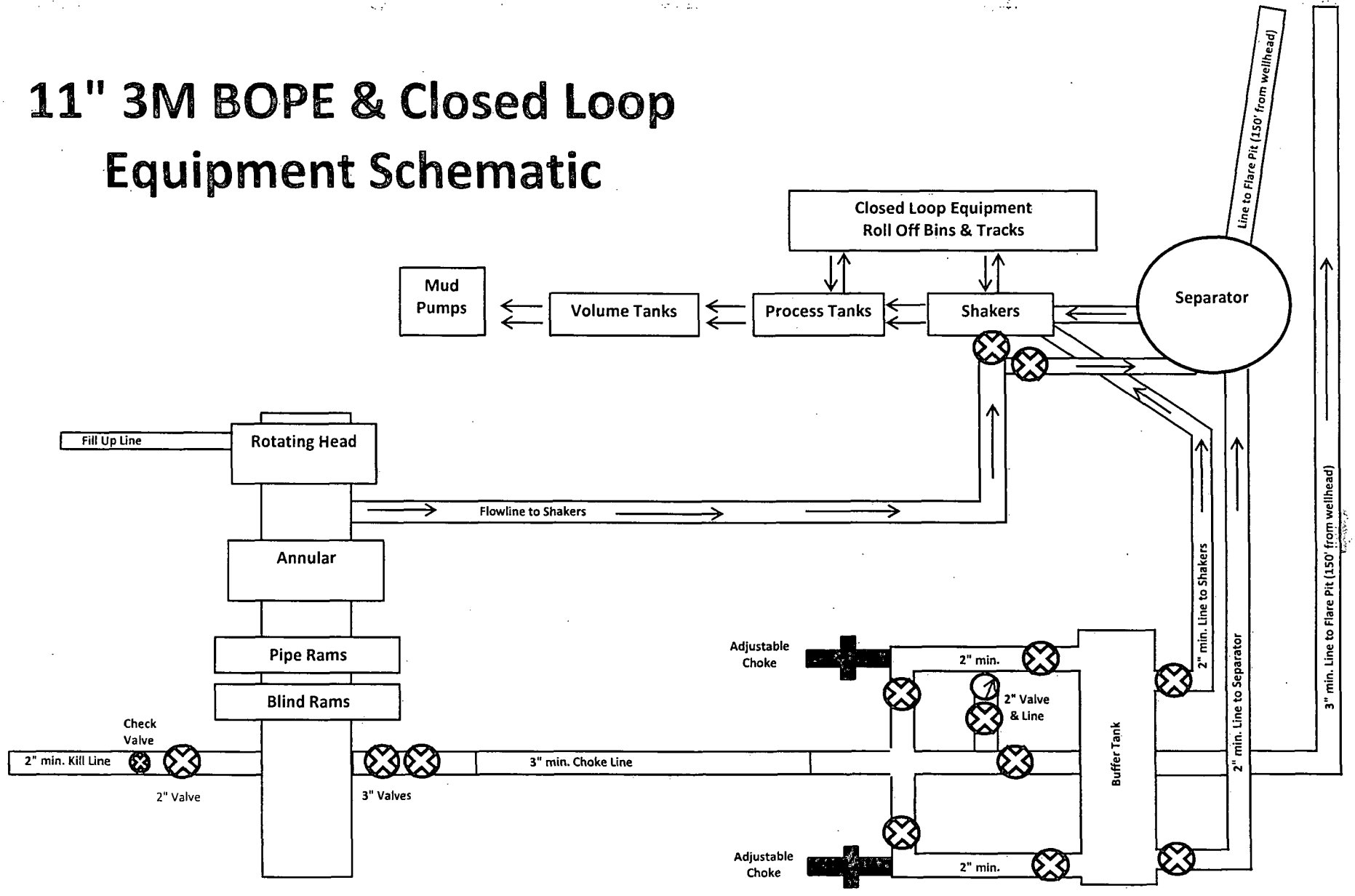
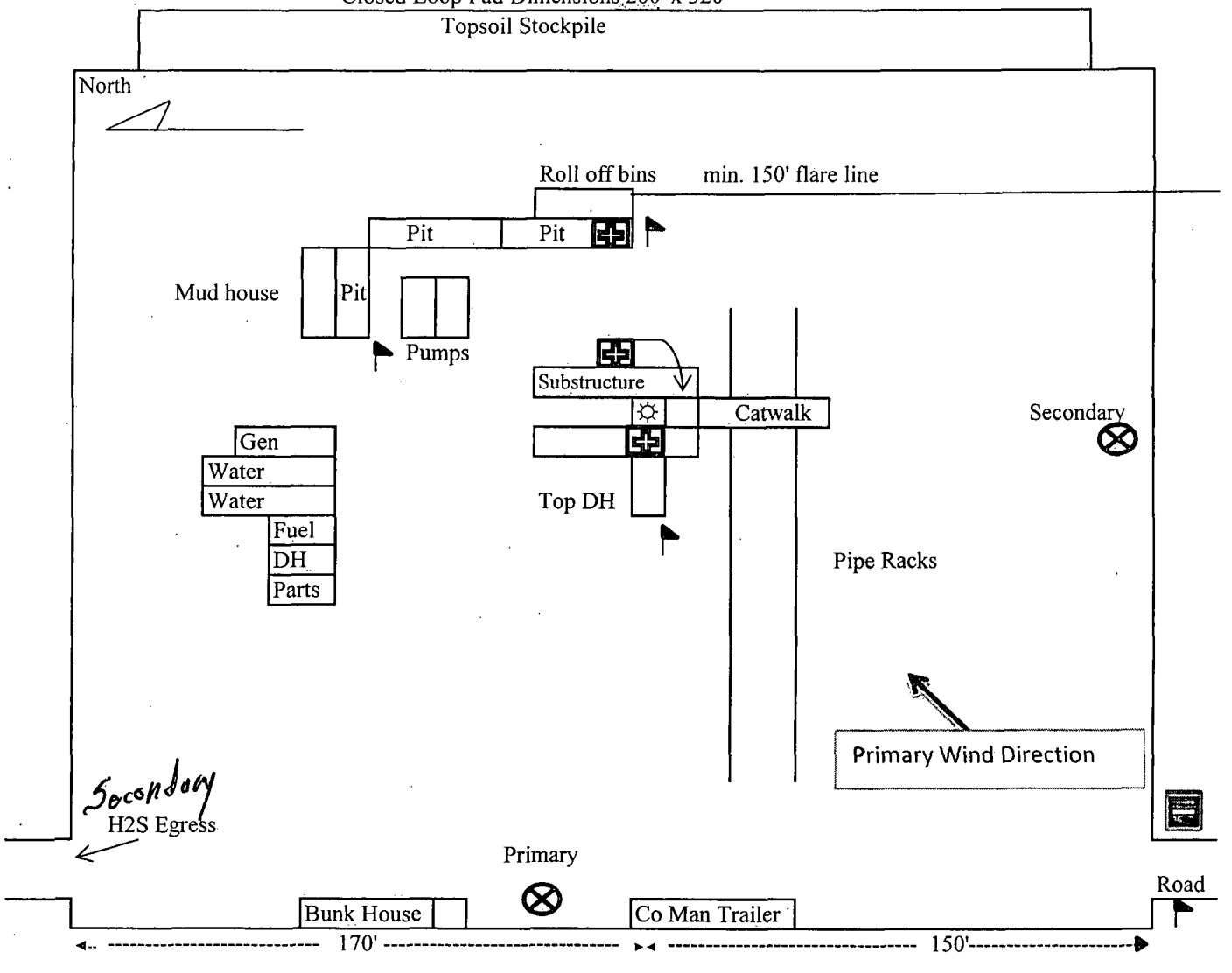


Exhibit 2
Well Name: Tamano 11 MD Fed Com #1H

Note: All valves & lines on choke manifold are 3" unless otherwise noted. Exact manifold configuration may vary.

H2S Diagram

Closed Loop Pad Dimensions 260' x 320'



= Safety Stations

= Wind Markers

= H2S Monitors

= Warning Signs

Exhibit 5

Mewbourne Oil Company
Tamano 11 MD Fed Com #1H
188' FSL & 903' FWL
Sec. 11 T18S R31E
Eddy County, NM

Hydrogen Sulfide Drilling Operations Plan

Mewbourne Oil Company

Tamano 11 MD Federal #1H

188' FSL & 903' FWL

Sec 11-T18S-R31E

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 Delaware 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. Choke manifold with minimum of one remotely operated adjustable choke.
   - B. Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
   - C. Auxiliary equipment including annular type blowout preventer.
2. Protective Equipment for Essential Personnel

   Thirty minute self contained work unit located in the dog house and at briefing areas.

Additionally: If H2S is encountered in concentrations less than 10 ppm, fans will be placed in work areas to prevent the accumulation of hazardous amounts of poisonous gas. If higher concentrations of H2S are detected the well will be shut in and a rotating head, mud/gas separator, remote choke and flare line with igniter will be installed.

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. If 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**
	Bradley Bishop	**575-390-6838**
Drilling Foreman	**Wesley Noseff**	**575-441-0729**

Closed Loop Pad Dimensions 280' x 320'

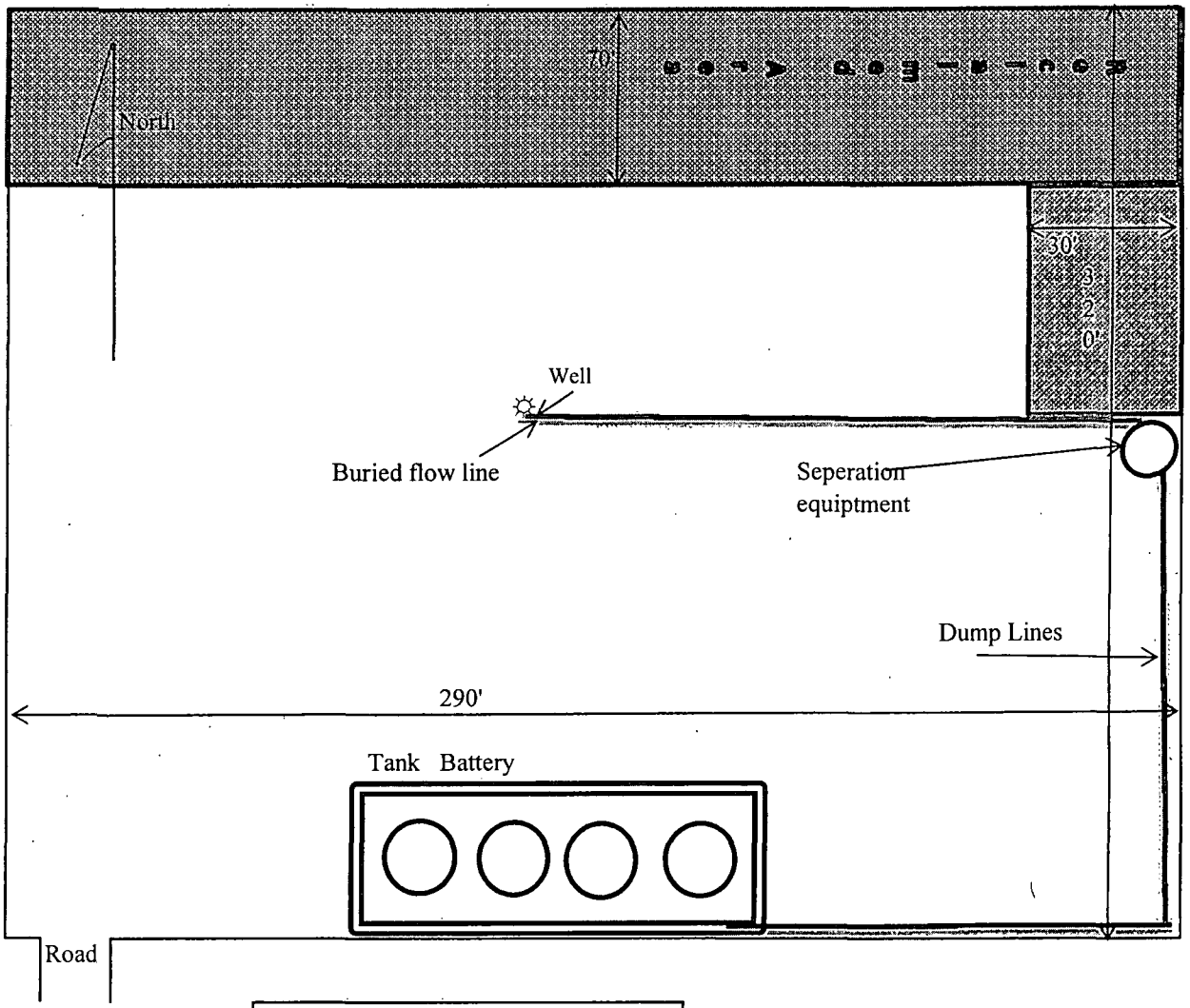


Exhibit 6

Mewbourne Oil Company
Tamano 11 MD Fed Com #1H
188' FSL & 903' FWL
Sec. 11 T18S R31E
Eddy County, NM

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

MEWBOURNE OIL COMPANY

Tamano 11 MD Federal #1H
188' FSL & 903' FWL (SHL)
Sec 11-T18S-R31E
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. Exhibits #3-#3C are maps showing the location of the proposed well and access road. Existing and proposed roads are highlighted in black.

B. Directions to location from the intersection of HWY 82 and CR 222. Go south on CR 222 for 4.1 miles. Go left on CR 249 for 1.5 miles to a lease road left. Go left on lease road for 1.2 miles to a lease road left. Go left on lease road for 605'.

C. Existing roads will be maintained in a condition the same as or better than before operations begin.

2. Proposed Access Road:

A No new road construction will be needed.

B. The maximum width of the driving surface will be 14 feet. The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1 foot deep with 3:1 slopes. The road will be surfaced with rolled and compacted caliche.

C. Mewbourne Oil Co. will cooperate with other operators in the maintenance of lease roads.

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 and East side of the well pad. Overhead electricity lines and a 3" surface gas line will follow existing lease roads to MOC's Tamano 15 AD Fed #1H location, See Exhibit 3D.

C. Production vessels that will remain on this location will be painted to conform to 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 a permitted off-site facility.
B. Water produced during operations will be hauled to an off-site permitted SWD in the area.
C. If any liquid hydrocarbons are produced during operations, those liquids will be stored in suitable tanks until sold.
D. Sewage and gray water will be safely contained on-site, and then waste will be disposed at an approved off-site facility.
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 has been conducted on the proposed well pad.

10. Plans for Restoration of Surface

A. 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.
B. Interim reclamation:
   i. All areas not needed for production operations will be reclaimed.
   ii. Caliche will be removed, the land will be recontoured, the top soil from stockpile will be spread over these areas.
   iii. The disturbed area will be restored by re-seeding during the proper growing season.

iv. Any additional caliche required for production facilities will be obtained from the area shown in exhibit #6 as interim reclamation.

C. Final Reclamation:

i. Upon cessation of the proposed operations, if the well is abandoned, all equipment and trash will be removed and taken to a proper facility.

ii. The location and road surfacing material will be removed and used to patch area lease roads. The entire location will be restored to the original contour as much as reasonable possible. The top soil used for interim reclamation will be spread over the entire location. All restoration work will be completed within 180 days of cessation of activities.

11. Surface Ownership:

Surface ownership is owned by BLM.

12. Other Information:

A. 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

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MEWBOURNE OIL
LEASE NO.:	LC029388D
WELL NAME & NO.:	1H-TAMANO 11 MD FED COM
SURFACE HOLE FOOTAGE:	188' FSL & 903' FWL
BOTTOM HOLE FOOTAGE	330' FNL & 850' FWL
LOCATION:	Section 11, T. 18 S., R 31 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)

Powerline and Pipeline Placement:
The power poles shall be installed no farther than 15 feet from and parallel to existing roads. The surface pipeline shall be installed no farther than 6 feet from and parallel to existing roads.

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

Communitization Agreement
A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales. In addition, the well sign shall include the surface and bottom hole lease numbers. If the Communitization Agreement number is known, it shall also be on the sign. If not, it shall be placed on the sign when the sign is replaced.

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) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of

surface disturbance, when constructing the access road, shall not exceed twenty-five (25) 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.

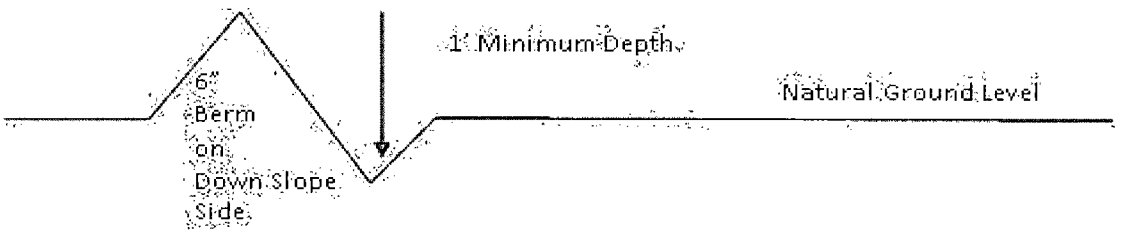
Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

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

Cattleguards

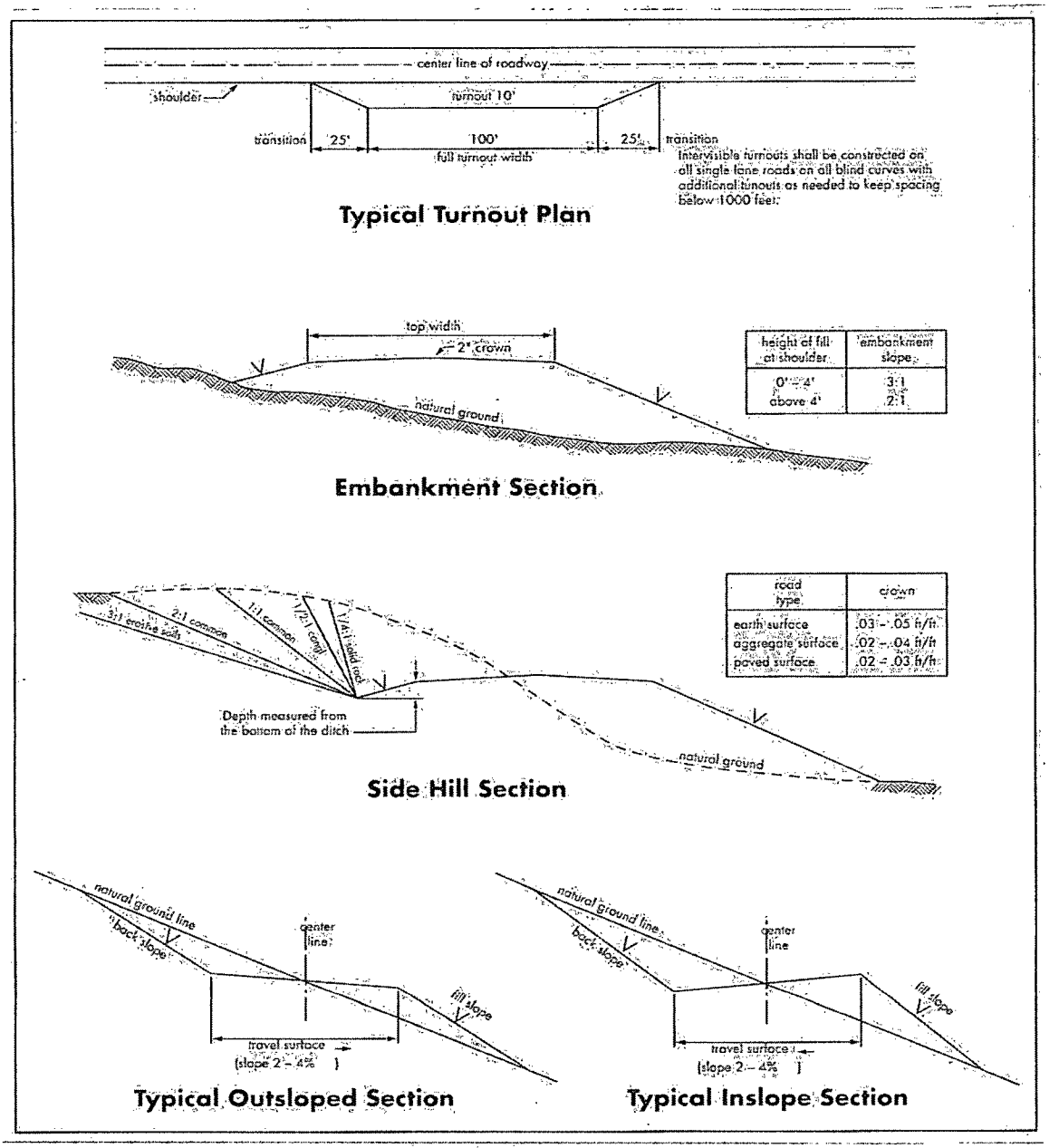
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

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.

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 (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is encountered in quantities greater than 10 PPM the well shall be shut in and H2S equipment shall be installed and flare line must be extended pursuant to Onshore Oil and Gas Order #6. After detection, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items.**

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 are 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 (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

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

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

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possible lost circulation in the Grayburg and San Andres formations.
Possible water flows in the Salado and Grayburg formations.

1. The **13-3/8** inch surface casing shall be set at approximately **820 feet** (in a competent bed below the Magenta Dolomite, a Member of the Rustler, 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 **9-5/8** inch intermediate casing is: **(Set casing into the Tansill formation at approximately 2160')**

   ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

3. 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. **Additional cement may be required – excess calculates to 19%.**

4. Cement not required on the **4-1/2"** liner. **Packer system being used.**

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

C. PRESSURE CONTROL

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

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

   a. **For surface 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.

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch intermediate casing shoe shall be **3000 (3M)** psi.

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

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

lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

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

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

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

e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

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

E. WASTE MATERIAL AND FLUIDS

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

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

CRW 050213

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 from the BLM Standard Environmental Color Chart (CC-001: June 2008).

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the application (Grant, Sundry Notice, APD) and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
b. Activities of other parties including, but not limited to:
    (1) Land clearing.
    (2) Earth-disturbing and earth-moving work.
    (3) Blasting.
    (4) Vandalism and sabotage.
c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-

way width of **20** feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline must be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline must be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of **24** inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the

holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder 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 will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

16. 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, powerline 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.

17. Surface pipelines must be less than or equal to 4 inches and a working pressure below 125 psi.

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).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

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

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

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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