Form 3160-3
(August 2007)

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

13-346

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMLC-028978(b), NMLC-058650, NMNM 56541-BK

6. If Indian, Allotee or Tribe Name

JCS 5/24/2013

1a. Type of work: ☑ DRILL ☐ REENTER Secretary ~~R-111~~-POTASH

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.
Dorado 34 DA Fed Com #1H <39987

2. Name of Operator Mewbourne Oil Company <14744>

9. API Well No.
30-015-41394

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
PO Box 5270 Hobbs, NM 88241	575-393-5905	South Leo Bone Spring (37920)

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

At surface 405' FNL & 321' FWL, Sec. 34 T18S R30E

At proposed prod. zone 990' FNL & 330' FEL, Sec. 34 T18S R30E

11. Sec., T. R. M. or Blk. and Survey or Area
Sec. 34 T18S R30E

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
25 miles NE of Carlsbad, NM	Eddy	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
321'	NMLC028978(b) ~~80~~ 320 NMLC058650 ~~320~~ 80 NMNM 56541 ~~80~~ 120	160

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file
255' - Linn Operating, North Benson Queen#35	12844' MD 8467' - TVD	NM-1693 Nationwide, NMB-000919

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3457' GL	04/01/2013	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	Name *(Printed/Typed)*	Date
Bradley Bishop		2-15-13

Title

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Jesse J. Juen		MAY 8 2013

Title	Office
STATE DIRECTOR	NM STATE 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.

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)

RECEIVED
MAY 16 2013
NMOCD ARTESIA

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 and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-41394	37920	South Leo Bone Spring

Property Code	Property Name	Well Number
39918	DORADO 34 DA FED COM	1H

OGRID No.	Operator Name	Elevation
14744	MEWBOURNE OIL COMPANY	3457

Surface Location

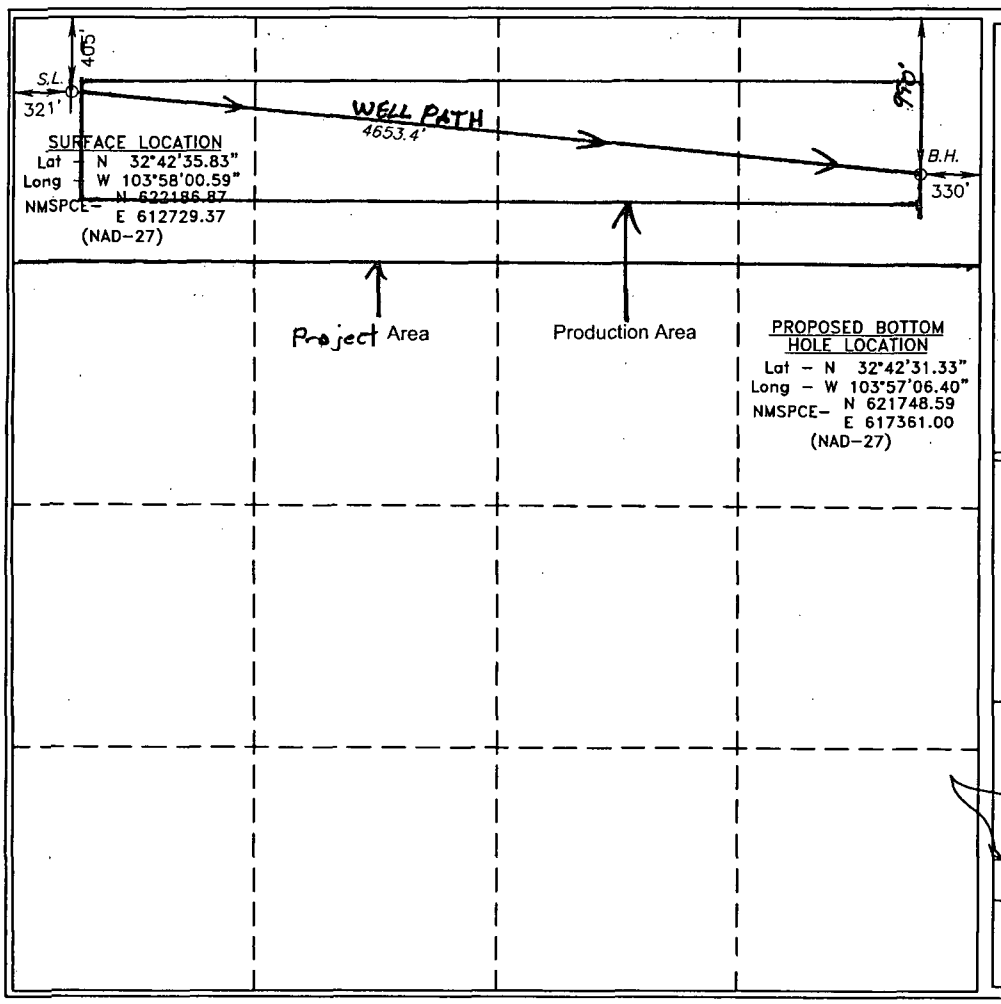
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	34	18 S	30 E		405	NORTH	321	WEST	EDDY

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
A	34	18 S	30 E		990	NORTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation 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



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 2-19-13 Date

BRADLEY BISHOP
Printed Name

Email Address

SURVEYOR CERTIFICATION

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

JANUARY 07, 2013
Date Surveyed

Signature & Seal of Professional Surveyor

NEW MEXICO 7977 PROFESSIONAL LAND SURVEYOR

W.O. No. 27909

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 27909

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 15 day of February, 2013.

Name: NM Young

Signature: Bradley Bishop FOR NM Young

Position Title: Hobbs District Manager

Address: PO Box 5270, Hobbs NM 88241

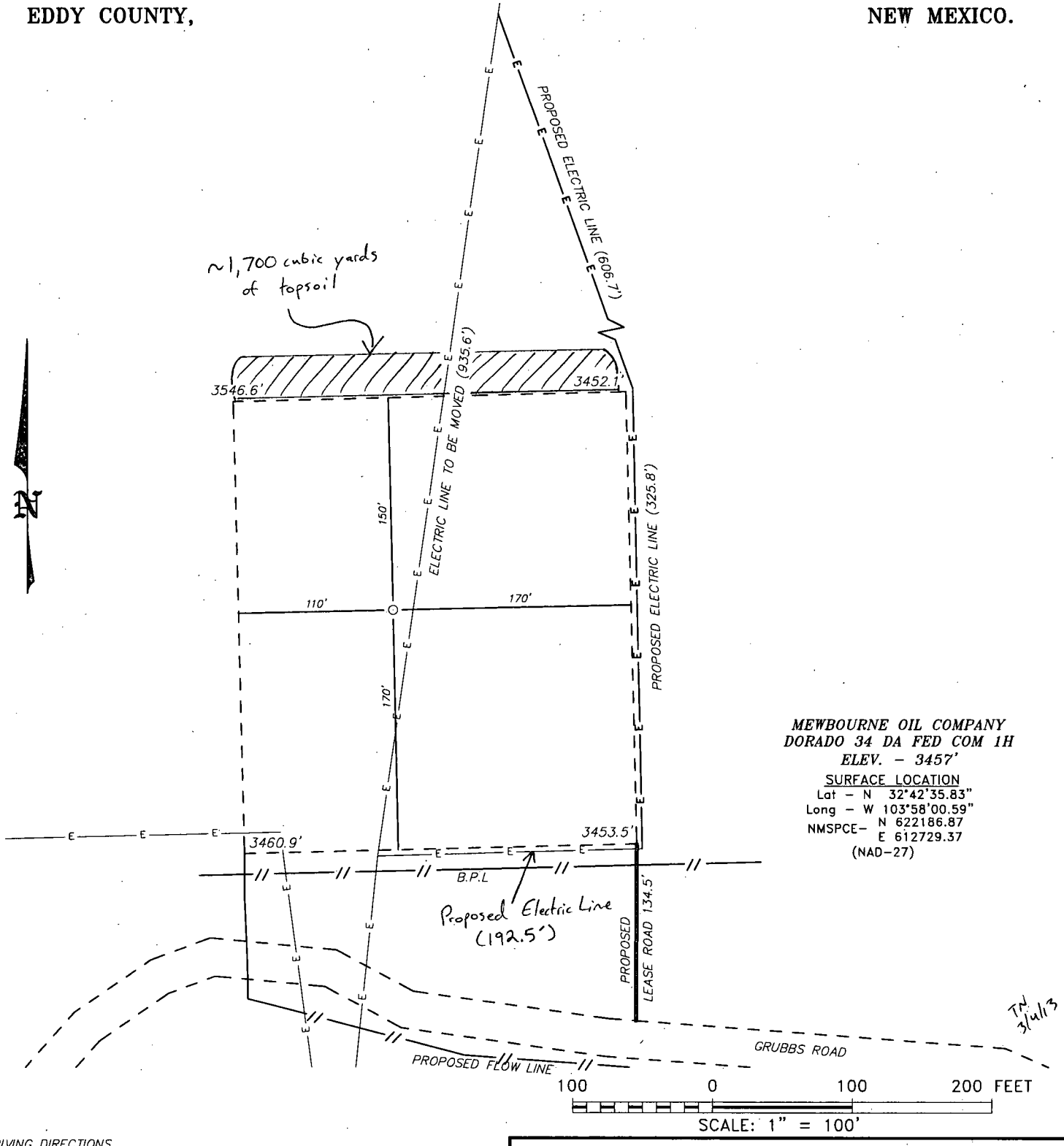
Telephone: 575-393-5905

E-mail: myoung@mewbourne.com

Exhibit "3"

SECTION 34, TOWNSHIP 18 SOUTH, RANGE 30 EAST, N.M.P.M.,

EDDY COUNTY, **NEW MEXICO.**



MEWBOURNE OIL COMPANY
DORADO 34 DA FED COM 1H
ELEV. - 3457'

SURFACE LOCATION
Lat - N 32°42'35.83"
Long - W 103°58'00.59"
NMSPCE- N 622186.87
E 612729.37
(NAD-27)

TN 3/4/13

DRIVING DIRECTIONS

FROM THE INTERSECTION OF GRUBBS AND DUVAL SHAFT GO EAST NORTHEAST 0.9 MILES TO EXISTING LEASE ROAD GO .1 MILES SOUTH TO PROPOSED LEASE ROAD.

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

W.O. Number: 27909	Drawn By: D. JONES		
Date: 01-21-2013	Disk: DAJ 27909	Survey Date: 01-07-2013	Sheet 1 of 1 Sheets

MEWBOURNE OIL COMPANY

REF: DORADO 34 DA FED COM 1H/ WELL PAD TOPO

THE DORADO 34 DA FED COM 1H LOCATED 405' FROM THE NORTH LINE AND 321' FROM THE WEST LINE OF SECTION 34, TOWNSHIP 18 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

EXHIBIT "3A"

DORADO 34 DA FED COM 1H
Located 405' FNL and 321' FWL
Section 33, Township 18 South, Range 30 East,
N.M.P.M., EDDY County, New Mexico.

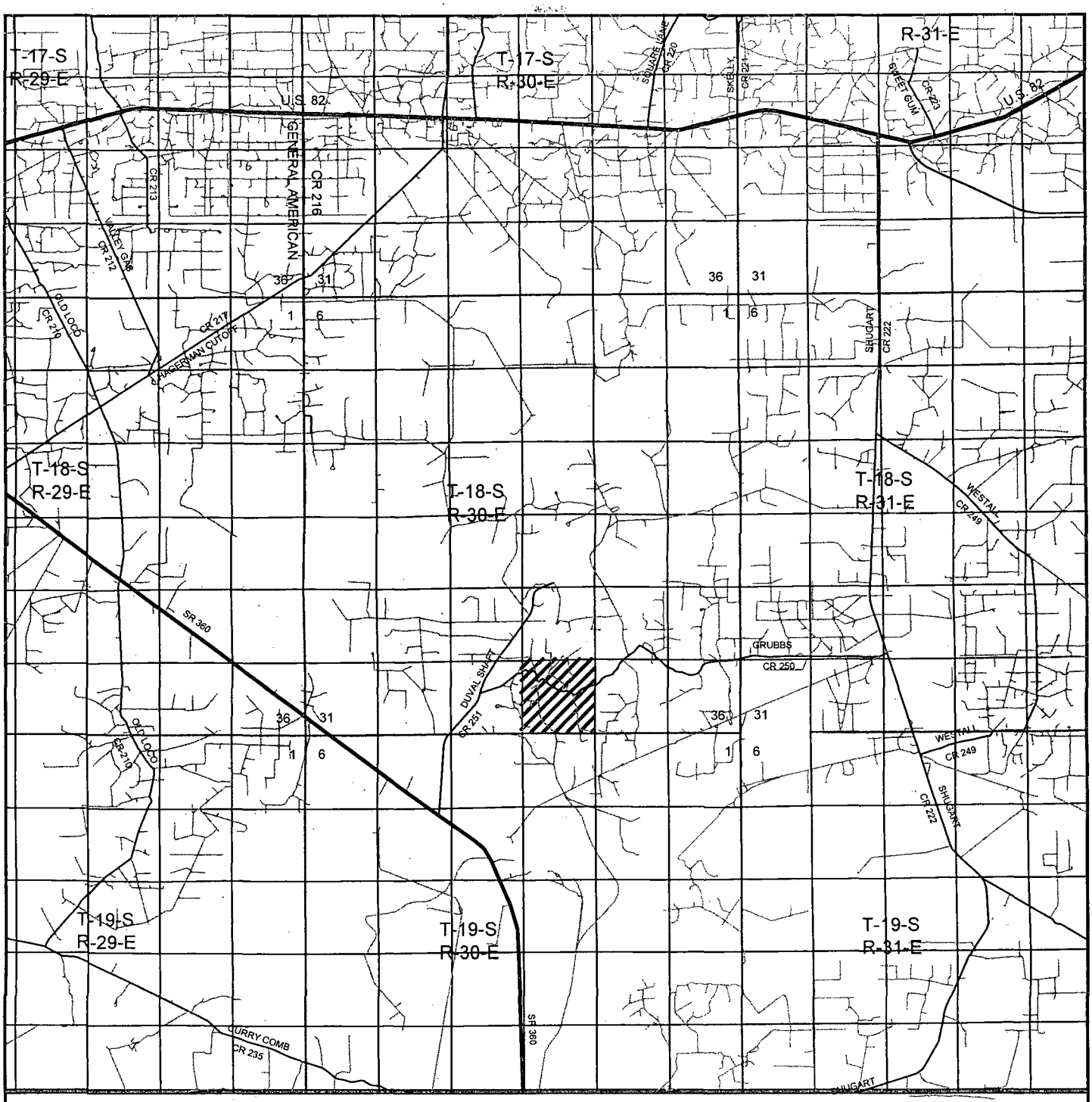
basin surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number:	DAJ 27909
Survey Date:	01-07-2013
Scale:	1" = 2000'
Date:	01-21-2013

N

MEWBOURNE OIL COMPANY

EXHIBIT "3B"



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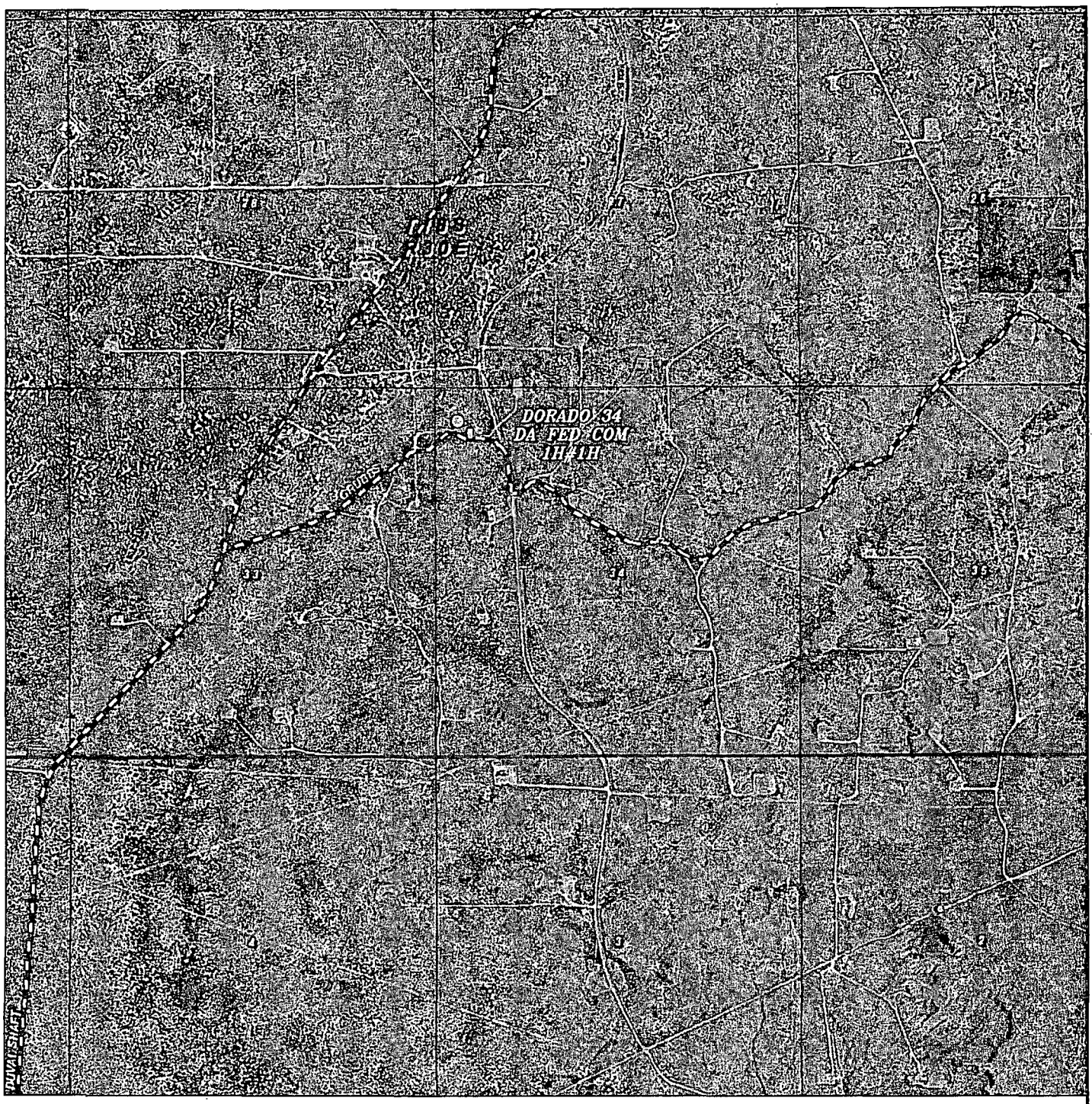
Hobbs, New Mexico 88241
(575) 393-7316 – Office
(575) 392-2206 – Fax
basinsurveys.com

W.O. Number:	DAJ 27909
Survey Date:	01-07-2013
Scale:	1" = 2 Miles
Date:	01-21-2013

N

MEWBOURNE OIL COMPANY

EXHIBIT "3C"



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(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: DAJ 27909

Scale: 1" = 2000'

YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND

N

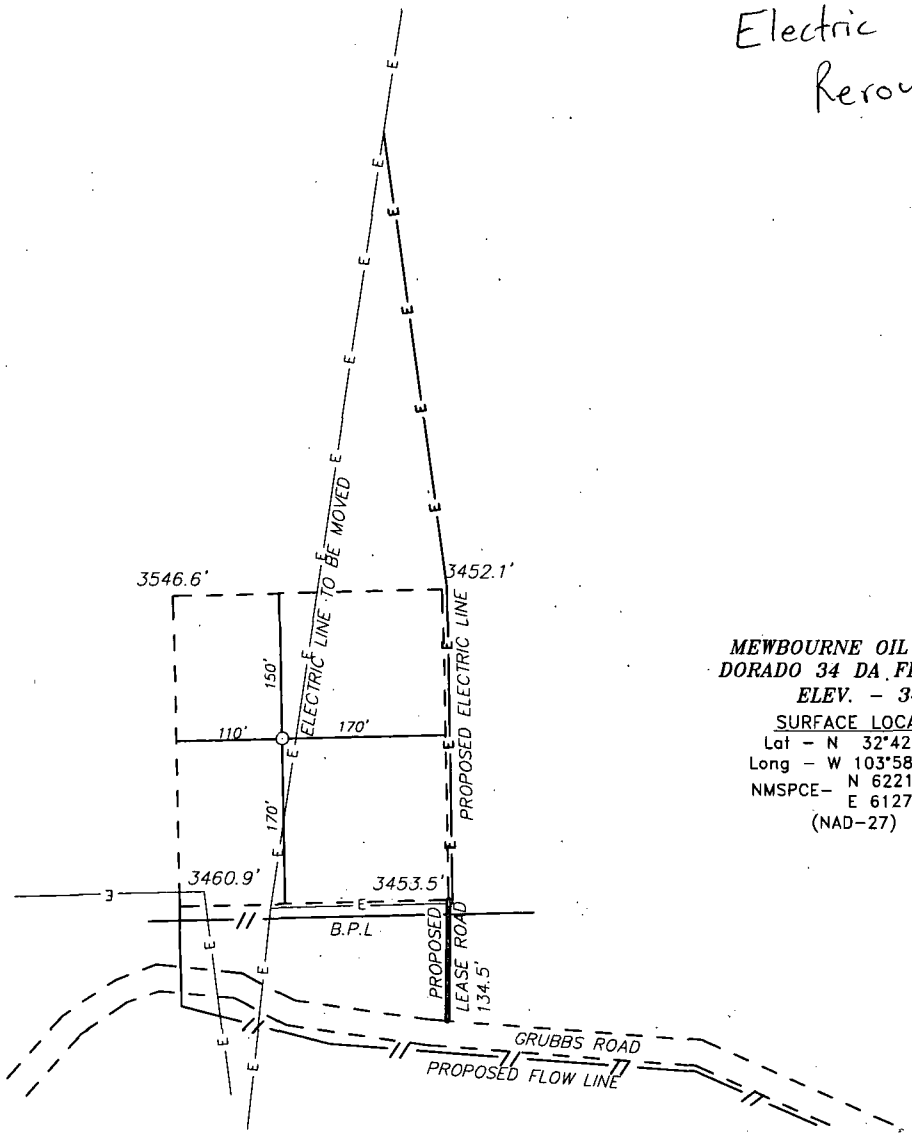
MEWBOURNE OIL COMPANY

Exhibit "3D" (1)

SECTION 34, TOWNSHIP 18 SOUTH, RANGE 30 EAST, N.M.P.M.,

EDDY COUNTY, **NEW MEXICO.**

Electric line Reroute



MEWBOURNE OIL COMPANY
DORADO 34 DA FED COM 1H
ELEV. - 3457'

SURFACE LOCATION
Lat - N 32°42'35.83"
Long - W 103°58'00.59"
NMSPCE- N 622186.87
E 612729.37
(NAD-27)

200 0 200 400 FEET

SCALE: 1" = 200'

DRIVING DIRECTIONS

FROM THE INTERSECTION OF GRUBBS AND DUVAL SHAFT GO EAST NORTHEAST 0.9 MILES TO EXISTING LEASE ROAD GO .1 MILES SOUTH TO PROPOSED LEASE ROAD.

MEWBOURNE OIL COMPANY

REF: DORADO 34 DA FED COM 1H/ WELL PAD TOPO

THE DORADO 34 DA FED COM 1H LOCATED 405' FROM THE NORTH LINE AND 321' FROM THE WEST LINE OF SECTION 34, TOWNSHIP 18 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

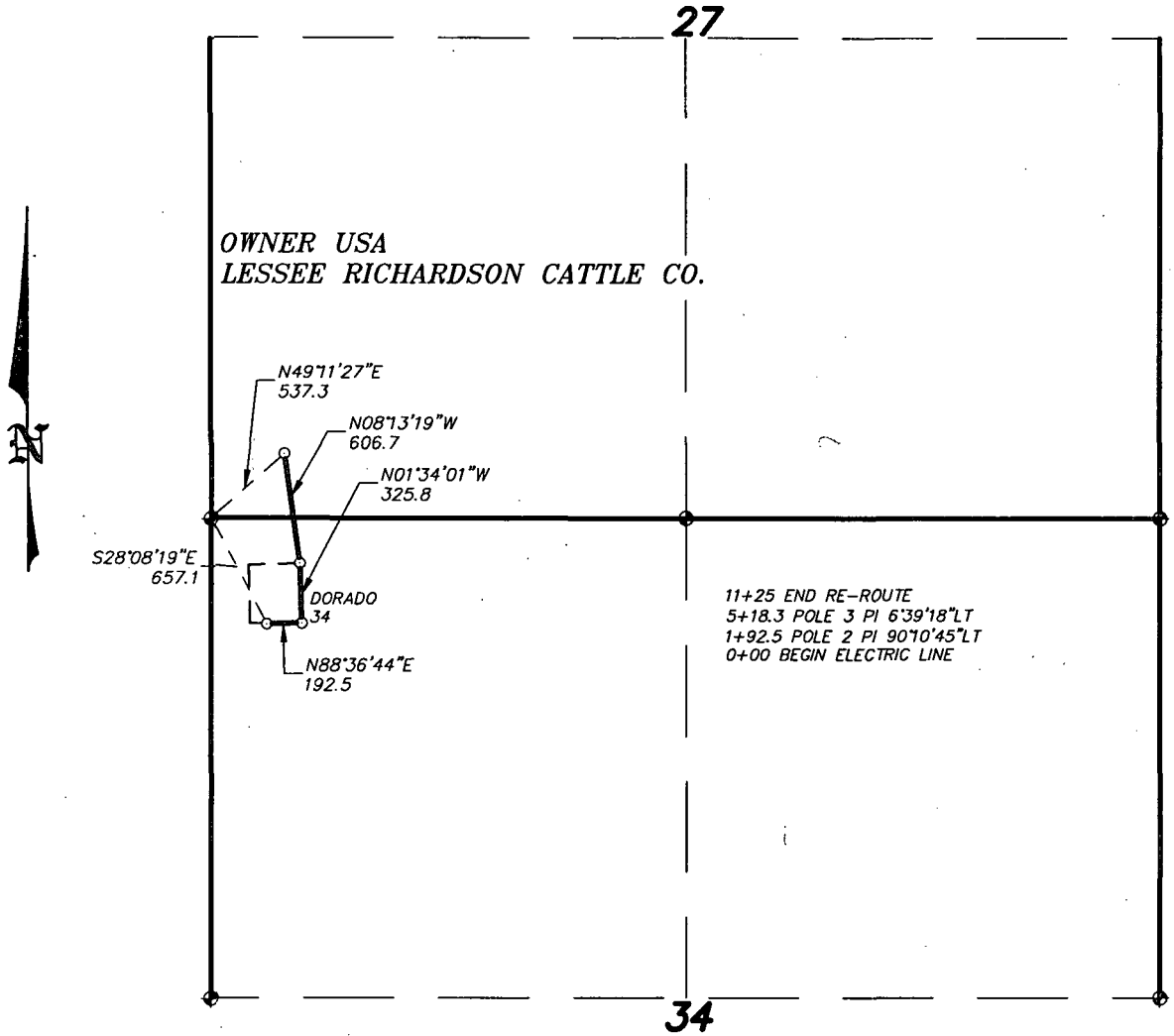
BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 27909	Drawn By: D. JONES		
Date: 01-21-2013	Disk: DAJ 27909	Survey Date: 01-07-2013	Sheet 1 of 1 Sheets

EXHIBIT "3D"(2)

SECTIONS 27&34, TOWNSHIP 18 SOUTH, RANGE 30 EAST, N.M.P.M.,

EDDY COUNTY, **NEW MEXICO.**



LEGAL DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE, LOCATED IN SECTIONS 27&34, TOWNSHIP 18 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

SECTION 34 = 769.4 FEET = 46.63 RODS = .14 MILES = .35 ACRES
SECTION 27 = 355.6 FEET = 21.55 RODS = .07 MILES = .16 ACRES
TOTAL = 1125.0 FEET = 68.18 RODS =0.21 MILES = .77 ACRES

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF AN ACTUAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

GARY L. JONES, NEW MEXICO No. 7977
TEXAS No. 5074

1000 0 1000 2000 FEET

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

NEWBOURNE OIL COMPANY

REF: PROPOSED ELECTRIC LINE TO THE DORADO 34 DA FED COM 1H

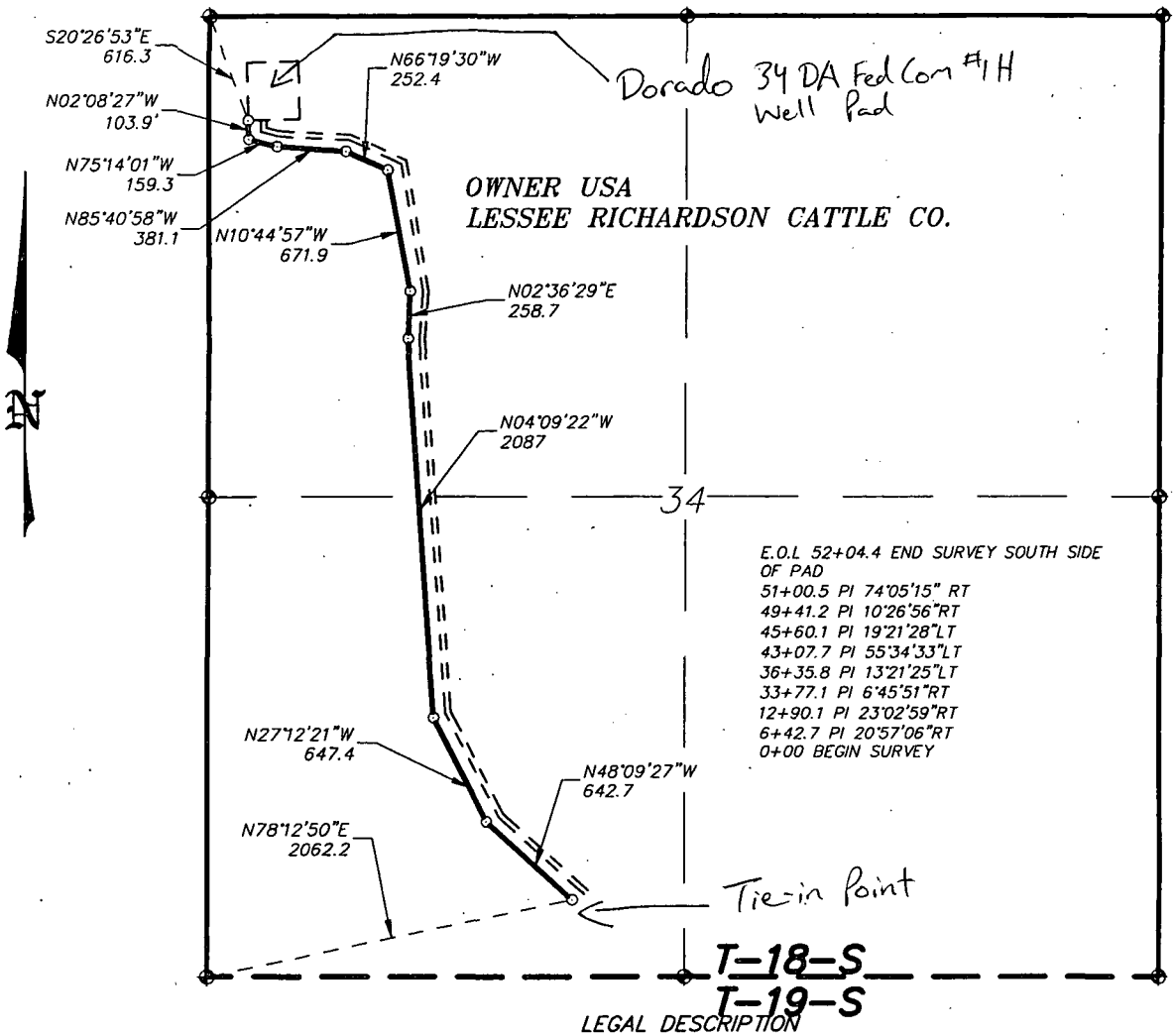
A ELECTRIC LINE CROSSING USA LAND IN
SECTIONS 27&34, TOWNSHIP 18 SOUTH, RANGE 30 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

W.O. Number: 27909	Drawn By: D. JONES		
Date: 01-21-2013	Disk: DAJ 27909	Survey Date: 01-07-2013	Sheet 1 of 2 Sheets

EXHIBIT "3E"

SECTION 34, TOWNSHIP 18 SOUTH, RANGE 30 EAST, N.M.P.M.,

EDDY COUNTY, **NEW MEXICO.**



LEGAL DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE, LOCATED IN SECTION 34, TOWNSHIP 18 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

SECTION 34 = 5204.4 FEET = 315.42 RODS = 0.99 MILES = 3.58 ACRES

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF AN ACTUAL SURVEY AND MEETS OR EXCEEDS THE REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES, N.M.P.S. No. 7977
TEXAS P.L.S. No. 5074

1000 0 1000 2000 FEET

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

NEWBOURNE OIL COMPANY

REF: PROPOSED FLOW LINE TO THE DORADO 34 DA FED COM 1H

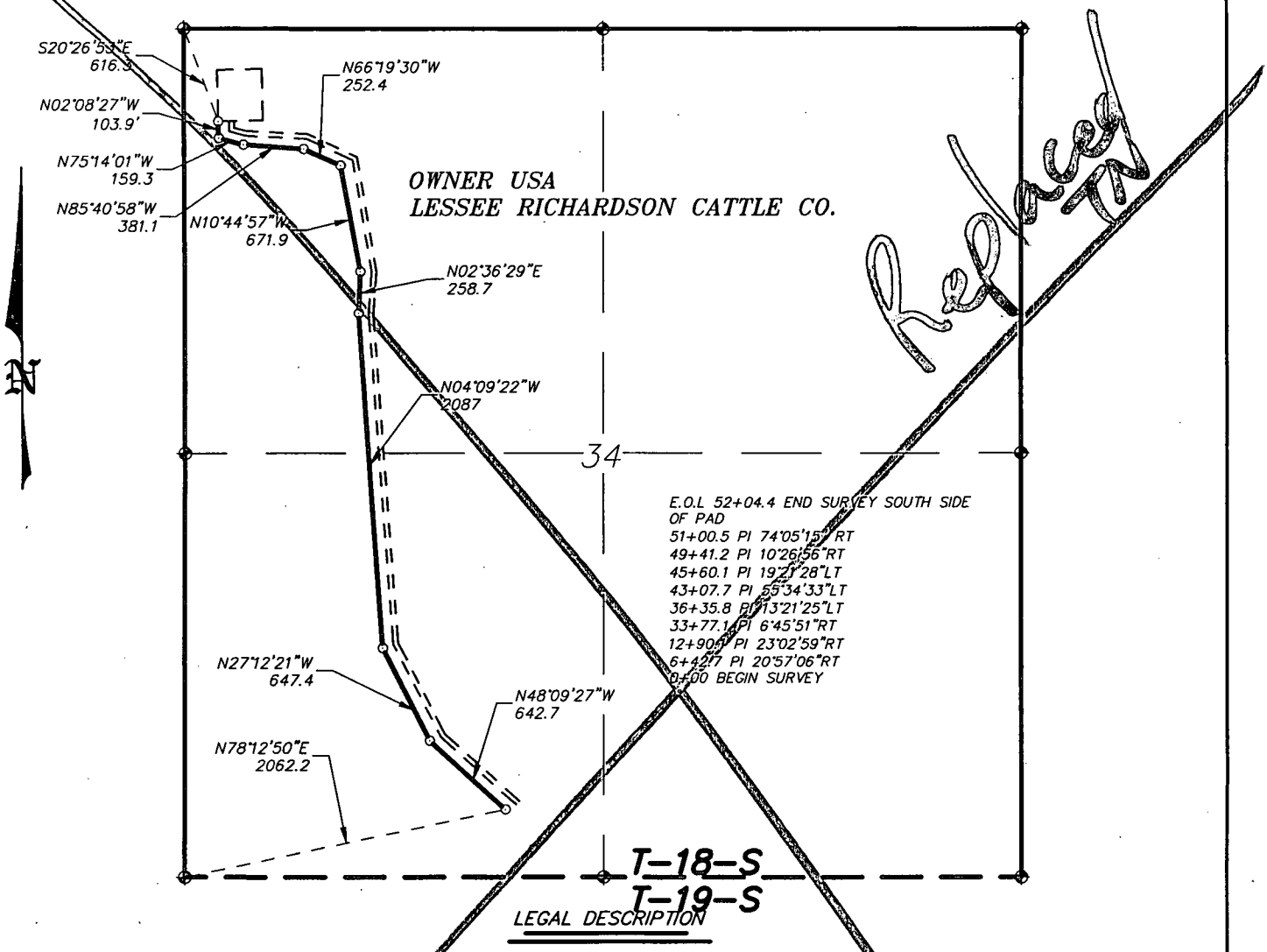
A FLOW LINE CROSSING USA LAND IN
SECTION 34, TOWNSHIP 18 SOUTH, RANGE 30 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

W.O. Number: 27909	Drawn By: D. JONES		
Date: 01-21-2013	Disk: DAJ 27909	Survey Date: 01-07-2013	Sheet 1 of 2 Sheets

EXHIBIT "3E"

SECTION 34, TOWNSHIP 18 SOUTH, RANGE 30 EAST, N.M.P.M.,

EDDY COUNTY, **NEW MEXICO.**



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SECTION 34 = 5204.4 FEET = 315.42 RODS = 0.99 MILES = 3.58 ACRES

1000 0 1000 2000 FEET

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF AN ACTUAL SURVEY AND MEETS OR EXCEEDS THE REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES, R.P.L.S. No. 7977
TEXAS No. 5074

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

MEWBOURNE OIL COMPANY

REF: PROPOSED FLOW LINE TO THE DORADO 34 DA FED COM 1H

A FLOW LINE CROSSING USA LAND IN

SECTION 34, TOWNSHIP 18 SOUTH, RANGE 30 EAST,

N.M.P.M., EDDY COUNTY, NEW MEXICO.

W.O. Number: 27909	Drawn By: D. JONES		
Date: 01-21-2013	Disk: DAJ 27909	Survey Date: 01-07-2013	Sheet 1 of 2 Sheets

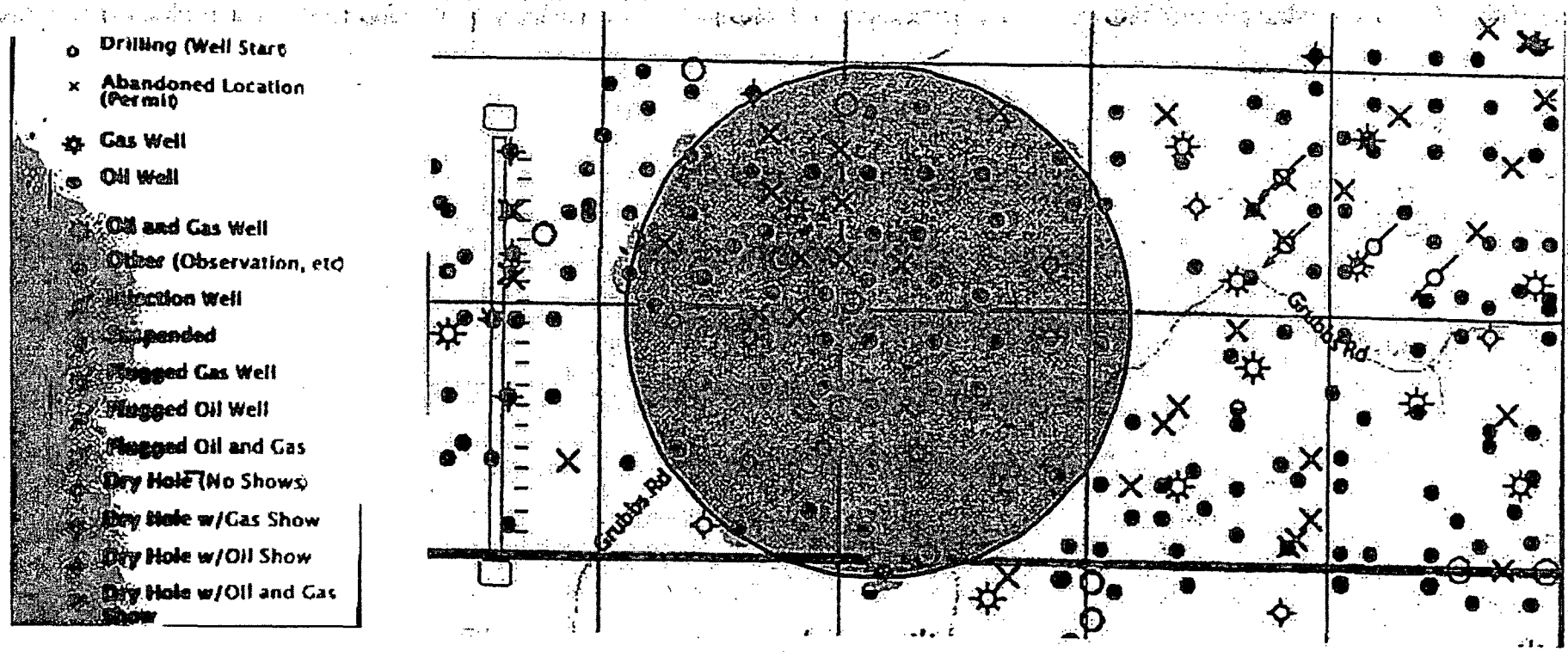


EXHIBIT "4" - Dorado 34 DA Fed Com #1H - SL - Sec. 34 T18S R30E, Eddy Co. NM

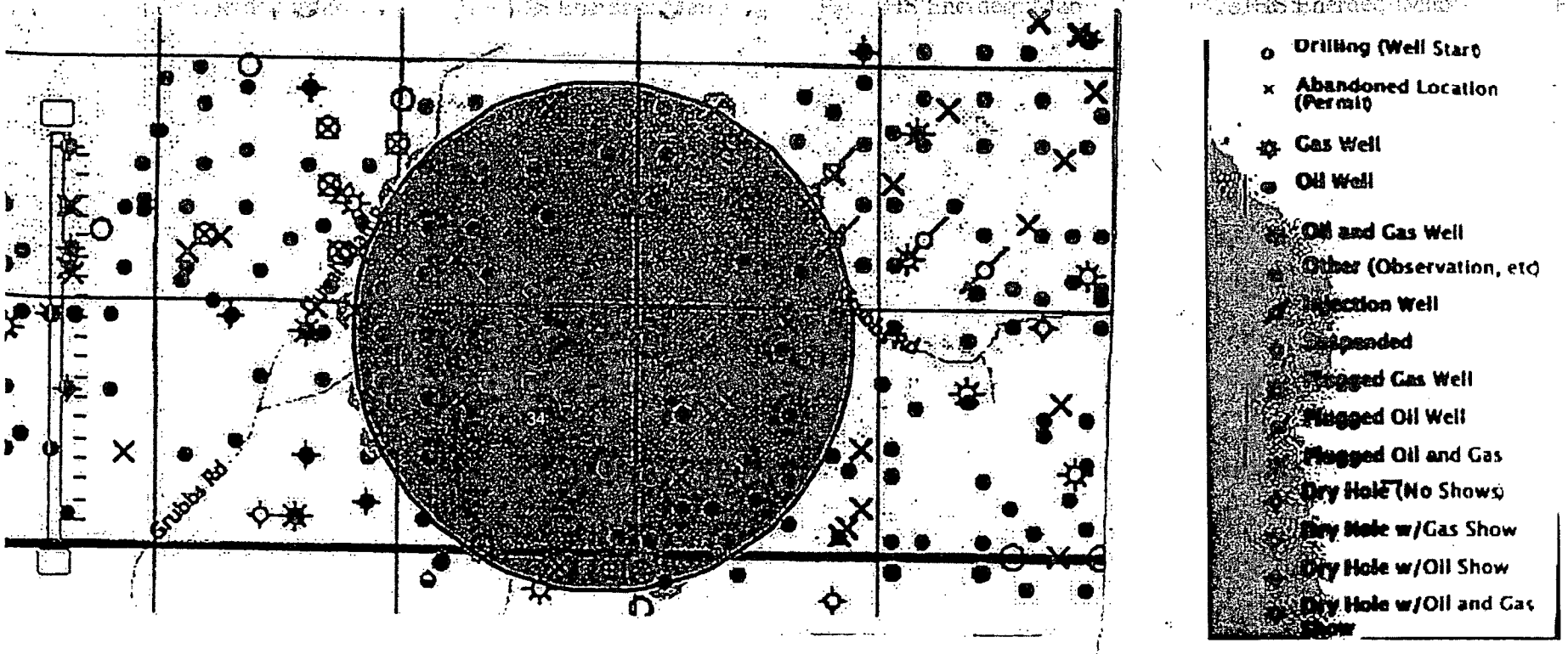


EXHIBIT "4A" - Dorado 34 DA Fed Com #1H - BHL - 990' FNL & 330' FEL, Sec. 34 T18S R30E, Eddy Co. NM

Drilling Program
Mewbourne Oil Company
Dorado 34 DA Fed Com #1H
405' FNL & 321' FWL (SHL)
Sec 34-T18S-R30E
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 5000# WP Double Ram BOP and 5000# WP Annular will be installed after running 7" & 9 ⅝" casing. Pressure tests will be conducted prior to drilling out under all casing strings. BOP controls will be installed prior to drilling under surface casing and will remain in use until completion of drilling operations. BOPE 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 3/8" Annular to 1000#, 7" & 9 ⅝" BOPE to 5000# and the Annular to 2500# 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'-~~365'~~ 405	ST&C
12 ¼"	9 ⅝" (new)	36#	J55	0'-1730'	LT&C
8 ¾"	7" (new)	26#	P110	0'-7905' MD	LT&C
8 ¾"	7" (new)	26#	P110	7905'-8646' MD	BT&C
6 1/8"	4 ½" (new)	13.5#	P110	8446'-12844' 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:

See COA

i. Surface Casing: 380 sks Class "C" cement w/ 2% CaCl2. Yield at 1.34 cuft/sk. Cmt circulated to surface w/ 100% excess.

ii. Intermediate Casing: 205 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.

iii Production Casing: 530 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. 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' - ~~365'~~ 405'	FW spud mud	8.6-9.0	32-34	NA
~~365'~~ - 1730'	Brine water	10.0-10.2	28-30	NA
1730' - 7905' (KOP)	FW	8.5-8.7	28-30	15
7905' - 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' (7805') to surface. GR from 7805' 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 8467' = 3672 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 Co

Eddy County, New Mexico
Sec 34-18S-30E
Dorado 34 DA Fed Com #1H

Wellbore #1

Plan: Design #1

DDC Well Planning Report

07 February, 2013

The DIRECTIONAL DRILLING COMPANY

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Dorado 34 DA Fed Com #1H
Company:	Mewbourne Oil Co	TVD Reference:	WELL @ 3477.0usft (Patterson)
Project:	Eddy County, New Mexico	MD Reference:	WELL @ 3477.0usft (Patterson)
Site:	Sec 34-18S-30E	North Reference:	Grid
Well:	Dorado 34 DA Fed Com #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project Eddy County, New Mexico

Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site Sec 34-18S-30E

Site Position:		Northing:	619,173.32 usft	Latitude:	32° 42' 5.860 N
From:	Map	Easting:	617,078.21 usft	Longitude:	103° 57' 9.827 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.21 °

Well Dorado 34 DA Fed Com #1H

Well Position	+N/-S	3,013.6 usft	Northing:	622,186.87 usft	Latitude:	32° 42' 35.832 N
	+E/-W	-4,348.8 usft	Easting:	612,729.37 usft	Longitude:	103° 58' 0.599 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,457.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/7/2013	7.60	60.53	48,700

Design Design #1

Audit Notes:

Version:		Phase:	PLAN	Tie On Depth:	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	96.88

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
7,905.6	0.00	0.00	7,905.6	0.0	0.0	0.00	0.00	0.00	0.00	
8,646.0	88.85	96.88	8,383.0	-56.1	464.5	12.00	12.00	13.08	96.88	
12,844.3	88.85	96.88	8,467.0	-559.2	4,631.7	0.00	0.00	0.00	0.00	PBHL Dorado 34 D.

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Dorado 34 DA Fed Com #1H
Company:	Mewbourne Oil Co	TVD Reference:	WELL @ 3477.0usft (Patterson)
Project:	Eddy County, New Mexico	MD Reference:	WELL @ 3477.0usft (Patterson)
Site:	Sec 34-18S-30E	North Reference:	Grid
Well:	Dorado 34 DA Fed Com #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Build 12° / 100'									
7,905.6	0.00	0.00	7,905.6	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	11.33	96.88	7,999.4	-1.1	9.2	9.3	12.00	12.00	0.00
8,100.0	23.33	96.88	8,094.7	-4.7	38.7	39.0	12.00	12.00	0.00
8,200.0	35.33	96.88	8,181.7	-10.5	87.3	87.9	12.00	12.00	0.00
8,300.0	47.33	96.88	8,256.7	-18.4	152.7	153.8	12.00	12.00	0.00
8,400.0	59.33	96.88	8,316.3	-28.0	232.2	233.9	12.00	12.00	0.00
8,500.0	71.33	96.88	8,357.9	-38.9	322.3	324.6	12.00	12.00	0.00
8,600.0	83.33	96.88	8,379.8	-50.6	418.9	422.0	12.00	12.00	0.00
EOB @ 88.85° Inc / 96.88° Azm / 8383' TVD									
8,646.0	88.85	96.88	8,383.0	-56.1	464.5	467.9	12.00	12.00	0.00
8,700.0	88.85	96.88	8,384.0	-62.6	518.1	521.9	0.00	0.00	0.00
8,800.0	88.85	96.88	8,386.1	-74.5	617.4	621.8	0.00	0.00	0.00
8,900.0	88.85	96.88	8,388.1	-86.5	716.6	721.8	0.00	0.00	0.00
9,000.0	88.85	96.88	8,390.1	-98.5	815.9	821.8	0.00	0.00	0.00
9,100.0	88.85	96.88	8,392.1	-110.5	915.1	921.8	0.00	0.00	0.00
9,200.0	88.85	96.88	8,394.1	-122.5	1,014.4	1,021.8	0.00	0.00	0.00
9,300.0	88.85	96.88	8,396.1	-134.5	1,113.6	1,121.7	0.00	0.00	0.00
9,400.0	88.85	96.88	8,398.1	-146.4	1,212.9	1,221.7	0.00	0.00	0.00
9,500.0	88.85	96.88	8,400.1	-158.4	1,312.2	1,321.7	0.00	0.00	0.00
9,600.0	88.85	96.88	8,402.1	-170.4	1,411.4	1,421.7	0.00	0.00	0.00
9,700.0	88.85	96.88	8,404.1	-182.4	1,510.7	1,521.7	0.00	0.00	0.00
9,800.0	88.85	96.88	8,406.1	-194.4	1,609.9	1,621.6	0.00	0.00	0.00
9,900.0	88.85	96.88	8,408.1	-206.4	1,709.2	1,721.6	0.00	0.00	0.00
10,000.0	88.85	96.88	8,410.1	-218.3	1,808.5	1,821.6	0.00	0.00	0.00
10,100.0	88.85	96.88	8,412.1	-230.3	1,907.7	1,921.6	0.00	0.00	0.00
10,200.0	88.85	96.88	8,414.1	-242.3	2,007.0	2,021.6	0.00	0.00	0.00
10,300.0	88.85	96.88	8,416.1	-254.3	2,106.2	2,121.5	0.00	0.00	0.00
10,400.0	88.85	96.88	8,418.1	-266.3	2,205.5	2,221.5	0.00	0.00	0.00
10,500.0	88.85	96.88	8,420.1	-278.3	2,304.8	2,321.5	0.00	0.00	0.00
10,600.0	88.85	96.88	8,422.1	-290.2	2,404.0	2,421.5	0.00	0.00	0.00
10,700.0	88.85	96.88	8,424.1	-302.2	2,503.3	2,521.5	0.00	0.00	0.00
10,800.0	88.85	96.88	8,426.1	-314.2	2,602.5	2,621.4	0.00	0.00	0.00
10,900.0	88.85	96.88	8,428.1	-326.2	2,701.8	2,721.4	0.00	0.00	0.00
11,000.0	88.85	96.88	8,430.1	-338.2	2,801.1	2,821.4	0.00	0.00	0.00
11,100.0	88.85	96.88	8,432.1	-350.2	2,900.3	2,921.4	0.00	0.00	0.00
11,200.0	88.85	96.88	8,434.1	-362.1	2,999.6	3,021.4	0.00	0.00	0.00
11,300.0	88.85	96.88	8,436.1	-374.1	3,098.8	3,121.3	0.00	0.00	0.00
11,400.0	88.85	96.88	8,438.1	-386.1	3,198.1	3,221.3	0.00	0.00	0.00
11,500.0	88.85	96.88	8,440.1	-398.1	3,297.3	3,321.3	0.00	0.00	0.00
11,600.0	88.85	96.88	8,442.1	-410.1	3,396.6	3,421.3	0.00	0.00	0.00
11,700.0	88.85	96.88	8,444.1	-422.1	3,495.9	3,521.3	0.00	0.00	0.00
11,800.0	88.85	96.88	8,446.1	-434.1	3,595.1	3,621.2	0.00	0.00	0.00
11,900.0	88.85	96.88	8,448.1	-446.0	3,694.4	3,721.2	0.00	0.00	0.00
12,000.0	88.85	96.88	8,450.1	-458.0	3,793.6	3,821.2	0.00	0.00	0.00
12,100.0	88.85	96.88	8,452.1	-470.0	3,892.9	3,921.2	0.00	0.00	0.00
12,200.0	88.85	96.88	8,454.1	-482.0	3,992.2	4,021.2	0.00	0.00	0.00
12,300.0	88.85	96.88	8,456.1	-494.0	4,091.4	4,121.1	0.00	0.00	0.00
12,400.0	88.85	96.88	8,458.1	-506.0	4,190.7	4,221.1	0.00	0.00	0.00
12,500.0	88.85	96.88	8,460.1	-517.9	4,289.9	4,321.1	0.00	0.00	0.00
12,600.0	88.85	96.88	8,462.1	-529.9	4,389.2	4,421.1	0.00	0.00	0.00
12,700.0	88.85	96.88	8,464.1	-541.9	4,488.5	4,521.1	0.00	0.00	0.00
12,800.0	88.85	96.88	8,466.1	-553.9	4,587.7	4,621.0	0.00	0.00	0.00
12,844.3	88.85	96.88	8,467.0	-559.2	4,631.7	4,665.3	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Dorado 34 DA Fed Com #1H
Company:	Mewbourne Oil Co	TVD Reference:	WELL @ 3477.0usft (Patterson)
Project:	Eddy County, New Mexico	MD Reference:	WELL @ 3477.0usft (Patterson)
Site:	Sec 34-18S-30E	North Reference:	Grid
Well:	Dorado 34 DA Fed Com #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL Dorado 34 DA I - plan hits target center - Point	0.00	0.00	8,467.0	-559.2	4,631.7	621,627.67	617,361.07	32° 42' 30.137 N	103° 57' 6.413 W

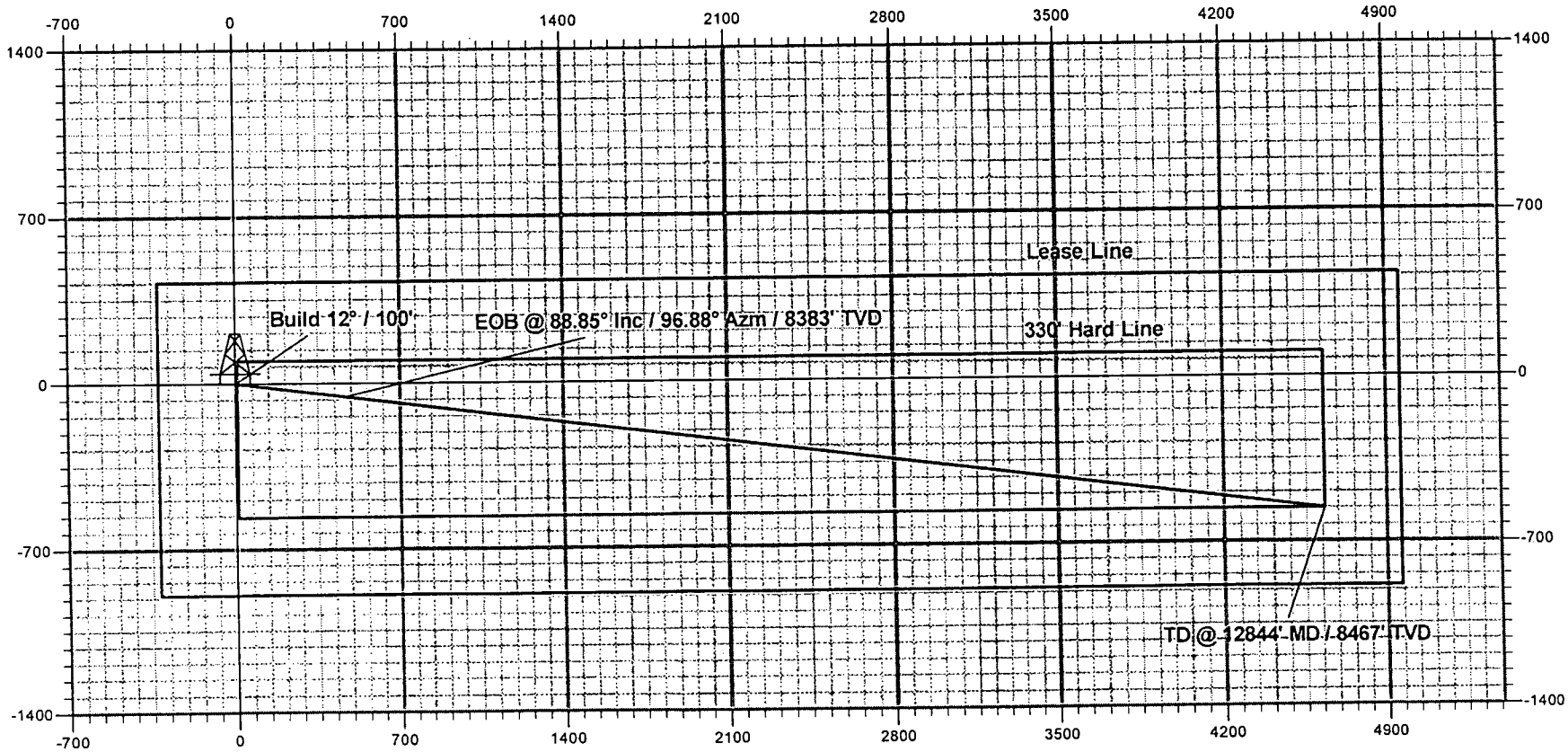
Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
7,905.6	7,905.6	0.0	0.0	Build 12° / 100'
8,646.0	8,383.0	-56.1	464.5	EOB @ 88.85° Inc / 96.88° Azm / 8383' TVD
12,844.3	8,467.0	-559.2	4,631.7	TD @ 12844' MD / 8467' TVD

Mewbourne Oil Company

Eddy County, New Mexico
Dorado 34 DA Fed Com #1H
Quote 130143
Design #1

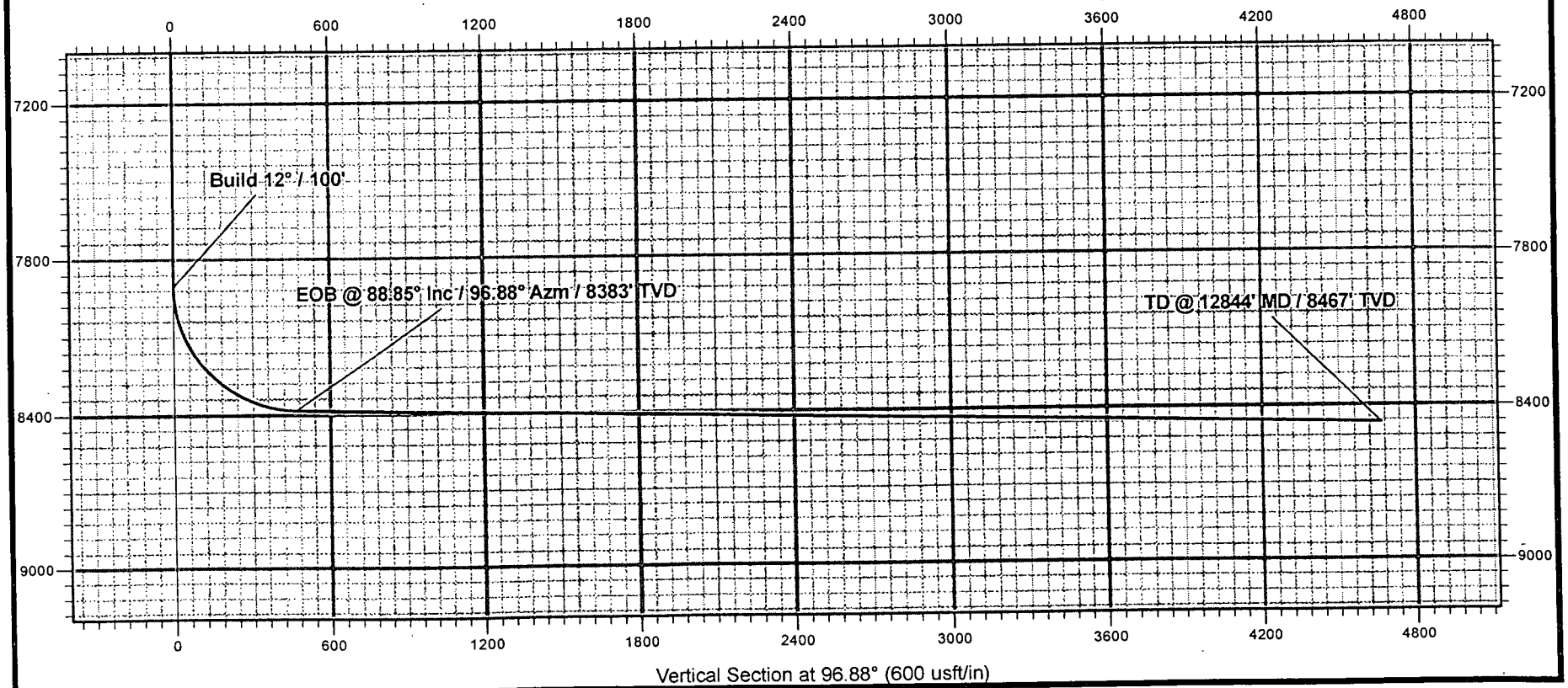
The DIRECTIONAL DRILLING COMPANY



Mewbourne Oil Company

Eddy County, New Mexico
Dorado 34 DA Fed Com #1H
Quote 130143
Design #1

The DIRECTIONAL DRILLING COMPANY



11" 3M BOPE & Closed Loop Equipment Schematic

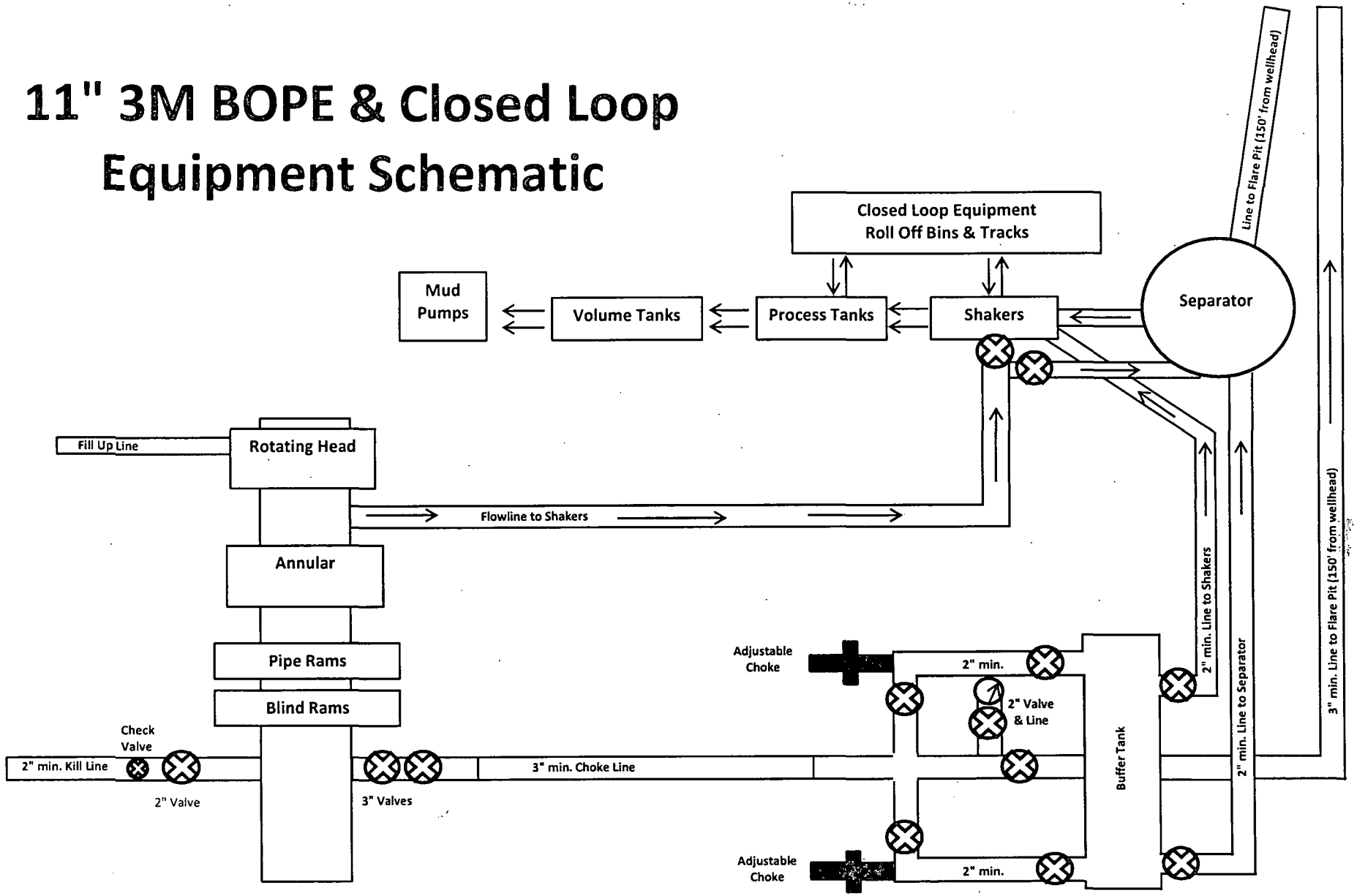


Exhibit 2

Well Name: Dorado 34 DA Fed Com #1H

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

13 ⅝" 2M BOPE & Closed Loop Equipment Schematic

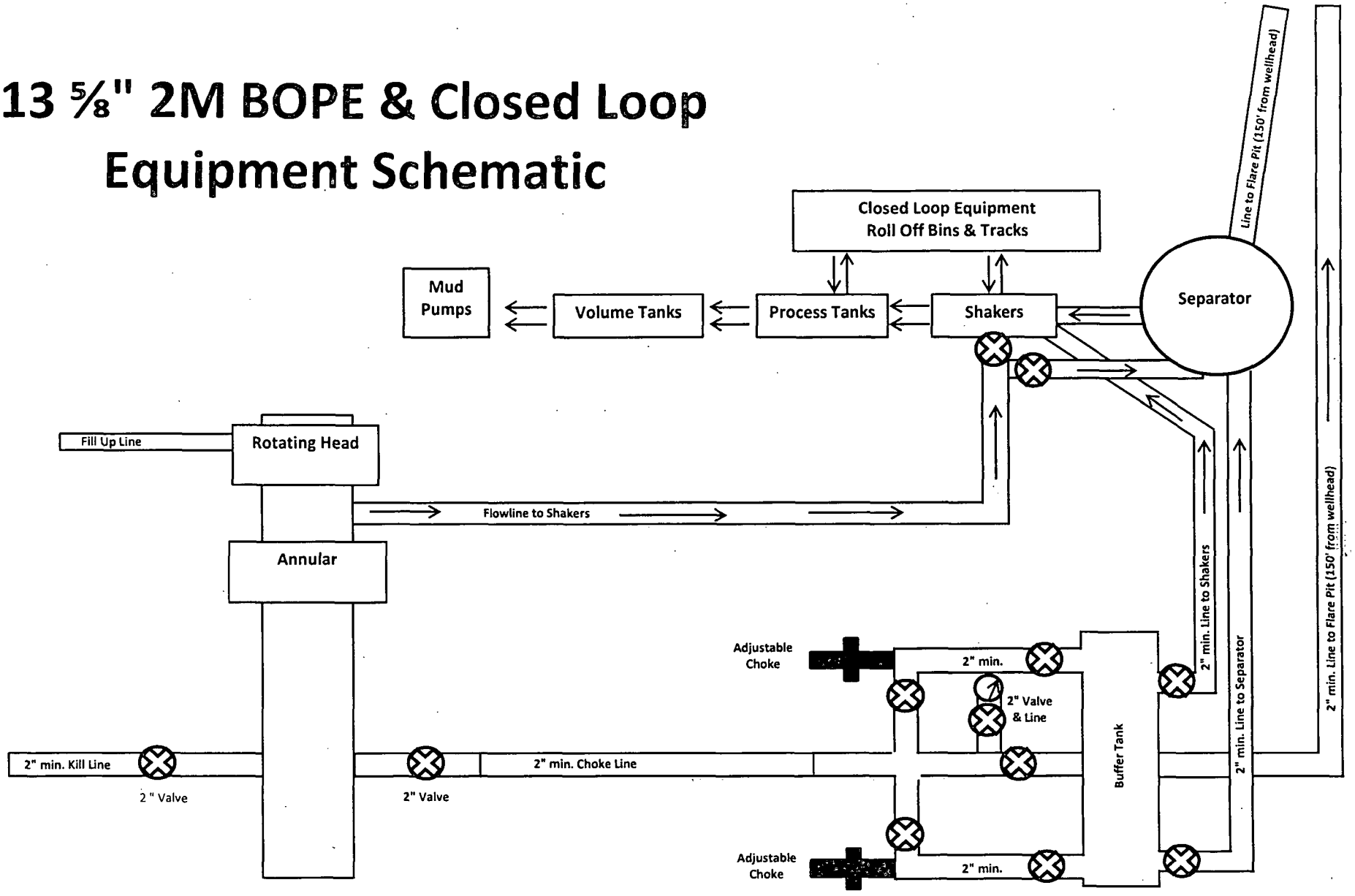


Exhibit 2A
Well Name:Dorado 34 DA Fed Com #1H

H2S Diagram
Closed Loop Pad Dimensions 260' x 320'

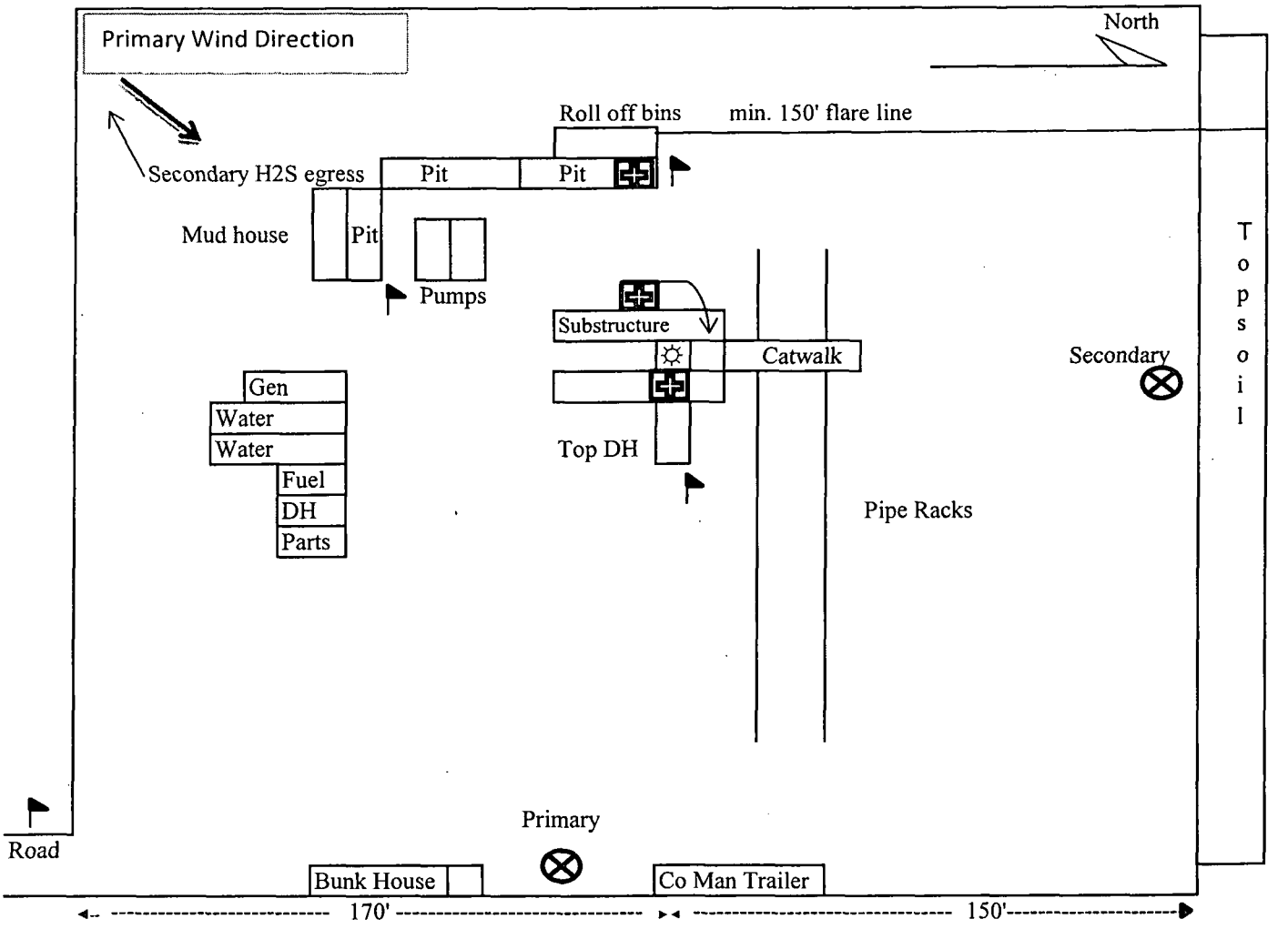


Exhibit 5

Mewbourne Oil Company
Dorado 34 DA Fed Com #1H
405' FNL & 321 FWL
Sec. 30 T18S R30E
Eddy County, NM

Hydrogen Sulfide Drilling Operations Plan

Mewbourne Oil Company

Dorado 34 DA Fed Com #1H

405' FNL & 321' FWL

Sec 30-T18S-R30E

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**

Notes Regarding Blowout Preventer

Mewbourne Oil Company

Dorado 34 DA Fed Com #1H
405' FNL & 321' FWL (SHL)
Sec 34-T18S-R30E
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.

Closed Loop Pad Dimensions 280' x 320'

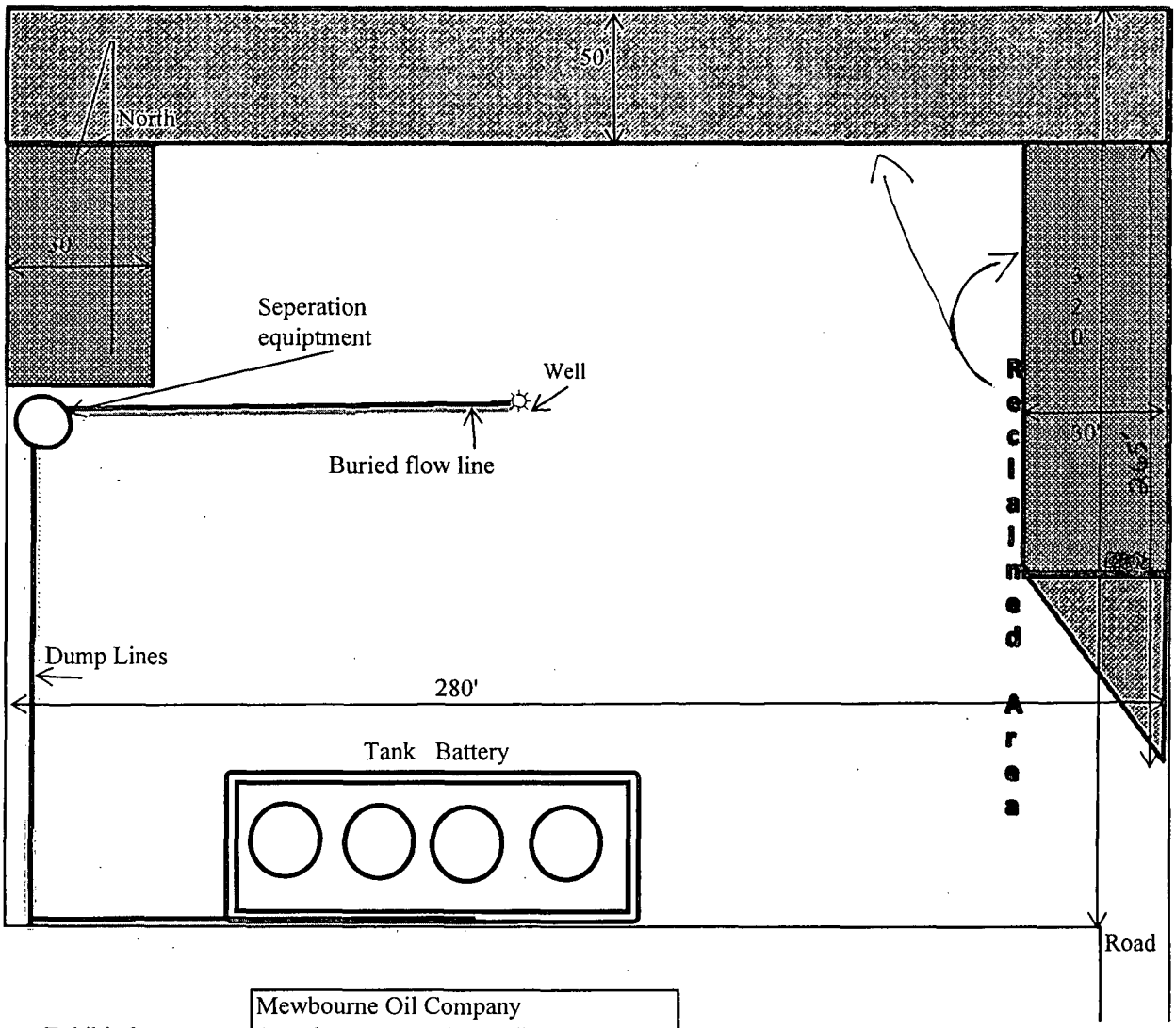


Exhibit 6

Mewbourne Oil Company
Dorado 34 DA Fed Com #1H
405' FNL & 321' FWL
Sec. 30 T18S R30E
Eddy County, NM

TN
2/25/13

Closed Loop Pad Dimensions 280' x 320'

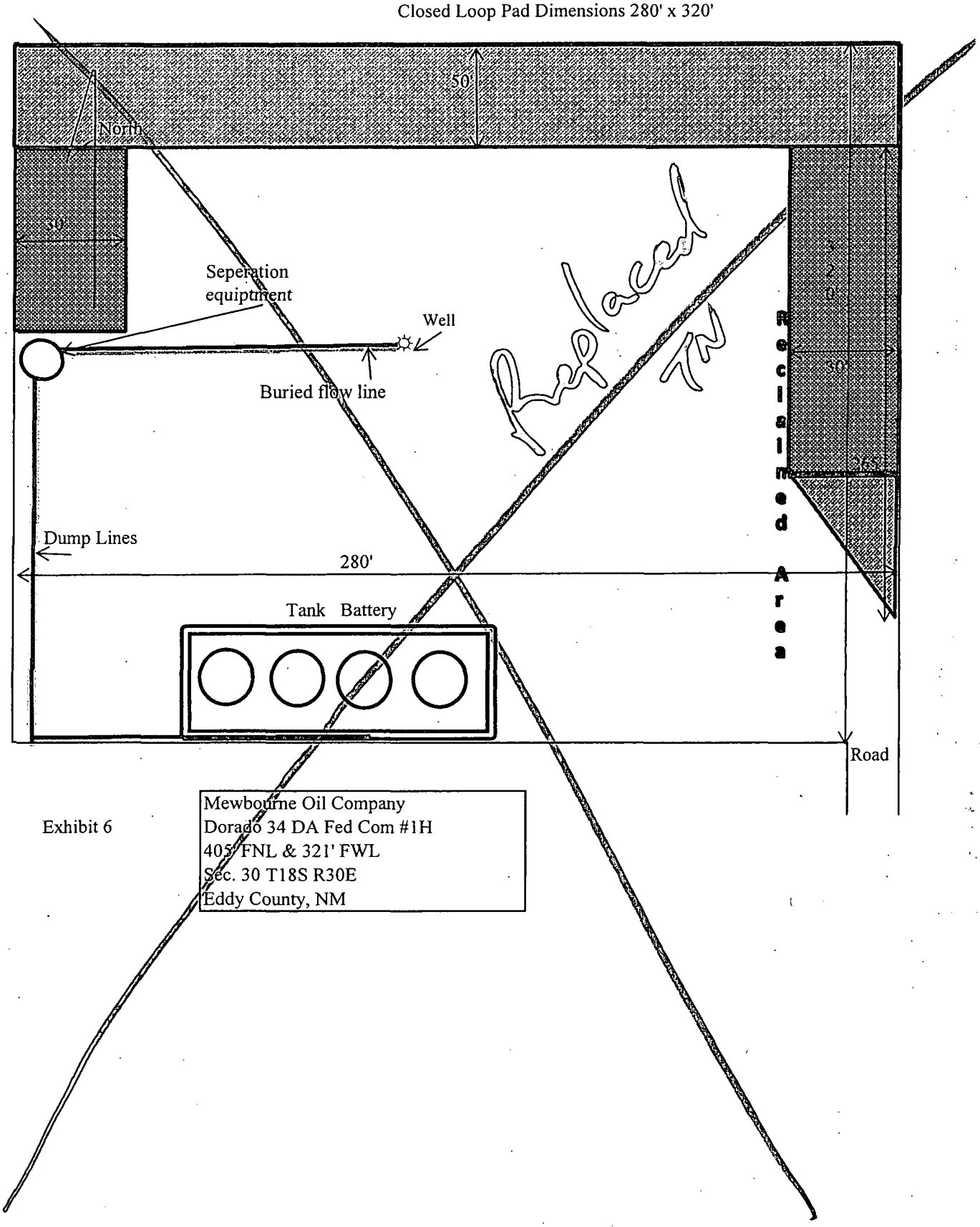


Exhibit 6

Mewbourne Oil Company
Dorado 34 DA Fed Com #1H
405' FNL & 321' FWL
Sec. 30 T18S R30E
Eddy County, NM

MULTI-POINT SURFACE USE AND OPERATIONS PLAN
MEWBOURNE OIL COMPANY
Dorado 34 DA Fed Com #1H
405' FNL & 321' FWL (SHL)
Sec 30-T18S-R30E
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 Grubbs and Duval Shaft, go East/NE .9 miles to existing lease road. Go .1 miles to proposed lease road.
C. Existing roads will be maintained in a condition the same as or better than before operations begin.

2. Proposed Access Road:

A Approx. 50' 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 SW side of the well pad. Overhead electricity lines will need to be rerouted to build this location, See Exhibit 3D. Gas line will cross Grubbs Rd and head south to existing Agave pipeline (See Exhibit 3E).
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

APD Tracking # :

Well-Site Evaluation Field Form

Operator Name: Mewbourne Oil Co. **Well Name** Dorado 34 DA Fed Com #1H

SHL: Section 34, T. 18 S. R. 30 E. Footage 850 FNL & 150 FWL

Well Type: (Horizontal) Vertical (Oil) Gas Other____ **NOS/APD Received?** (NOS) APD

Surface Management Agency (SMA): (BLM) FEE STATE Other____ **SMA Contacted?** (Yes) No

Operator Representative/ Contact Name: Bradley Bishop **Phone** 575-390-6838

BLM Onsite Representatives Tanner Nygren **Date** 1/7/13

Description & Topography: (cut & fill, etc.) Slightly sloping downhill to the NE
~5ft cut/fill

Soils: (reseeding stips, etc.) Sandy

Cave Area: low

Hydrogeology: (playas, floodplain, drainages, erosive soils, plant indicators, etc.)
Shinnery oak habitat

Wildlife: (habitat, LPC, SDL, etc.) LPC

Range Improvements: (fences, etc.) NA

Well Infrastructure

V-Door Direction: N Topsoil: North

Pad Size: 320 x 280

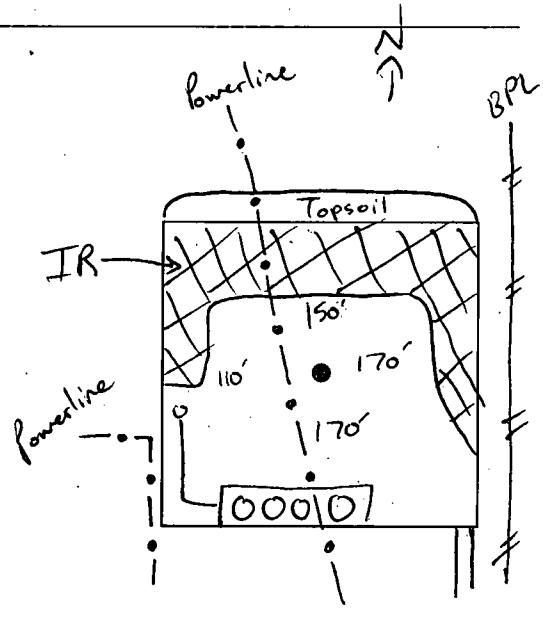
Road Route: SE corner going S

Prod. Facility Placement: south side

Interim Rec: North by 50'; W&E by 30'

Other: Rerouting powerline

Evaluation: (Moved?) 321 FWL 404 FNL



PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MEWBOURNE OIL
LEASE NO.:	NM56541
WELL NAME & NO.:	1H-DORADO 34 DA FED COM
SURFACE HOLE FOOTAGE:	405' FNL & 321' FWL
BOTTOM HOLE FOOTAGE	990' FNL & 330' FEL
LOCATION:	Section 34, T. 18 S., R 30 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)

Surface Pipeline Placement Requirement
The surface pipeline proposed in the APD must also have an approved right-of-way application and shall be installed no farther than 15 feet from and parallel to existing roads for the entire length of the route. See survey plat within the APD for the route.

Electric Line Requirement
Mewbourne must get permission from the electric line holder/owner prior to rerouting the electric line.

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.

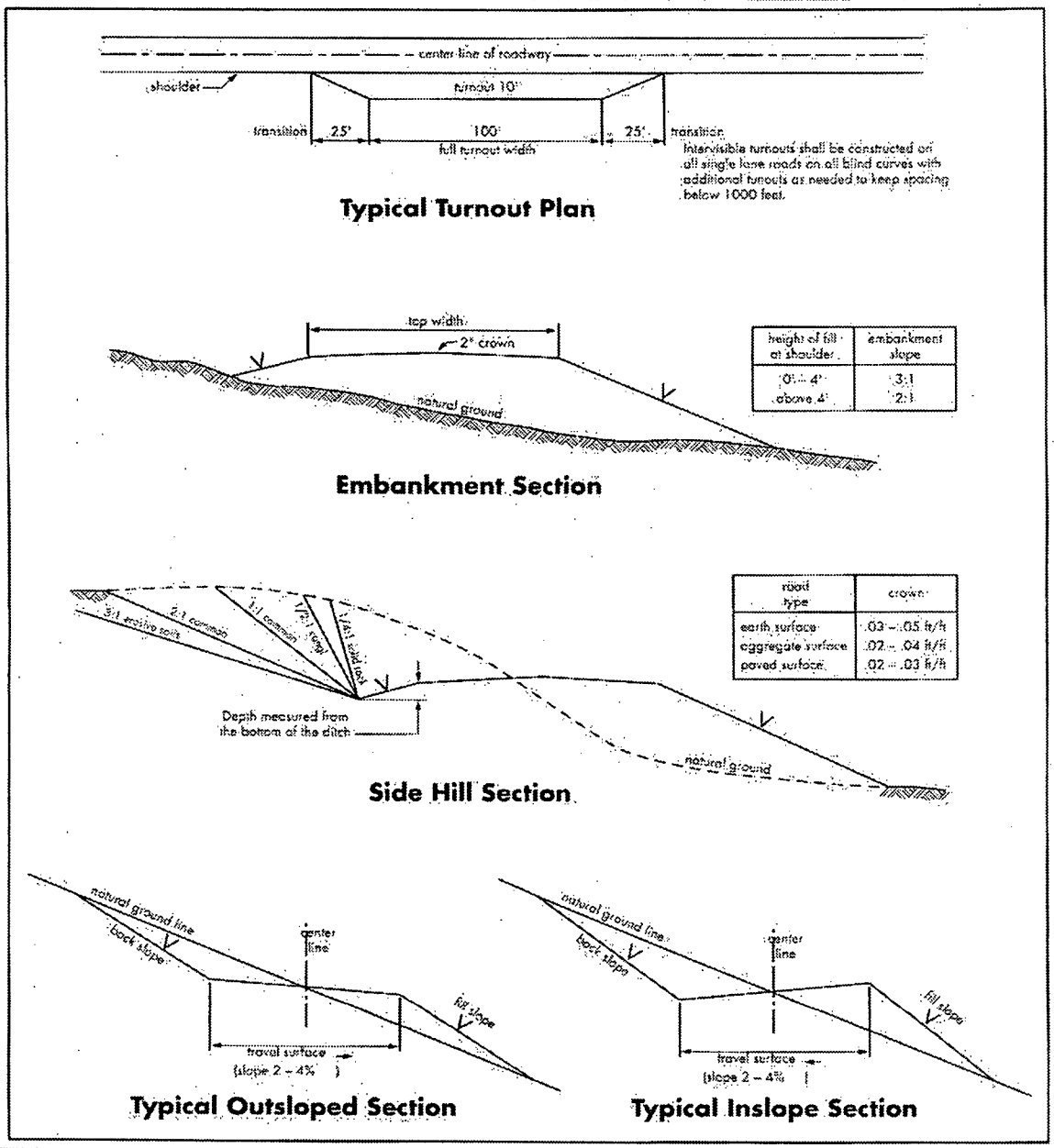
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing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

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

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

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

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

1. **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.**

1. 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.**

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

3. **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.

Secretary's Potash
Possible brine flows in the Salado and Artesia groups.
Possible lost circulation in the Artesia group.

1. The **13-3/8** inch surface casing shall be set at approximately **405** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

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

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.
    Additional cement may be required – excess calculates to 19%.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

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. The minimum required fill of cement behind the **4-1/2** inch production liner is:

   ☒ Cement not required – Port/Packer system to be 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 **5000 (5M)** psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

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

a. In potash areas, 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. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.

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 042513

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 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. Special Stipulations:

Surface pipelines must be smaller than 4 inches and a working pressure below 125 psi.

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the approved application 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 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. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed in accordance to standards outlined in "Suggested Practices for Raptor Protection on Power lines, " Raptor Research Foundation, Inc., 1981. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication are "raptor safe." Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

6. 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 the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. 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 actions to prevent the loss of significant 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.

11. Special Stipulations:
- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes with soil from the removed poles.

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