



OGD-ARTESIA

ATS-10-260

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

Split Estate

5. Lease Serial No.

NM 14758 / NM 104640 BHL  
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.

Limousine 15 CD Fed Com #1H

2. Name of Operator

Mewbourne Oil Company (14744)

9. API Well No.

30-015-37818 (11795)

3a. Address

PO Box 5270 Hobbs, NM 88241

3b. Phone No. (include area code)

575-393-5905

10. Field and Pool, or Exploratory

N Seven Rivers Glorieta 4000

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

At surface (SL) 990' FNL & 2010' FEL Unit B

At proposed prod zone (BHL) 990' FNL & 330' FWL Unit D

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

Sec 15 - T20S - R25E

14 Distance in miles and direction from nearest town or post office\*

16 Miles NW of Carlsbad

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) 330'

16. No. of Acres in lease

160

17. Spacing Unit dedicated to this well

80

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

N/A

19. Proposed Depth

5453' 3500' MD 2713 VD

20 BLM/BIA Bond No. on file

NM1693, Nationwide

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

3409' GL

22. Approximate date work will start\*

ASAP

23 Estimated duration

15

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

Jackie Lathan

Name (Printed/Typed)

Jackie Lathan

Date

01/28/10

Title

Hobbs Regulatory

Approved by (Signature)

/s/ Don Peterson

Name (Printed/Typed)

/s/ Don Peterson  
CARLSBAD FIELD OFFICE

Date

MAY 11 2010

Title

FIELD MANAGER

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

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U S C Section 1001 and Title 43 U S C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

\*(Instructions on reverse)

Roswell Controlled Water Basin

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

KLO

SUBJECT TO LIKE  
APPROVAL BY STATE

Approval Subject to General Requirements  
& Special Stipulations Attached

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED  
OMB No 1004-0135  
Expires January 31, 2004

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE - Other instructions on reverse side**

1 Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No NM-14758 104410
2. Name of Operator Mewbourne Oil Company 14744		6 If Indian, Allottee or Tribe Name
3a Address PO Box 5270 Hobbs, NM 88241	3b Phone No (include area code) 575-393-5905	7 If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T, R., M., or Survey Description) 990' FNL & 2010' FEL, Sec 15-T20S-R25E Unit Letter B (SL) 990' FNL & 330' FWL, Sec 15, T20S, R25E Unit Letter D (BHL)		8 Well Name and No. Limousine 15 CD Fed Com #1H
		9 API Well No.
		10 Field and Pool, or Exploratory Area N. Seven Rivers Glorieta - Yeso
		11 County or Parish, State Eddy County, NM

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


TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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

Please see attached.

If you have any questions, please call Charles Martin @ 575-393-5905

Engineering review is OK RGH 4/9/10

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Jackie Lathan		Title Hobbs Regulatory
Signature 		Date 04/06/10

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed) /s/ Don Peterson	Title FIELD MANAGER
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Date MAY 11 2010

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 next page)

**SUBJECT TO LIKE  
APPROVAL BY STATE**

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

Form C-102  
Revised October 15, 2009

Submit one copy to appropriate  
District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number <b>30-015-37818</b>	Pool Code <b>11795</b>	Pool Name <b>CERMETAY, YESO</b> <del>North Seven Rivers Glorieta Yeso</del>
Property Code <b>38155</b>	Property Name <b>LIMOUSINE "15" CD FEDERAL COM</b>	Well Number <b>1H</b>
OGRID No. <b>14744</b>	Operator Name <b>MEWBOURNE OIL COMPANY</b>	Elevation <b>3409'</b>

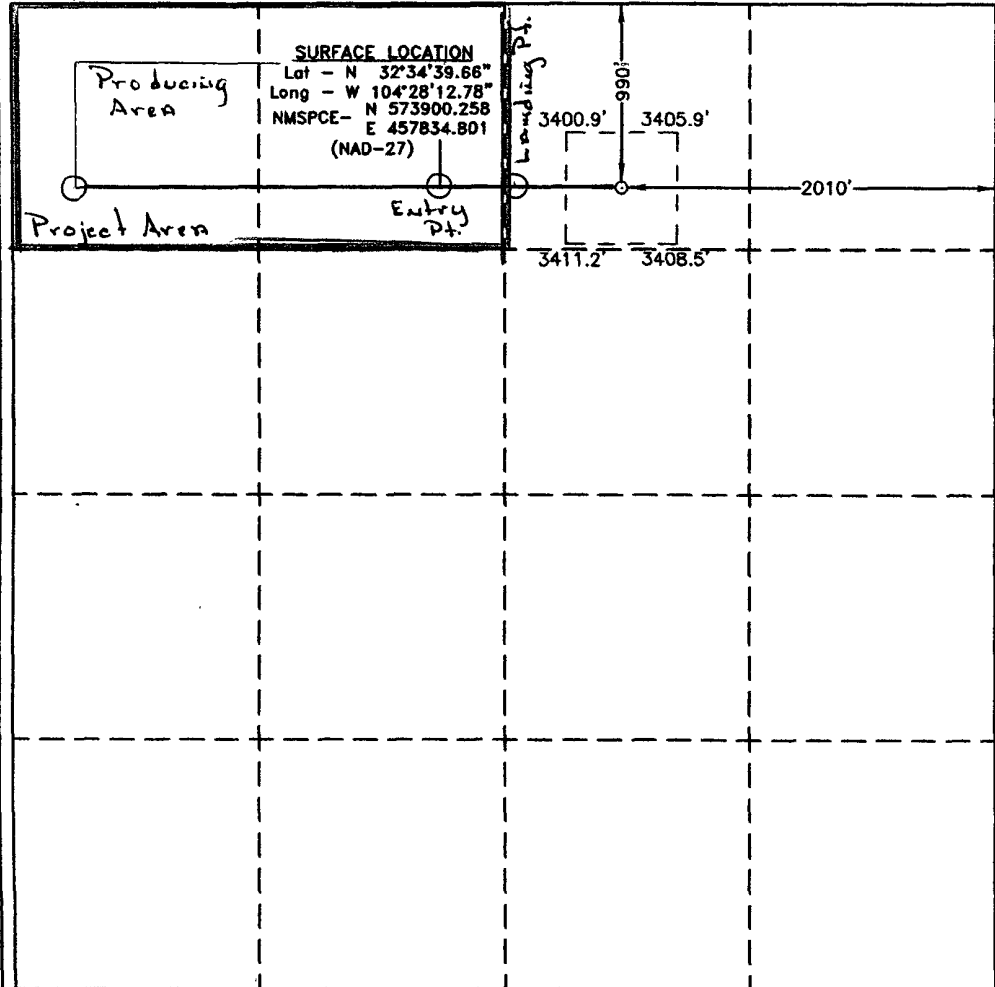
Surface Location

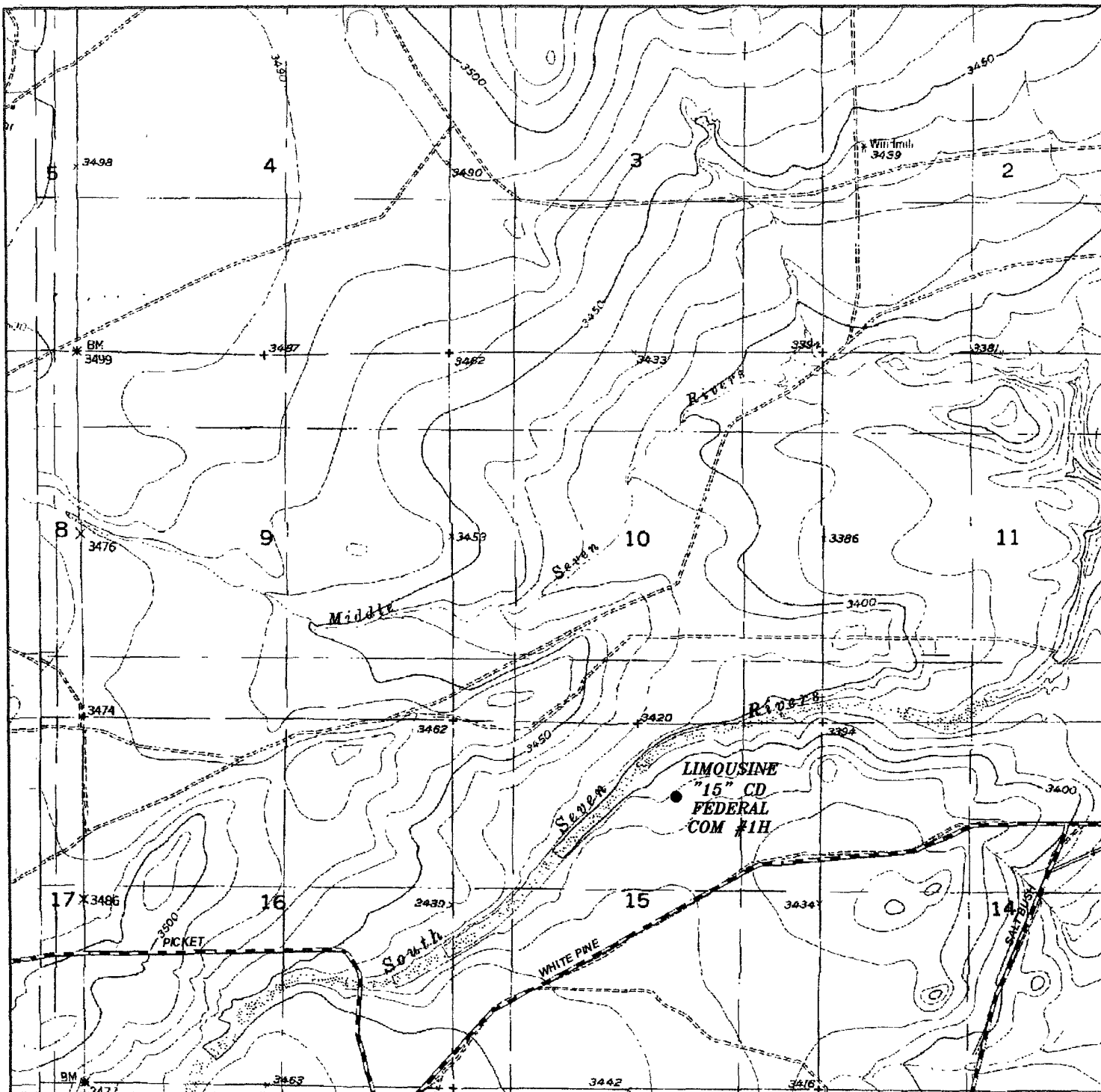
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>B</b>	<b>15</b>	<b>20 S</b>	<b>25 E</b>		<b>990</b>	<b>NORTH</b>	<b>2010</b>	<b>EAST</b>	<b>EDDY</b>

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
<b>D</b>	<b>15</b>	<b>20 S</b>	<b>25 E</b>		<b>990</b>	<b>North</b>	<b>330</b>	<b>West</b>	<b>Eddy</b>
Dedicated Acres <b>80</b>	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

 <p><b>SURFACE LOCATION</b> Lat - N 32°34'39.66" Long - W 104°28'12.78" NMSPC- N 573900.258 E 457834.801 (NAD-27)</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location 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.</p> <p><i>Jackie Lathan</i> 1/21/12 Signature Date</p> <p><b>Jackie Lathan</b> Printed Name</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p><b>JANUARY L. JONES</b> Date Surveyed Signature &amp; Seal of Professional Surveyor 7977</p> <p>Certificate No. Gary L. Jones 7977</p> <p><b>Basin Surveys</b></p>
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LIMOUSINE "15" CD FEDERAL COM #1H Exhibit 3  
 Located 990' FNL and 2010' FEL  
 Section 15, Township 20 South, Range 25 East,  
 N.M.P.M., Eddy County, New Mexico.



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

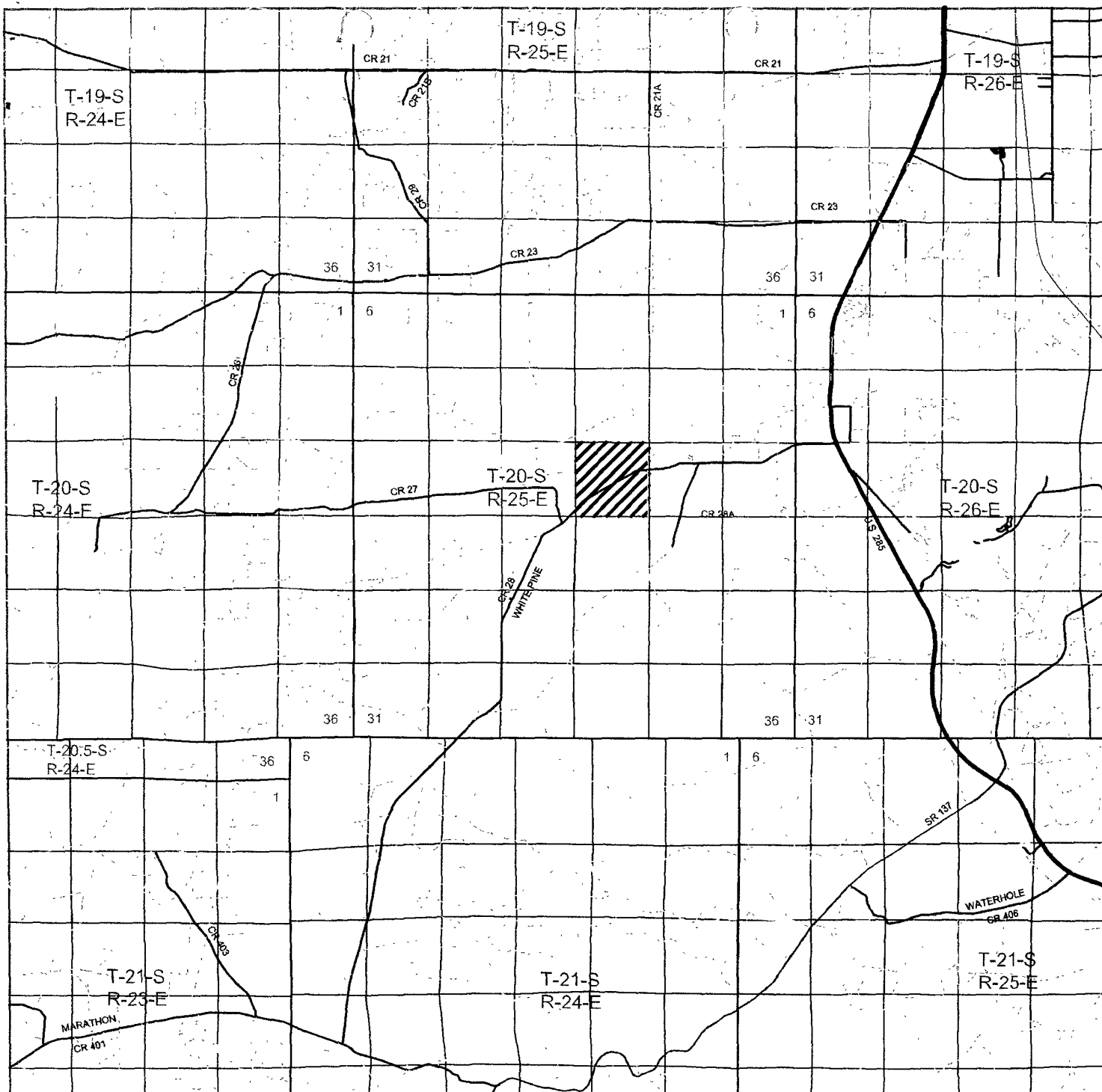
W.O. Number: JMS 22180

Survey Date: 01-14-2010

Scale: 1" = 2000'

Date: 01-18-2010

MEWBOURNE  
 OIL COMPANY



LIMOUSINE "15" CD FEDERAL COM #1H Exhibit 3A  
 Located 990' FNL and 2010' FEL  
 Section 15, Township 20 South, Range 25 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 22180

Survey Date: 01-14-2010

Scale: 1" = 2 Miles

Date: 01-18-2010

**MEWBOURNE**  
**OIL COMPANY**

Limousine 15 CD Fed #1H

Upon further geological review, Mewbourne Oil Co. wishes to amend the production casing and cementing program as follows:

Production casing will be as follows:

5 1/2" (new)	17#	J-55	LT&C	Surface - KOP
5 1/2" (new)	17#	J-55	BT&C	KOP - EOC
5 1/2" (new)	17#	J-55	LT&C	EOC - TD

We will utilize a packer/port system in the lateral hole. A 5 1/2" ECP and FO cementer will be placed immediately above KOP and cement will be circulated to surface w/215 sx light Class "C" (yield @ 2.45 cuft/sk) & 100 sx Class "C" (yield @ 1.32 cuft/sk). No changes will be made to the mud program.

**Drilling Program**  
**Mewbourne Oil Company**  
Limousine 15 CD Federal Com #1H  
990' FNL & 2010' FEL (SL)  
990' FNL & 330' FWL (BHL)  
Sec 15-T20S-R25E  
Eddy County, New Mexico

**1. The estimated top of geological markers are as follows:**

Grayburg	525'
*San Andres	900'
*Glorietta	2375'
*Yeso	2510'

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

Water	Below 100'
Hydrocarbons	Oil and Gas are anticipated in the above (*) formations. These zones will be protected by casing and cementing as necessary.

**3. Pressure control equipment:**

A 2000# WP Annular will be installed after running 9 5/8" casing. Pressure tests will be conducted and BOPE will remain in use until completion of drilling operations. The BOP will be inspected and operated daily to insure mechanical integrity and the inspection will be recorded on the daily drilling report.

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.

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

**A. Casing Program:**

Hole Size	Casing	Wt/Ft.	Grade	Depth	Jt Type
12 1/4"	9 5/8" (new)	36#	J55	0-925' (MD)	ST&C
8 3/4"	5 1/2" (new)	17#	J55	0-5453' (MD)	LT&C

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

**B. Cementing Program**

- i. Surface Casing: 400 sks Class C cement with 2% CaCl. Yield at 1.34 cuft/sk.  
Circ to surface.
- ii. Production Casing: 300 sacks Class C light with additives. Yield at 2.71 cuft/sk.  
450 Class C with additives. Yield at 1.34 cuft/sk.  
Circ to surface.

See  
COA

~~\*Mewbourne Oil Company reserves the right to change cement and casing designs as hole conditions may warrant.~~

**5. Mud Program:**

Interval	Type System	Weight	Viscosity	Fluid Loss
0'-925' (MD)	FW spud mud	8.4-9.0	28	NC
950'-5453' (MD)	FW & Sweeps	8.4-8.6	34	15 cc or less

**6. Evaluation Program:**

See — Samples: 10' samples from ~~intermediate~~ <sup>Surface</sup> casing to TD  
COA — Logging: GR in lateral. Gyro 2100' to surface.  
Coring: As needed for evaluation  
Drill Stem Tests: As needed for evaluation

**7. Downhole Conditions**

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Zones of abnormal pressure:	None anticipated
Zones of lost circulation:	Anticipated in surface and intermediate holes
Maximum bottom hole temperature:	110 degree F
Maximum bottom hole pressure:	8.4 lbs/gal gradient or less

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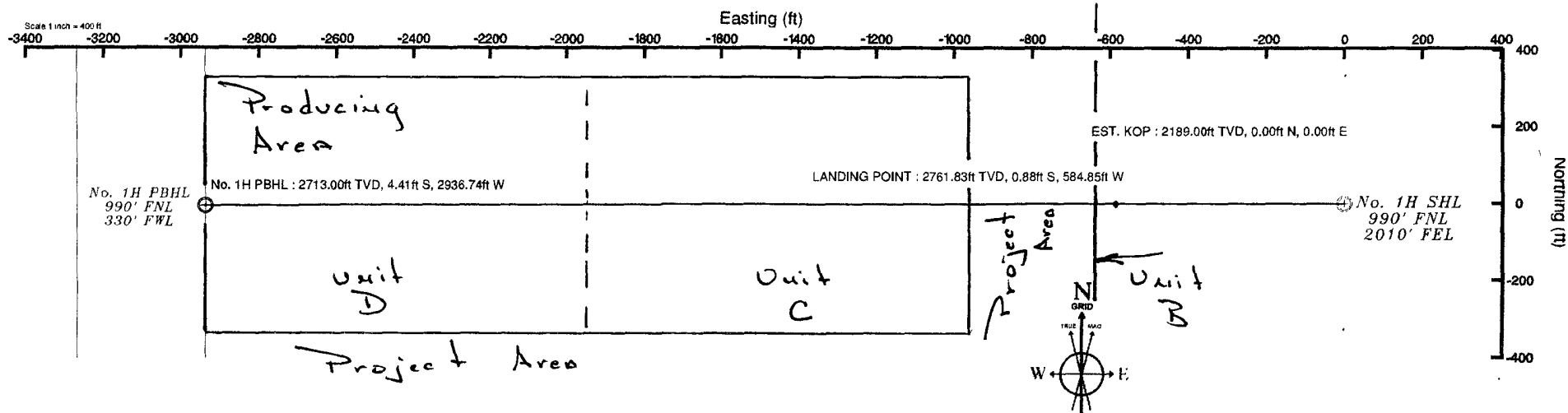
**8. Anticipated Starting Date:**

Mewbourne Oil Company intends to drill this well as soon as possible after receiving approval with approximately 10 days involved in drilling operations and an additional 5 days involved in completion operations on the project.

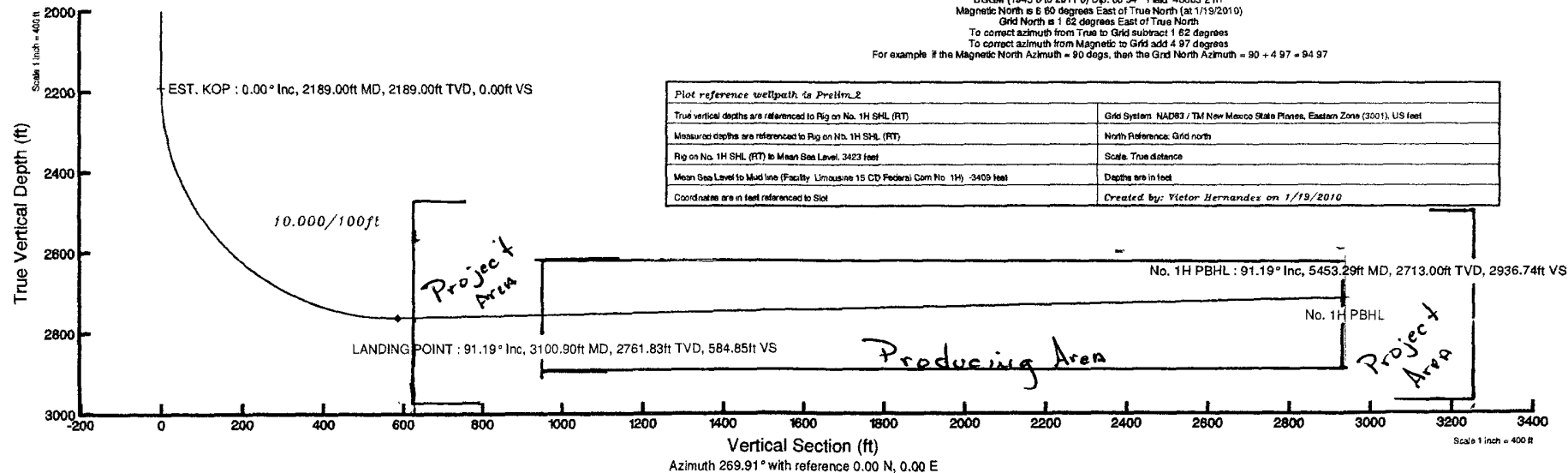


## Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (%100ft)	VS (ft)
Tie On	0.00	0.000	269.914	0.00	0.00	0.00	0.00	0.00
EST. KOP	2189.00	0.000	269.914	2189.00	0.00	0.00	0.00	0.00
LANDING POINT	3100.90	91.190	269.914	2761.83	-0.88	-584.85	10.00	584.85
No. 1H PBHL	5453.29	91.190	269.914	2713.00	-4.41	-2936.74	0.00	2936.74



BGGM (1945 0 to 2011 0) Dip: 60.34° Field 48883 2 nT  
Magnetic North is 60 degrees East of True North (at 1/19/2010)  
Grid North is 1.62 degrees East of True North  
To correct azimuth from True to Grid subtract 1.62 degrees  
To correct azimuth from Magnetic to Grid add 4.97 degrees  
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 4.97 = 94.97



Plot reference wellpath to Prelim_2	
True vertical depths are referenced to Rig on No. 1H SHL (RT)	Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No. 1H SHL (RT)	North Reference: Grid north
Rig on No. 1H SHL (RT) to Mean Sea Level: 3423 feet	Scale: True distance
Mean Sea Level to Mud line (Facility Limousine 15 CD Federal Com No. 1H) -3409 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: Victor Hernandez on 1/19/2010

Azimuth 269.91° with reference 0.00 N, 0.00 E

# Planned Wellpath Report

Prelim\_2

Page 1 of 3

## REFERENCE WELLPATH IDENTIFICATION

Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Limousine) Sec 15, T20S, R25E	Wellbore	No. 1H PWB
Facility	Limousine 15 CD Federal Com No. 1H		

## REPORT SETUP INFORMATION

Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	1.00095	Report Generated	1/19/2010 at 5:02:44 PM
Convergence at slot	1.62° East	Database/Source file	WA_Midland/No._1H_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	1494241.75	347945.46	31°55'10.005"N	101°15'45.596"W
Facility Reference Pt			1494241.75	347945.46	31°55'10.005"N	101°15'45.596"W
Field Reference Pt			1494241.75	347945.46	31°55'10.005"N	101°15'45.596"W

## WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 1H SHL (RT) to GL	14.00ft
Horizontal Reference Pt	Slot	Rig on No. 1H SHL (RT) to Mean Sea Level	3423.00ft
Vertical Reference Pt	Rig on No. 1H SHL (RT)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 1H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	269.91°

# Planned Wellpath Report

Prelim 2

Page 2 of 3

## REFERENCE WELLPATH IDENTIFICATION

Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Limousine) Sec 15, T20S, R25E	Wellbore	No. 1H PWB
Facility	Limousine 15 CD Federal Com No. 1H		

## WELLPATH DATA (36 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00	0.000	269.914	0.00	0.00	0.00	0.00	0.00	Tie On
2189.00	0.000	269.914	2189.00	0.00	0.00	0.00	0.00	EST. KOP
2289.00†	10.000	269.914	2288.49	8.70	-0.01	-8.70	10.00	
2389.00†	20.000	269.914	2384.96	34.55	-0.05	-34.55	10.00	
2489.00†	30.000	269.914	2475.48	76.76	-0.12	-76.76	10.00	
2589.00†	40.000	269.914	2557.29	134.05	-0.20	-134.05	10.00	
2689.00†	50.000	269.914	2627.91	204.67	-0.31	-204.67	10.00	
2789.00†	60.000	269.914	2685.20	286.48	-0.43	-286.48	10.00	
2889.00†	70.000	269.914	2727.40	376.99	-0.57	-376.99	10.00	
2989.00†	80.000	269.914	2753.25	473.46	-0.71	-473.46	10.00	
3089.00†	90.000	269.914	2761.96	572.96	-0.86	-572.96	10.00	
3100.90	91.190	269.914	2761.83	584.85	-0.88	-584.85	10.00	LANDING POINT
3189.00†	91.190	269.914	2760.01	672.94	-1.01	-672.94	0.00	
3289.00†	91.190	269.914	2757.93	772.92	-1.16	-772.92	0.00	
3389.00†	91.190	269.914	2755.85	872.89	-1.31	-872.89	0.00	
3489.00†	91.190	269.914	2753.78	972.87	-1.46	-972.87	0.00	
3589.00†	91.190	269.914	2751.70	1072.85	-1.61	-1072.85	0.00	
3689.00†	91.190	269.914	2749.63	1172.83	-1.76	-1172.83	0.00	
3789.00†	91.190	269.914	2747.55	1272.81	-1.91	-1272.81	0.00	
3889.00†	91.190	269.914	2745.47	1372.79	-2.06	-1372.79	0.00	
3989.00†	91.190	269.914	2743.40	1472.77	-2.21	-1472.76	0.00	
4089.00†	91.190	269.914	2741.32	1572.74	-2.36	-1572.74	0.00	
4189.00†	91.190	269.914	2739.25	1672.72	-2.51	-1672.72	0.00	
4289.00†	91.190	269.914	2737.17	1772.70	-2.66	-1772.70	0.00	
4389.00†	91.190	269.914	2735.09	1872.68	-2.81	-1872.68	0.00	
4489.00†	91.190	269.914	2733.02	1972.66	-2.96	-1972.66	0.00	
4589.00†	91.190	269.914	2730.94	2072.64	-3.11	-2072.63	0.00	
4689.00†	91.190	269.914	2728.87	2172.61	-3.26	-2172.61	0.00	
4789.00†	91.190	269.914	2726.79	2272.59	-3.41	-2272.59	0.00	
4889.00†	91.190	269.914	2724.71	2372.57	-3.56	-2372.57	0.00	

## Planned Wellpath Report

Prelim\_2

Page 3 of 3

## REFERENCE WELLPATH IDENTIFICATION

Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Limousine) Sec 15, T20S, R25E	Wellbore	No. 1H PWB
Facility	Limousine 15 CD Federal Com No. 1H		

## WELLPATH DATA (36 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
4989.00†	91.190	269.914	2722.64	2472.55	-3.71	-2472.55	0.00	
5089.00†	91.190	269.914	2720.56	2572.53	-3.86	-2572.53	0.00	
5189.00†	91.190	269.914	2718.49	2672.51	-4.01	-2672.50	0.00	
5289.00†	91.190	269.914	2716.41	2772.49	-4.16	-2772.48	0.00	
5389.00†	91.190	269.914	2714.33	2872.46	-4.31	-2872.46	0.00	
5453.29	91.190	269.914	2713.00 <sup>1</sup>	2936.74	-4.41	-2936.74	0.00	No. 1H PBHL

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Sh
1) No. 1H PBHL	5453.29	2713.00	-4.41	-2936.74	1491302.23	347941.05	31°55'10.784"N	101°16'19.656"W	pc

## SURVEY PROGRAM Ref Wellbore: No. 1H PWB Ref Wellpath: Prelim\_2

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
14.00	5453.29	NaviTrak (Standard)		No. 1H PWB

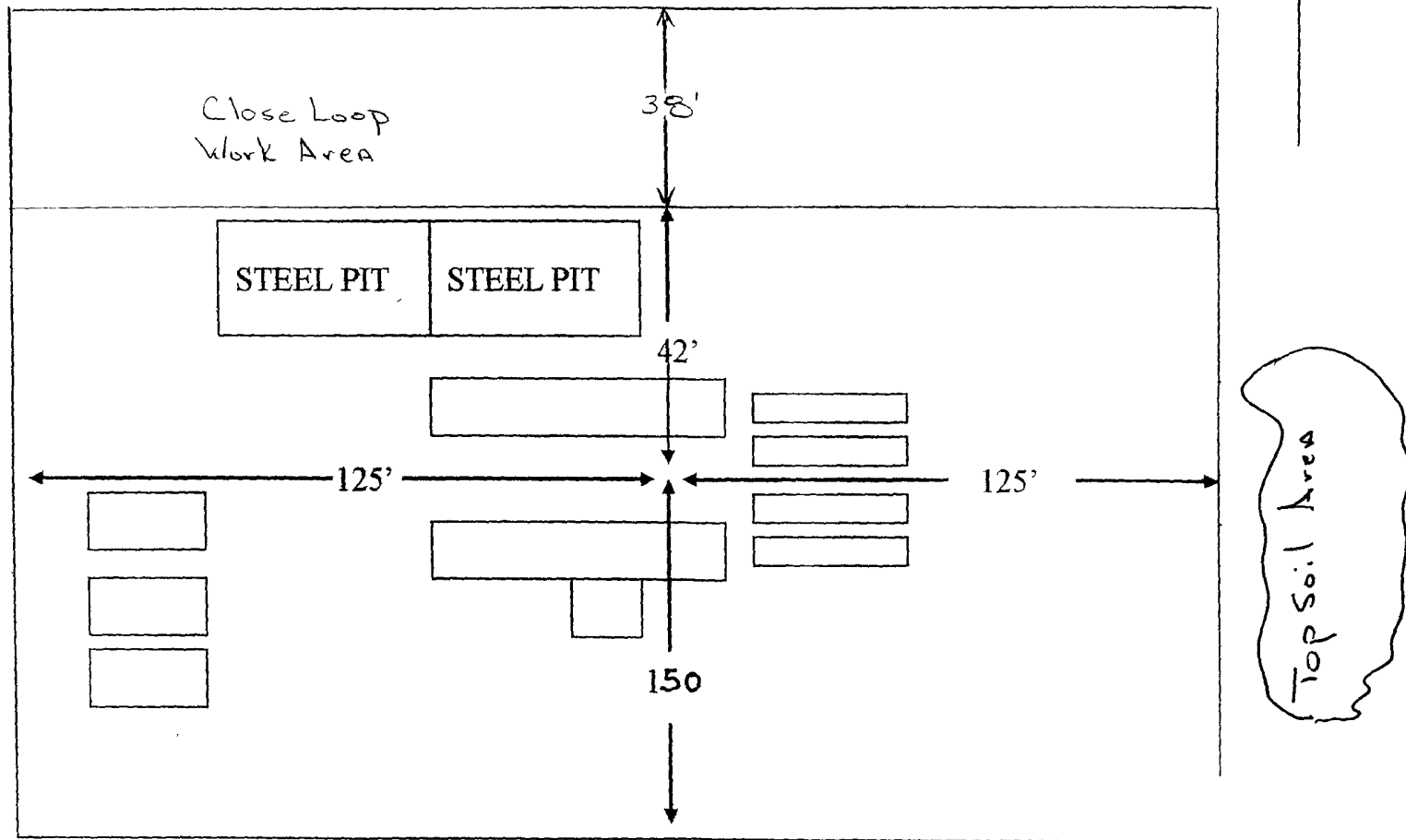
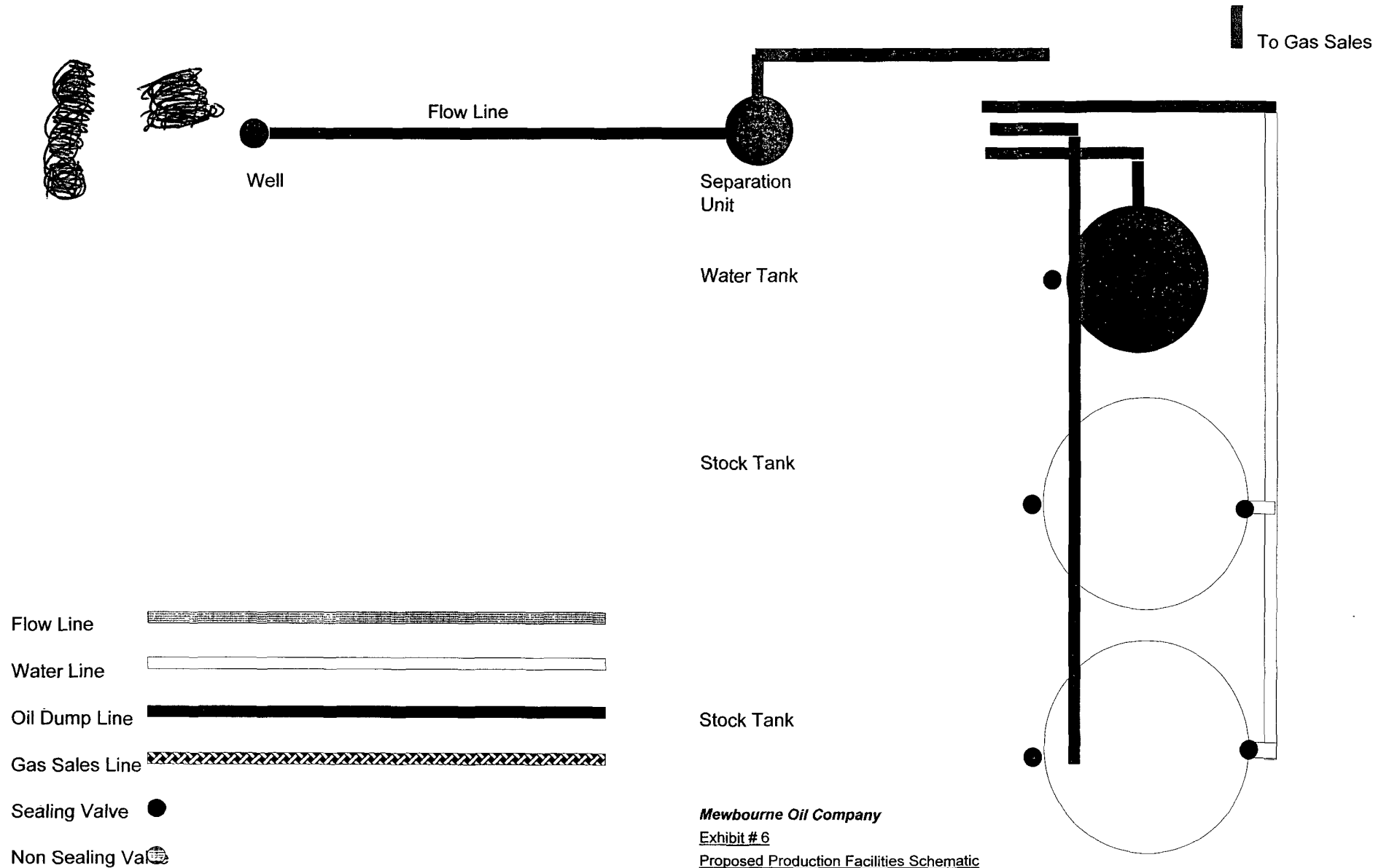


Exhibit 5

250' x 230'

Lindusine 15 CD Federal Com #14  
 990' FUL #2010' FEL  
 Sec. 15 T-20S R-25E Eddy Co. N.M.

# Proposed Production Facilities Schematic



**Mewbourne Oil Company**

Exhibit # 6

Proposed Production Facilities Schematic

Llmousine 15 CD Fed Com #1H

990' FNL & 2010' FEL (SL)

990' FNL & 330' FWL (BHL)

Sec 15-T20S-R25E

Eddy, Co., NM

## **Notes Regarding Blowout Preventer**

### **Mewbourne Oil Company**

Limousine 15 CD Federal Com #1H

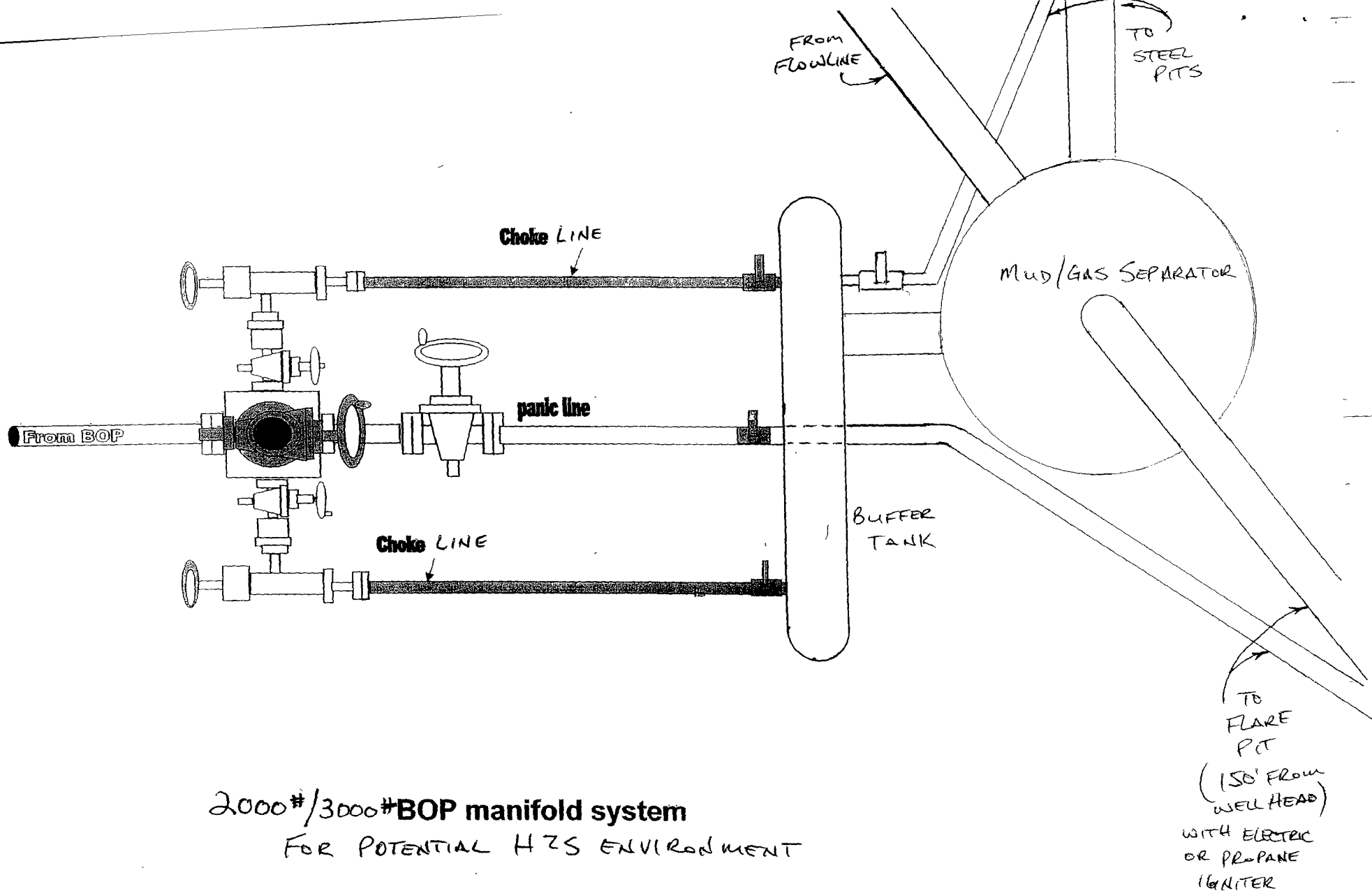
990' FNL & 2010' FEL (SL)

990' FNL & 330' FWL (BHL)

Section 15-T20S-R25E

Eddy County, New Mexico

1. 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.
2. Blowout preventer and all fittings must be in good condition with a minimum 2000 PSI working pressure on 9 5/8" csg.
3. 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 2000 PSI working pressure.
4. Equipment through which bit must pass shall be at least as large as internal diameter of the casing.
5. A kelly cock shall be installed on the kelly at all times.
6. 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.



Limosine 15 CD Fed Com #1H  
Sec 15, T20S, R25E  
Eddy Co., NM



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

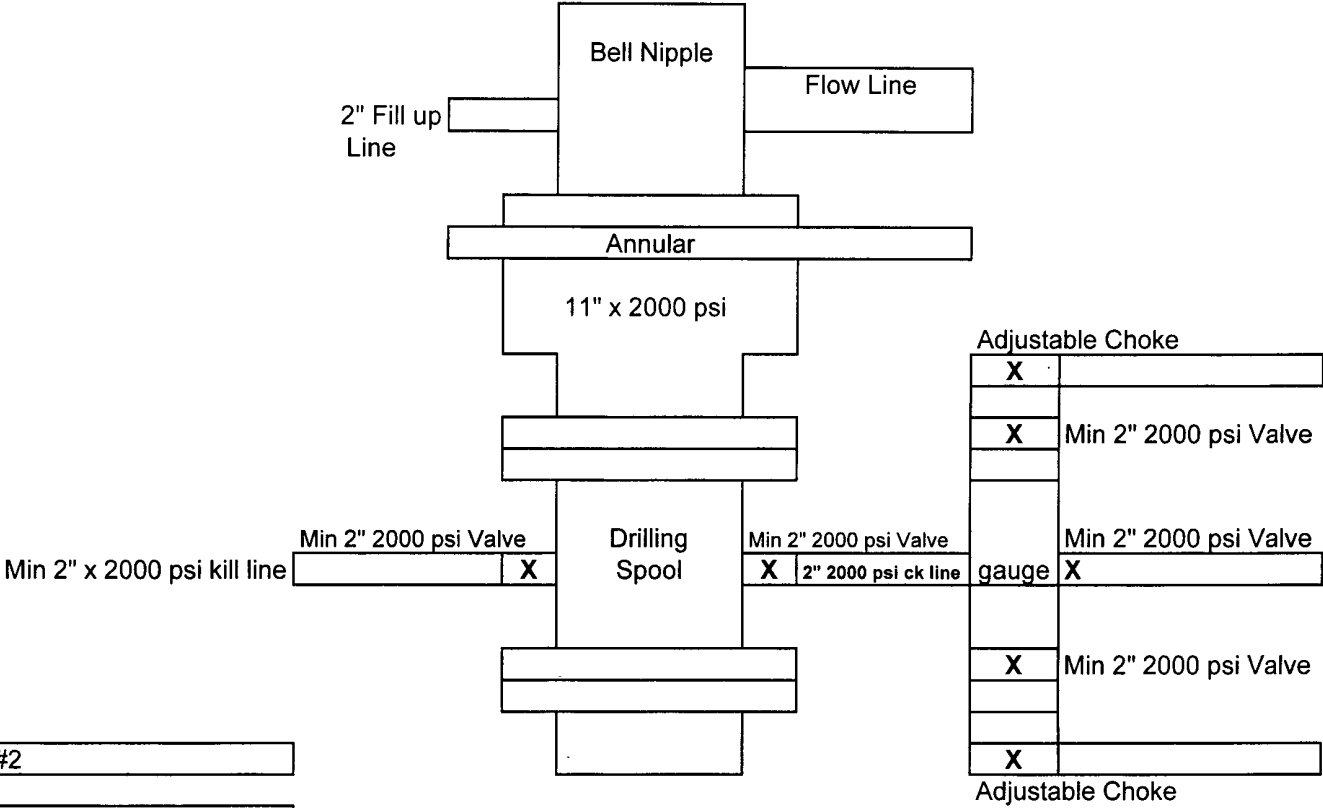


Exhibit #2

Limousine 15 CD Fed Com #1H  
990' FNL & 2010 FEL (SL)  
990' FNL & 330' FWL (BHL)  
Sec 15-T20S-R25E  
Eddy, Co., NM

## Hydrogen Sulfide Drilling Operations Plan

### **Mewbourne Oil Company**

Limousine 15 CD Federal Com #1H

990' FNL & 2010' FEL (SL)

990' FNL & 330' FWL (BHL)

Sec 15-T20S-R25E

Eddy County, New Mexico

#### **1. General Requirements**

MOC will have on location and working all H<sub>2</sub>S safety equipment before spudding for purposes of safety and insurance requirements.

#### **2. Hydrogen Sulfide Training**

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

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

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

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

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

#### **3. Hydrogen Sulfide Safety Equipment and Systems**

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

1. Well Control Equipment
  - A. Choke manifold with minimum of one adjustable choke and flare line.
  - B. Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
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
	2 <sup>nd</sup> 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

**Exhibit #4**  
**Status of Wells in Immediate Vicinity**  
**Mewbourne Oil Company**  
Limousine 15 CD Federal Com #1H  
990' FNL & 2010' FEL (SL)  
990' FNL & 330' FWL (BHL)  
Sec 15-T20S-R25E  
Eddy County, New Mexico

**Section 15-T20S-R25E**

Operator: Mewbourne Oil Company  
Well Name: Quick Draw 15 A #1  
Unit letter: A  
Status: Pumping  
Field: North Seven Rivers Yeso

Operator: Mewbourne Oil Company  
Well Name: Quick Draw 15 B #1  
Unit letter: B  
Status: Pumping  
Field: Cemetery Yeso

Operator: Mewbourne Oil Company  
Well Name: Quick Draw 15 G #1  
Unit letter: G  
Status: Pumping  
Field: Cemetery Yeso

## **MULTI-POINT SURFACE USE AND OPERATIONS PLAN**

### **MEWBOURNE OIL COMPANY**

Limousine 15 CD Federal Com #1H

990' FNL & 2010' FEL (SL)

990' FNL & 330' FWL (BHL)

Sec 15-T20S-R25E

Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, Covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved, and the procedures to be followed in 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. Exhibit #3A is a topographic map showing the location of the proposed well and access road. Existing roads are highlighted in blue proposed roads are highlighted in red.
- B. **Directions to location from Carlsbad, NM on US 285 (Artesia Hwy) 12 miles, turn left (west) on White Pine Rd (Eddy Co 28) and continue west 7.75 miles. Turn right (North) to location.**

#### **2. Proposed Access Road:**

- A. No 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:**

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 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 fresh water and fresh 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 disposed of in the closed loop system.
- B. Drilling fluids will be hauled off as needed.
- C. Water produced during operations will be disposed at an approved disposal.
- D. If any liquid hydrocarbons are produced during operations, those liquids will be stored in suitable tanks until sold.
- E. Current regulations regarding the proper disposal of human waste will be followed.
- F. 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, pit area, and location of major rig components are shown.
- B. There will be no reserve pit. A closed loop mud system will be used while drilling this well.
- C. The pad dimension of 250' X 230' has been staked and flagged.
- D. An archaeological survey has been 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 will be ripped and re-seeded. The entire location will be restored to the original contour as much as reasonable possible. All trash & garbage will be hauled to an appropriate disposal site to assure the location is aesthetically pleasing as reasonably 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. 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:           Chrystine Willard & Family. An agreement letter is attached.

**12. Other Information:**

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

**13. Operator's Representative:**

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

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

**Mewbourne Oil Company**  
Limousine 15 CD Federal #1H  
990' FNL & 2010' FEL  
Section 15-T20S-R25E  
Eddy County, New Mexico

January 27, 2010

Mewbourne Oil Company has an agreement with Ms. Chrystine Willard & family (Surface Owner) for surface disturbance for road & utilities Right-of-Way in Unit Letter B of Sec 15, T20S, R25E.

If you have any questions, please call Mickey Young at 575-393-5905.

Thank You,  
Jackie Lathan  
Hobbs Regulatory



## 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 Limousine 15 CD Federal #1H, 990' FNL & 2010' FEL of Sec 15-T20S- R25E, 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: 1/27/2010

Print: NM Young

**Hobbs District Manager**

## PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MEWBOURNE OIL
LEASE NO.:	NM104640
WELL NAME & NO.:	1H-LIMOUSINE 15 CD FED COM
SURFACE HOLE FOOTAGE:	0990' FNL & 2010' FEL
BOTTOM HOLE FOOTAGE:	0990' FNL & 0330' FWL
LOCATION:	Section 15, T. 20 S., R 25 E., NMPM
COUNTY:	Eddy County, New Mexico

### TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☒ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Water Quality
  - Cave/Karst
  - Communitization Agreement
- ☒ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
  - High cave/karst
  - Logging requirements
- ☐ **Production (Post Drilling)**
  - Well Structures & Facilities
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

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## **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**

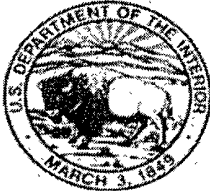
The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds 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)

EXHIBIT NO. 1

Date of Issue:

5/4/2010



Bureau of Land Management, Carlsbad Field Office  
620 E. Greene Street Carlsbad, NM 88220

NEPA

10-356

Cultural and Archaeological Resources

BLM Report No.

10-NM-523-375

### NOTICE OF STIPULATIONS

**Historic properties in the vicinity of this project are protected by federal law. In order to ensure that they are not damaged or destroyed by construction activities, the project proponent and construction supervisors shall ensure that the following stipulations are implemented.**

<b>Project Name:</b>	A Class III Cultural Resource Inventory Report for the Limousine 15CD Federal Com Number 1H Proposed Well Location and Site LA 165922, Eddy County, New Mexico
<b>Required</b>	<p><b>1). A 3-day preconstruction call-in notification.</b> Contact BLM Inspection and Enforcement at</p> <p><b>2. Professional archaeological monitoring.</b> Contact your project archaeologist, or BLM's Cultural Resources Section at (575) 234- 5917, 5967, or 5986, for assistance.</p> <p>A. <input checked="" type="checkbox"/> These stipulations must be given to your monitor at least <b>5 days</b> prior to the start of construction.</p> <p>B. <input checked="" type="checkbox"/> No construction, including vegetation removal or other site prep may begin prior to the arrival of the monitor.</p> <p><b>3. Cultural site barrier fencing.</b> (Your monitor will assist you).</p> <p>A. <input type="checkbox"/> A temporary site protection barrier(s) shall be erected prior to all ground-disturbing activities. The minimum barrier(s) shall consist of upright wooden survey lath spaced no more than ten (10) feet apart and marked with blue ribbon flagging or blue paint. There shall be no construction activities or vehicular traffic past the barrier(s) at any time.</p> <p>B. <input type="checkbox"/> A permanent, 4-strand barbed wire fence strung on standard "T-posts" shall be erected prior to all ground-disturbing activities. No construction activities or vehicle traffic are allowed past the fence.</p> <p><b>Required</b></p> <p><b>4. The archaeological monitor shall:</b></p> <p>A. <input type="checkbox"/> Ensure that all site protection barriers are located as indicated on the attached map(s).</p> <p>B. <input checked="" type="checkbox"/> Observe all ground-disturbing activities to ensure that there are not intact subsurface cultural deposits.</p> <p>C. <input type="checkbox"/> Ensure that all reroutes are adhered to avoid cultural site no.(s) LA</p> <p>D. <input type="checkbox"/> Ensure the proposed is/are located as shown on the attached map(s).</p> <p>E. <input checked="" type="checkbox"/> Submit a brief monitoring report within 30 days of completion of monitoring.</p> <p><b>Other:</b></p>

**Site Protection and Employee Education:** It is the responsibility of the project proponent and his construction supervisor to inform all employees and subcontractors that cultural and archaeological sites are to be avoided by all personnel, vehicles, and equipment; and that it is illegal to collect, damage, or disturb cultural resources on Public Lands.

For assistance, contact  
BLM Cultural Resources: Martin Stein (575) 234-5967 Bruce Boeke (575) 234-5917  
George MacDonell (575)  
234-2228

### **Protecting Water Quality**

- 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.
- 

## **Cave and Karst**

**\*\* Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.**

### **Cave/Karst Surface Mitigation**

The following stipulations will be applied to minimize impacts during construction, drilling and production.

#### **Construction:**

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

#### **No Blasting:**

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

#### **Pad Berming:**

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

#### **Tank Battery Liners and Berms:**

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

#### **Leak Detection System:**

A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating valves and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

#### **Automatic Shut-off Systems:**

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

### **Cave/Karst Subsurface Mitigation**

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

#### **Rotary Drilling with Fresh Water:**

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

---

#### **Directional Drilling:**

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

#### **Lost Circulation:**

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

#### **Abandonment Cementing:**

Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

#### **Pressure Testing:**

Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

#### **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.

## **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 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 thirty (30) feet.

**Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

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

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

### **Crowning**

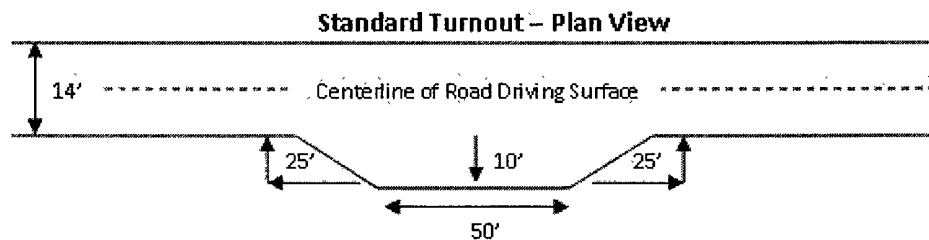
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **Ditching**

Ditching shall be required on both sides of the road.

### **Turnouts**

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

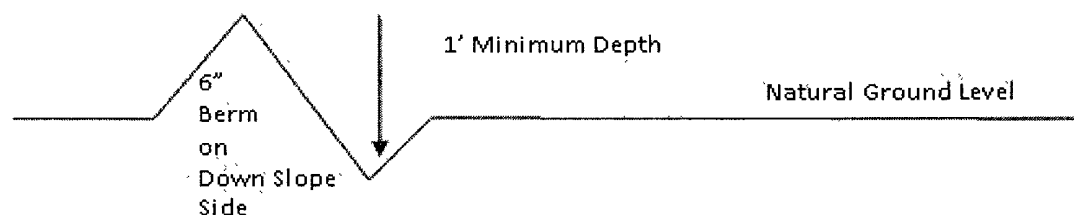


### **Drainage**

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

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

### **Cross Section of a Typical Lead-off Ditch**





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

#### **Formula for Spacing Interval of Lead-off Ditches**

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

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

#### **Culvert Installations**

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

#### **Cattleguards**

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

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

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

#### **Fence Requirement**

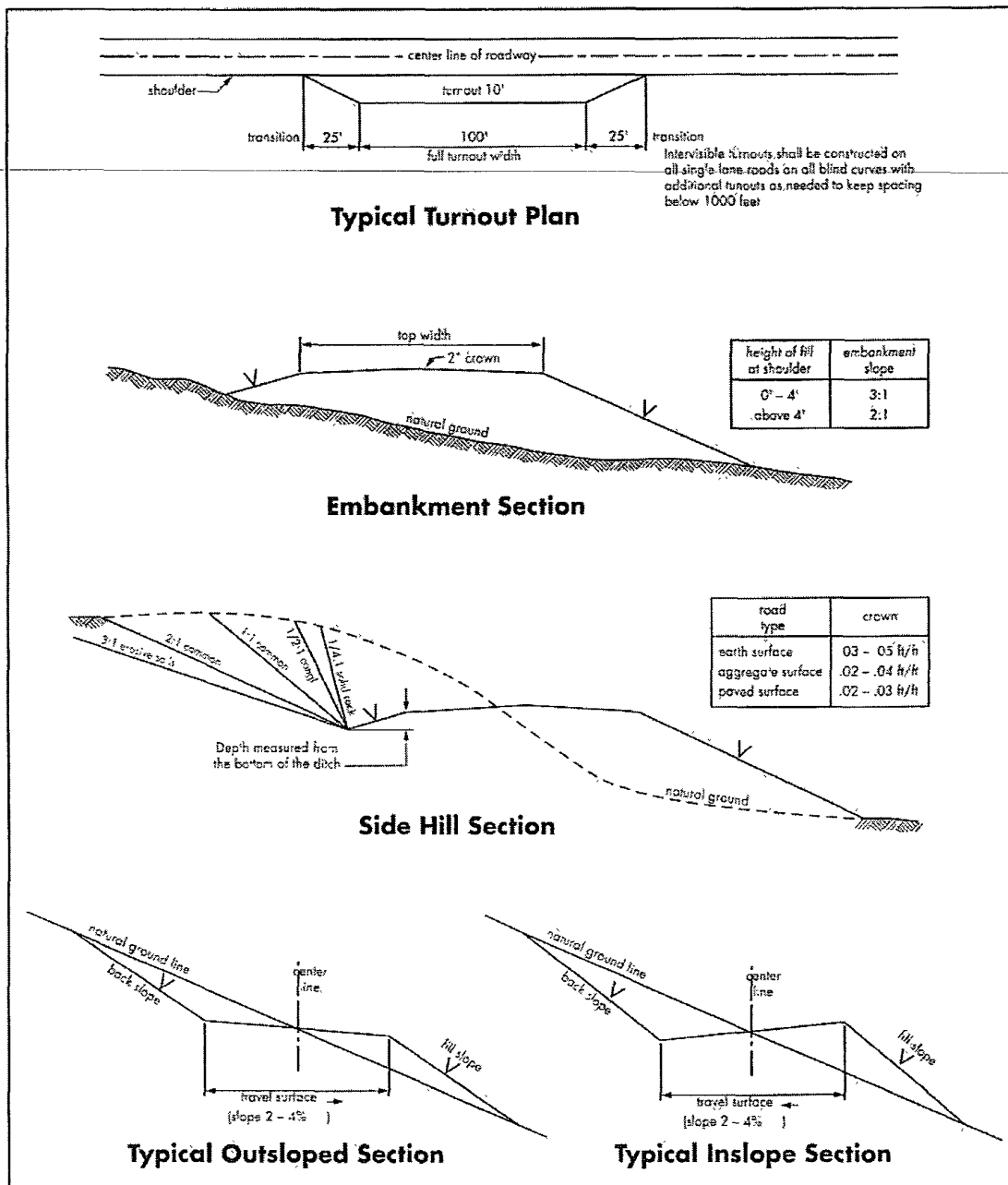
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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

#### **Public Access**

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

**Figure 1 – Cross Sections and Plans For Typical Road Sections**



## VII. DRILLING

### A. DRILLING OPERATIONS REQUIREMENTS

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

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

☒ **Eddy County**

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

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
3. **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.**

### 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 San Andres.**

1. The 9-5/8 inch surface casing shall be set at approximately 925 feet within the San Andres Dolomite 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.

**IF LOST CIRCULATION OCCURS WHILE DRILLING THE 8-3/4" HOLE, THE CEMENT PROGRAM FOR THE 5-1/2" CASING WILL NEED TO BE MODIFIED AND THE BLM IS TO BE CONTACTED PRIOR TO RUNNING THE CASING. A MINIMUM OF TWO CASING STRINGS CEMENTED TO SURFACE IS REQUIRED IN HIGH CAVE/KARST AREAS. THE CEMENT MUST BE IN A SOLID SHEATH THEREFORE, ONE INCH OPERATIONS WILL NOT BE PERMITTED. A DV TOOL WILL BE REQUIRED.**

2. The minimum required fill of cement behind the 5-1/2 inch production casing is:
  - a. First stage to DV/FO tool, cement shall:
    - ☒ No cement required, operator is using a packer/port completion system in the lateral part of the hole. **Operator must have a zonal isolation packer between the San Andres and Glorieta zone to prevent down-hole commingling behind pipe.**
  - b. Second stage above DV/FO tool, cement shall:
    - ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **May require additional cement as the excess calculates to 16%.**
3. 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.

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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**.
3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. Casing cut-off and BOP installation will not be initiated until the cement has had a minimum of 8 hours setup time for a water basin. The casing shall remain stationary and under pressure for at least eight hours after the operator places the cement. In the potash area, the minimum time is 12 hours and the casing shall remain stationary and under pressure during this time period. Casing shall be under pressure if the operator uses some acceptable means of holding pressure or if the operator employs one or more float valves to hold the cement in place. Testing the BOP/BOPE against a plug can commence after meeting the above conditions plus the BOP installation time.
  - b. The tests shall be done by an independent service company using a test plug.
  - c. The results of the test shall be reported to the appropriate BLM office.
  - d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
  - e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

### **D. DRILL STEM TEST**

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

**RGH 030510**

## **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.

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#### **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.

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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.

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

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

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

\*Pounds of pure live seed:

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