

SECRETARY'S POTASH

OCD Artesia

14-421

JES

7-7-14

Form 3160-3
(March 2012)UNORTHODOX
LOCATIONUNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 20145. Lease Serial No. *NMCL 0028978 A-BNL*
NMNM 027279A(54), NMNM 003775,

6. If Indian, Allottee or Tribe Name

1a. Type of work: ☒ DRILL ☐ REENTER1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator Mewbourne Oil Company

3a. Address PO Box 5270
Hobbs, NM 882413b. Phone No. (include area code)
575-393-5905

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

At surface 660' FNL & 200' FWL - Sec. 28 T18S R30E

At proposed prod. zone 660' FNL & 330' FEL, Sec. 28 T18S R30E

14. Distance in miles and direction from nearest town or post office*
26 miles SE of Artesia, NM15. Distance from proposed* location to nearest property or lease line, ft.
(Also to nearest drig. unit line, if any)

200'

16. No. of acres in lease
NMNM 027279A-840
NMNM 003775-800
*NMCL 0028978A-1751.53*17. Spacing Unit dedicated to this well
16018. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
168' - Bradley 28 Fed #2H19. Proposed Depth
11761' - MD
7303' - TVD20. BLM/BIA Bond No. on file
NM-1693 nationwide, NMB-00091921. Elevations (Show whether DF, KDB, RT, GL, etc.)
3423' - GL22. Approximate date work will start*
04/21/201423. Estimated duration
60 days

24. Attachments

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

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature *Bradley Bishop* Name (Printed/Typed) Bradley Bishop Date 3-25-14

Title

Approved by (Signature) */s/George MacDonell* Name (Printed/Typed) */s/George MacDonell* Date 7/1/2014

Title FIELD MANAGER Office CARLSBAD FIELD OFFICE

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

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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

(Continued on page 2)

*(Instructions on page 2)

Capitan Controlled Water Basin

NM OIL CONSERVATION
ARTESIA DISTRICT

JUL 03-2014

RECEIVED

SEE ATTACHED FOR
CONDITIONS OF APPROVALApproval subject to General Requirements
& Special Stipulations Attached

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-42480	² Pool Code 54600	³ Pool Name SANTO NINO BONE SPRING ✓
⁴ Property Code 313442	⁵ Property Name BRADLEY 28 BIDA FED COM	
⁷ OGRID No. 14944	⁸ Operator Name MEWBOURNE OIL CO.	⁶ Well Number 1H
		⁹ Elevation 3423

¹⁰ 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	28	18-S	30-E		660	NORTH	200	WEST	EDDY

¹¹ 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	28	18-S	30-E		660	NORTH	330	EAST	EDDY

¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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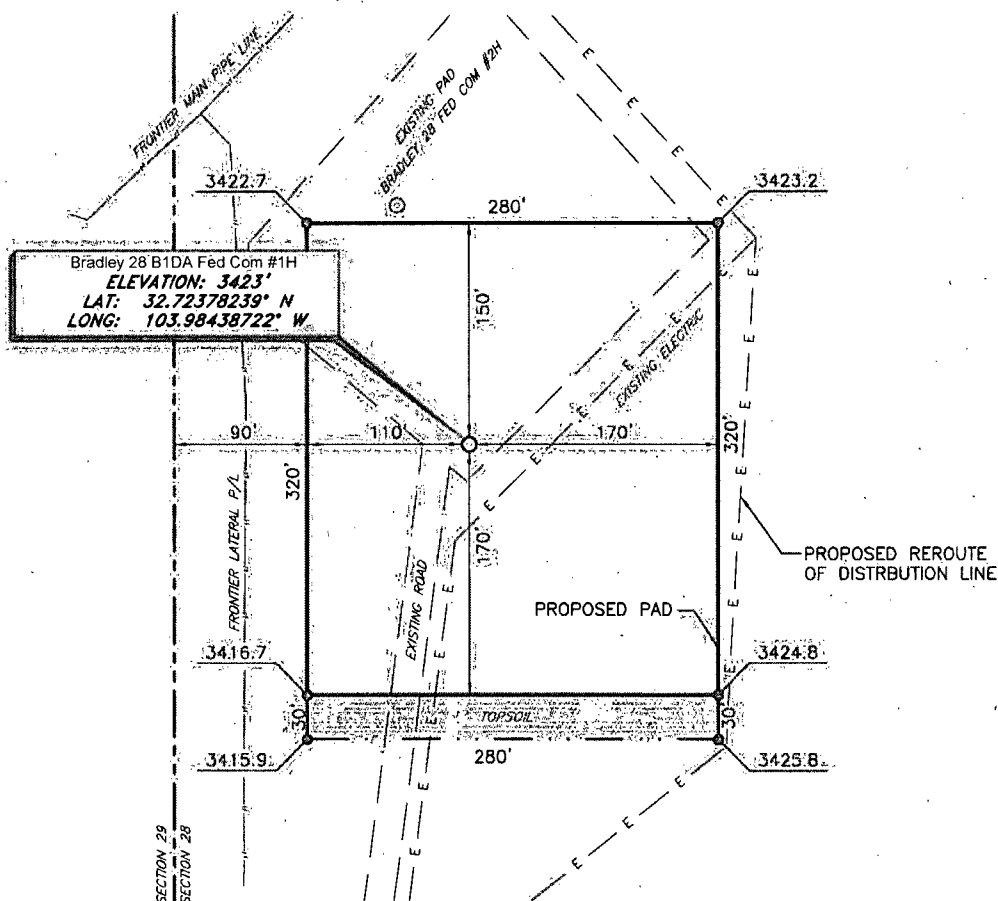
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

		<p>¹⁷ OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location 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>Bradley Bishop</i> 3-6-14 Signature Date</p> <p>BRADLEY BISHOP Printed Name</p> <p>_____ E-mail Address</p>
<p>CORNER DATA NAD 27 GRID - NM EAST</p> <p>A: FOUND BRASS CAP 1916 N 622581.1 - E 6607127.2</p> <p>B: FOUND BRASS CAP 1916 N 625219.8 - E 607119.8</p> <p>C: FOUND BRASS CAP 1916 N 627859.3 - E 607111.4</p> <p>D: FOUND BRASS CAP 1916 N 627861.6 - E 609748.4</p> <p>E: FOUND BRASS CAP 1916 N 627866.6 - E 612387.9</p> <p>F: FOUND BRASS CAP 1916 N 625227.6 - E 612397.1</p> <p>G: BC 1916 BROKEN N 622591.2 - E 612405.6</p> <p>H: FOUND 1/2" RB N 622587.4 - E 609670.3</p> <p>GEODETIC DATA NAD 27 GRID - NM EAST</p> <p>SURFACE LOCATION N 627199.6 E 607313.4</p> <p>LAT: 32.72378239° N LONG: 103.98438722° W</p>		<p>18 SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>10/30/13 Date of Survey</p> <p>_____ Signature and Seal of Professional Surveyor:</p> <p>19680 Certificate Number</p>

(3)

MEWBOURNE OIL CO.

Bradley 28 B1DA Fed Com #1H
 (660' FNL & 200' FWL)
 Section 28, T-18-S, R-30-E,
 N. M. P. M., Eddy Co., New Mexico

DIRECTIONS TO LOCATION

From the Junction of of C.R.-250 Grubbs and Duval Shaft;
 Go North on Duval Shaft approx. 1.1 mile to lease road;
 Turn left and go West on lease road approx. 1.0 mile to an intersection;
 Turn right and go Northerly to the Bradley 28 Fed #2H pad;
 Location is on right at South corner of existing pad.

SCALE: 1" = 100'
 0 50 100
 BEARINGS ARE
 NAD 27 GRID - NM EAST
 DISTANCES ARE
 GROUND.

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NO.	REVISION	DATE
JOB NO.:	LS130452	
DWG. NO.:	130452PAD	

PROSPERITY CONSULTANTS, LLC



SCALE: 1" = 100'

DATE: 10/30/13

SURVEYED BY: BK/IE

DRAWN BY: JC

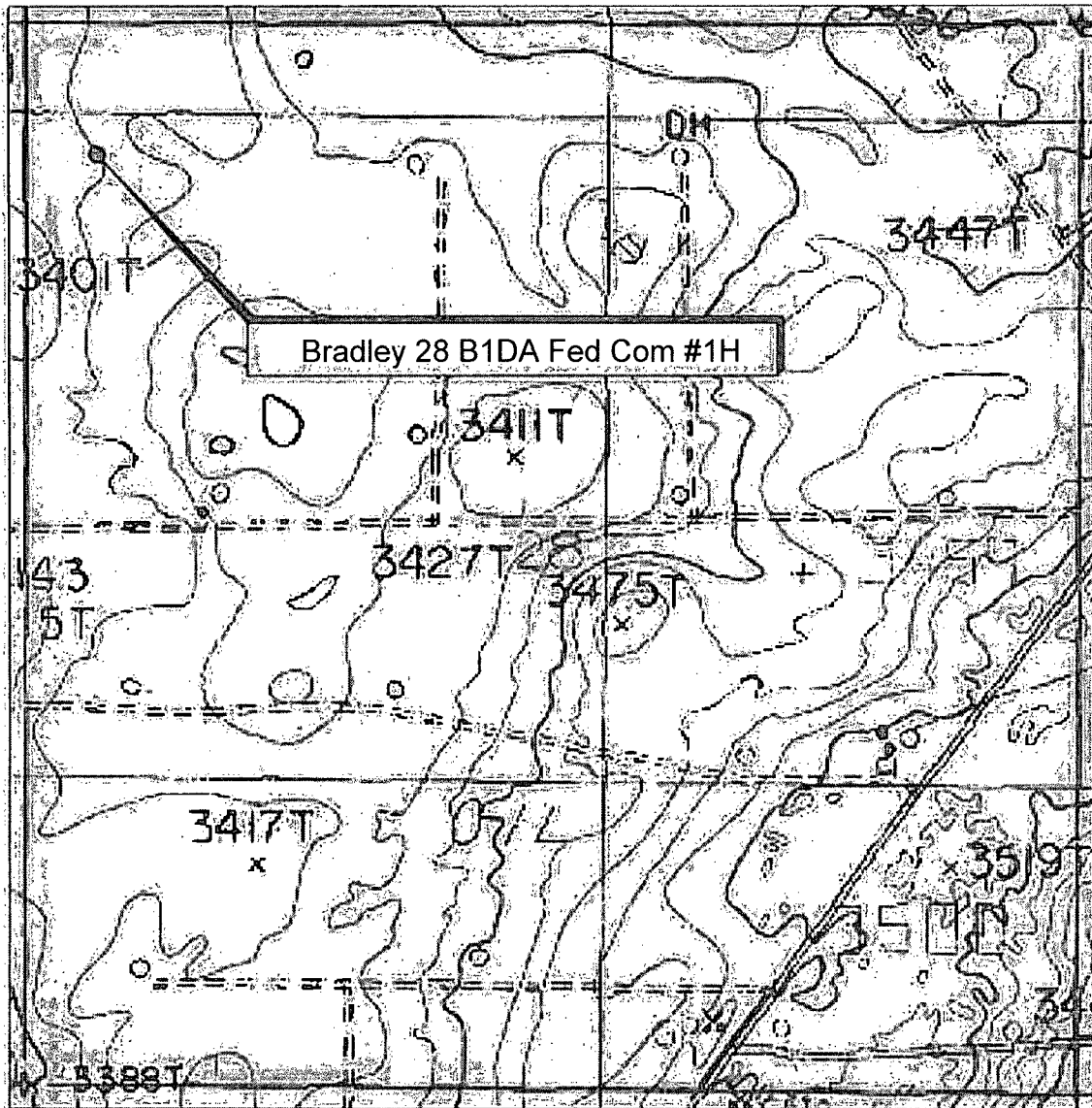
APPROVED BY: LWB

SHEET: 1 OF 1

308 W. Broadway St., Hobbs, NM 88240 | Firm No.: TX 10193838 NM 4655451 | (575) 964-8200

43A"

LOCATION VERIFICATION MAP



SECTION 28, TWP. 18 SOUTH, RGE. 30 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO

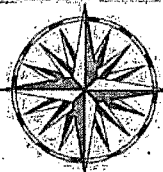
OPERATOR: Mewbourne Oil Co.
LEASE: Bradley 28 B1DA Fed Com #1H
WELL NO.: 1H
ELEVATION: 3423'

LOCATION: 660' FNL & 200' FWL
CONTOUR INTERVAL: 10'
USGS TOPO. SOURCE MAP:
Hackberry Lake, NM (P.E. 1985)

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NO.	REVISION	DATE
JOB NO.: LS130452		
DWG. NO.: 130452LVM		

PROSPERITY CONSULTANTS, LLC



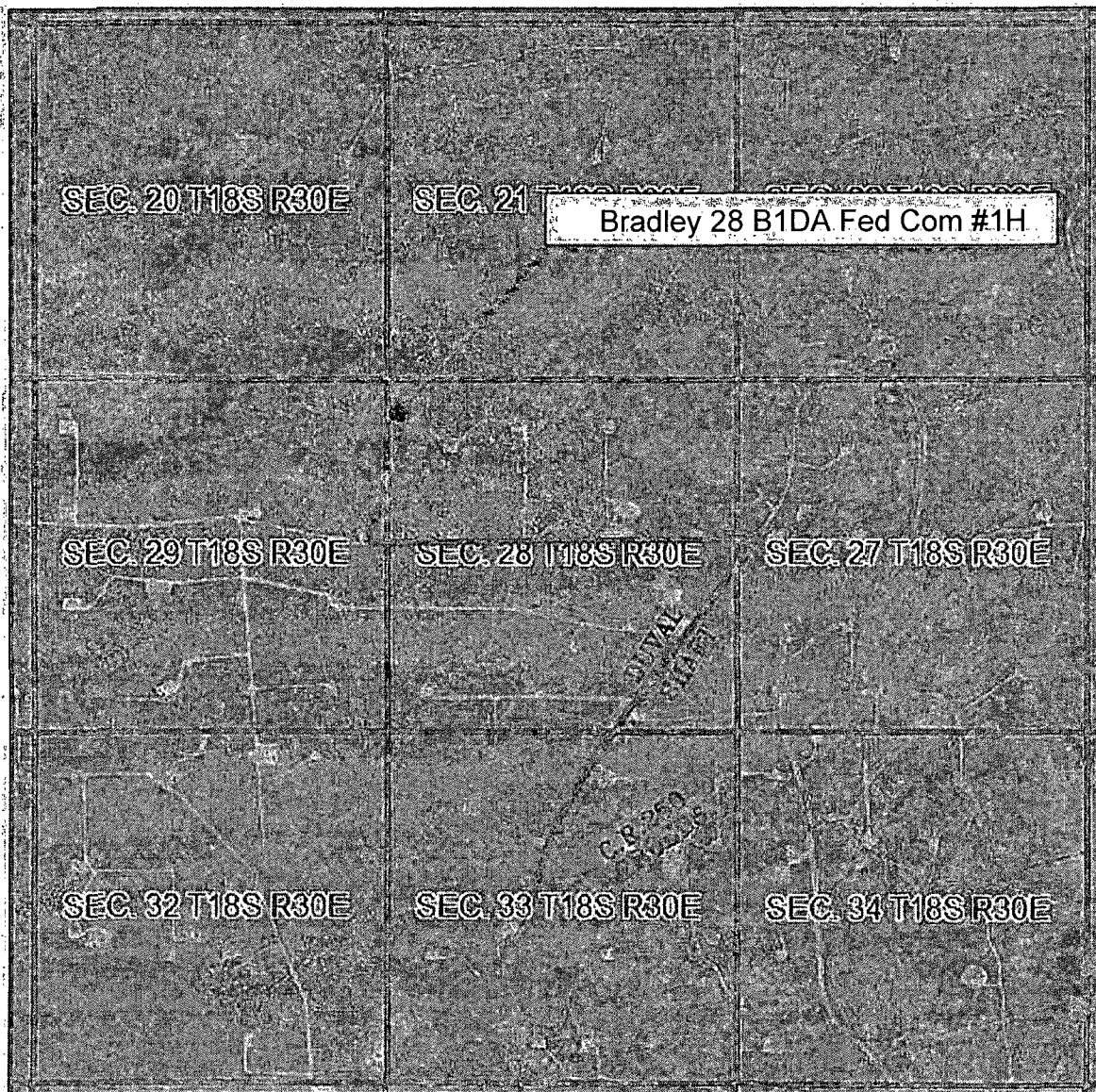
SCALE: 1" = 1000'
DATE: 10/30/13
SURVEYED BY: BK/IE
DRAWN BY: JC
APPROVED BY: LWB
SHEET: 1 OF 1

308 W. Broadway St., Hobbs, NM 88240 | Firm No.: TX 10193838 NM 4655451 | (575) 964-8200

"3B"

VICINITY MAP

NOT TO SCALE



SECTION 28, TWP. 18 SOUTH, RGE. 30 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO

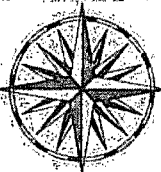
OPERATOR: Mewbourne Oil Co.
LEASE: Bradley 28 B1DA Fed Com #1H
WELL NO.: 1H

LOCATION: 660' FNL & 200' FWL
ELEVATION: 3423'

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NO.	REVISION	DATE
JOB NO.: LS130452		
DWG. NO.: 130452VM		

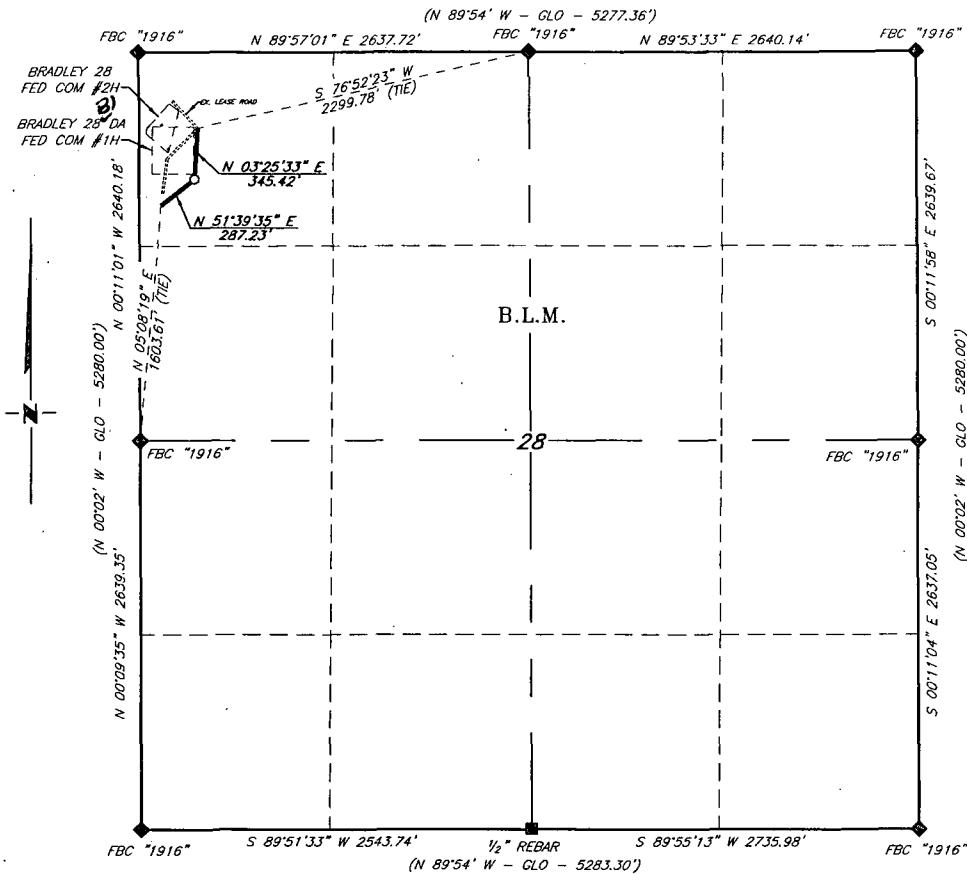
PROSPERITY CONSULTANTS, LLC



308 W. Broadway St., Hobbs, NM 88240 | Firm No.: TX 10193838 NM 4655451 | (575) 964-8200

SCALE: N.T.S.
DATE: 10/30/13
SURVEYED BY: BK/IE
DRAWN BY: JC
APPROVED BY: LWB
SHEET : 1 OF 1

MEWBOURNE OIL COMPANY
REROUTE OF DISTRIBUTION LINE
FOR THE BRADLEY#28 DA FED COM #1H
SEC. 28, T18S, R30E, N.M.P.M., EDDY CO., N.M.



DESCRIPTION

A strip of land 30 feet wide, being 632.65 feet or 38.342 rods in length lying in Section 28, Township 18 South, Range 30 East, N. M. P. M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B.L.M. Land, Eddy Co., N.M.:

Beginning at a point which lies N 05°08'19" E, 1603.61 feet from a Brass Cap Stamped, "1916" found for the West quarter corner of Section 28;

Thence N 51°39'35" E, 287.23 feet;

Thence N 03°25'33" E, 345.42 feet, the Point of Ending, a point which lies S 76°52'23" W, 2299.78 feet from a Brass Cap, stamped "1916", found for the North quarter corner of said Section 28.

Said strip of land containing 0.436 acres, more or less and is allocated by forties as follows:

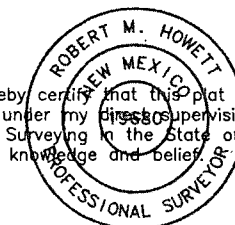
NW ¼ NW ¼ 0.436 Acres

SCALE: 1" = 1000'
 0 500 1000
 BEARINGS: NAD 27 GRID-NM EAST
 DISTANCES: HORIZ. GROUND

LEGEND
 () RECORD DATA
 ◆ FBC**** FOUND BRASS CAP "YEAR"
 ■ FND**** FOUND MONUMENT AS NOTED

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that this plat was prepared from an actual ground survey made under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Robert M. Howett
 Robert M. Howett NM PS 19680



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NO.	REVISION	DATE

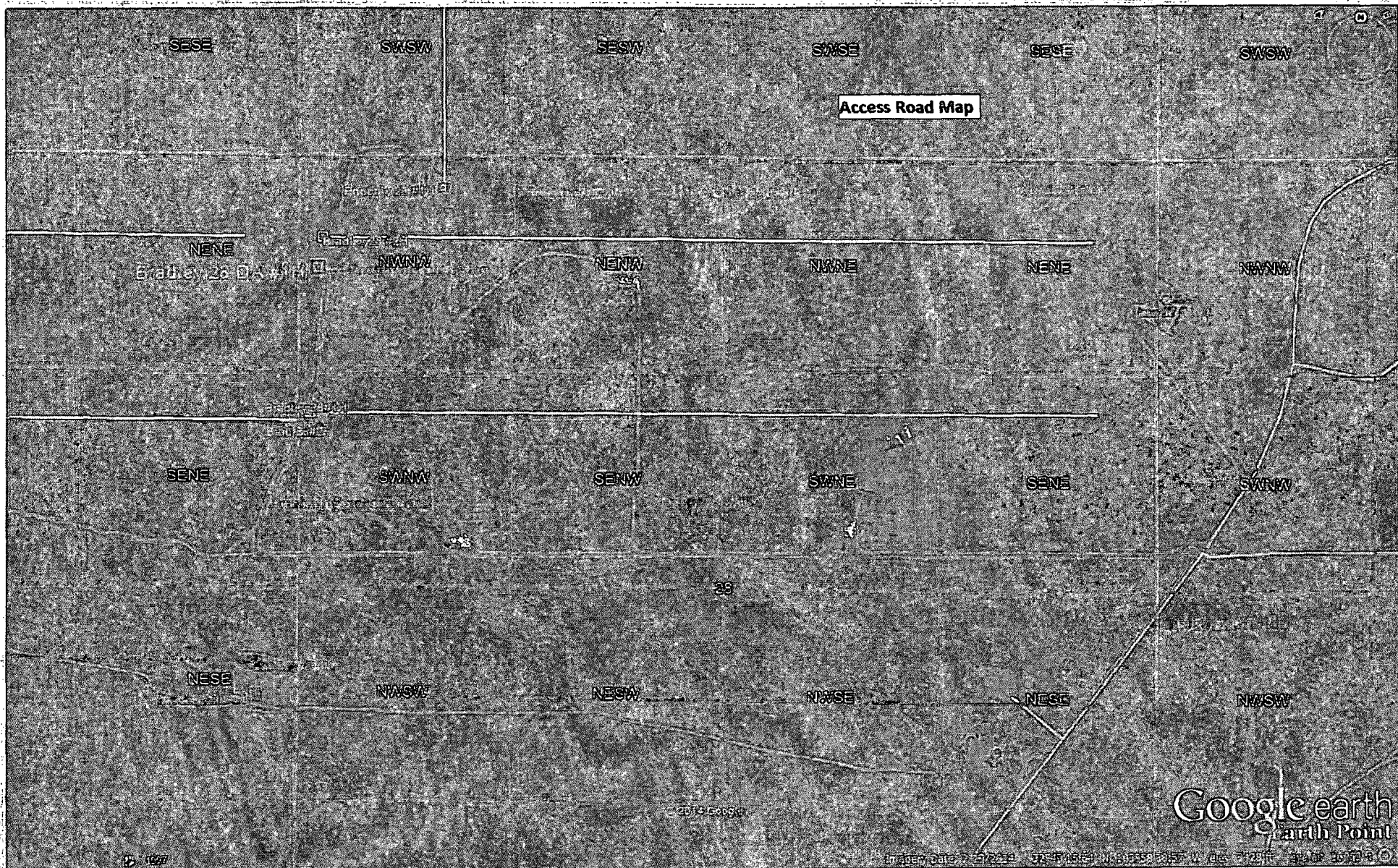
PROSPERITY CONSULTANTS, LLC



2251 Double Creek Drive, Suite 602, Round Rock, Texas 78664

o (512) 992-2087 f (512) 251-2518

SCALE: 1" = 1000'
 DATE: 11/13/13
 SURVEYED BY: BK/IE
 DRAWN BY: AF
 APPROVED BY: LWB
 SHEET : 11 OF 1



Access Road Map

Google earth
Earth Point

Imagery date: 7/25/2011 USF 15121 N 15121215 W 15121215 Earth Point

Exhibit "3D" flowline
route

Phoenix 21 #1H

Bradley 28 #2H

Proposed well site
Bradley 28 DA #1H

Brad 29 #2H

Bradley 28 #1H

--Existing battery

Google earth
Earth Point



1997

Imagery Date: 4/16/2013 22°43'22.77" N 103°59'15.38" W elev 3425 ft eye alt 5941 ft

- Drilling (Well Start)
- × Abandoned Location (Permit)
- ✱ Gas Well
- Oil Well
- ✱ Oil and Gas Well
- Other (Observation, etc)
- ✱ Injection Well
- Suspended
- ✱ Plugged Gas Well
- ✱ Plugged Oil Well
- ✱ Plugged Oil and Gas
- ✱ Dry Hole (No Show)
- ✱ Dry Hole w/Gas Show
- ✱ Dry Hole w/Oil Show
- ✱ Dry Hole w/Oil and Gas Show

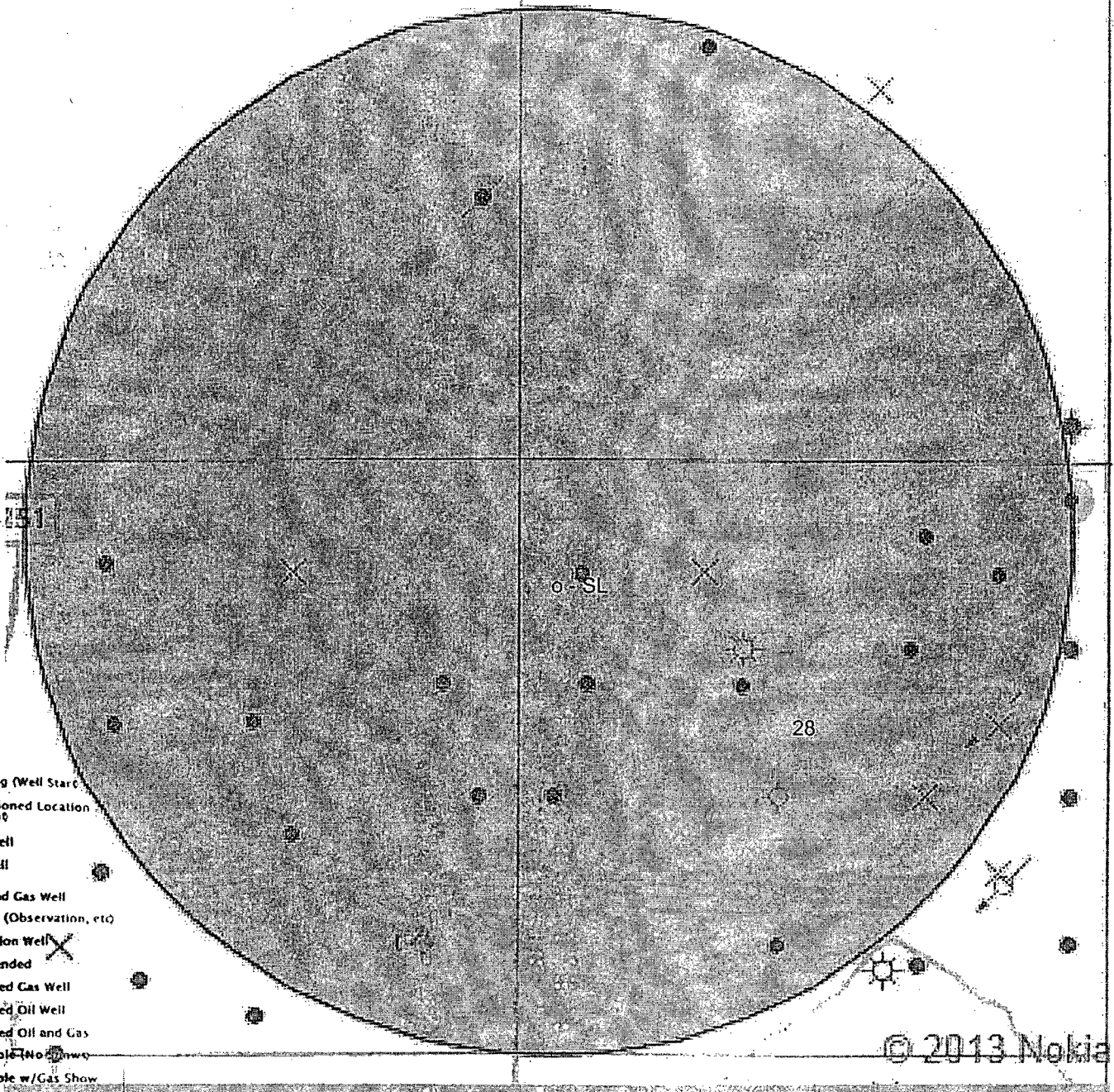


Exhibit "4" - SL - Bradley 28 B1DA Fed Com #1H

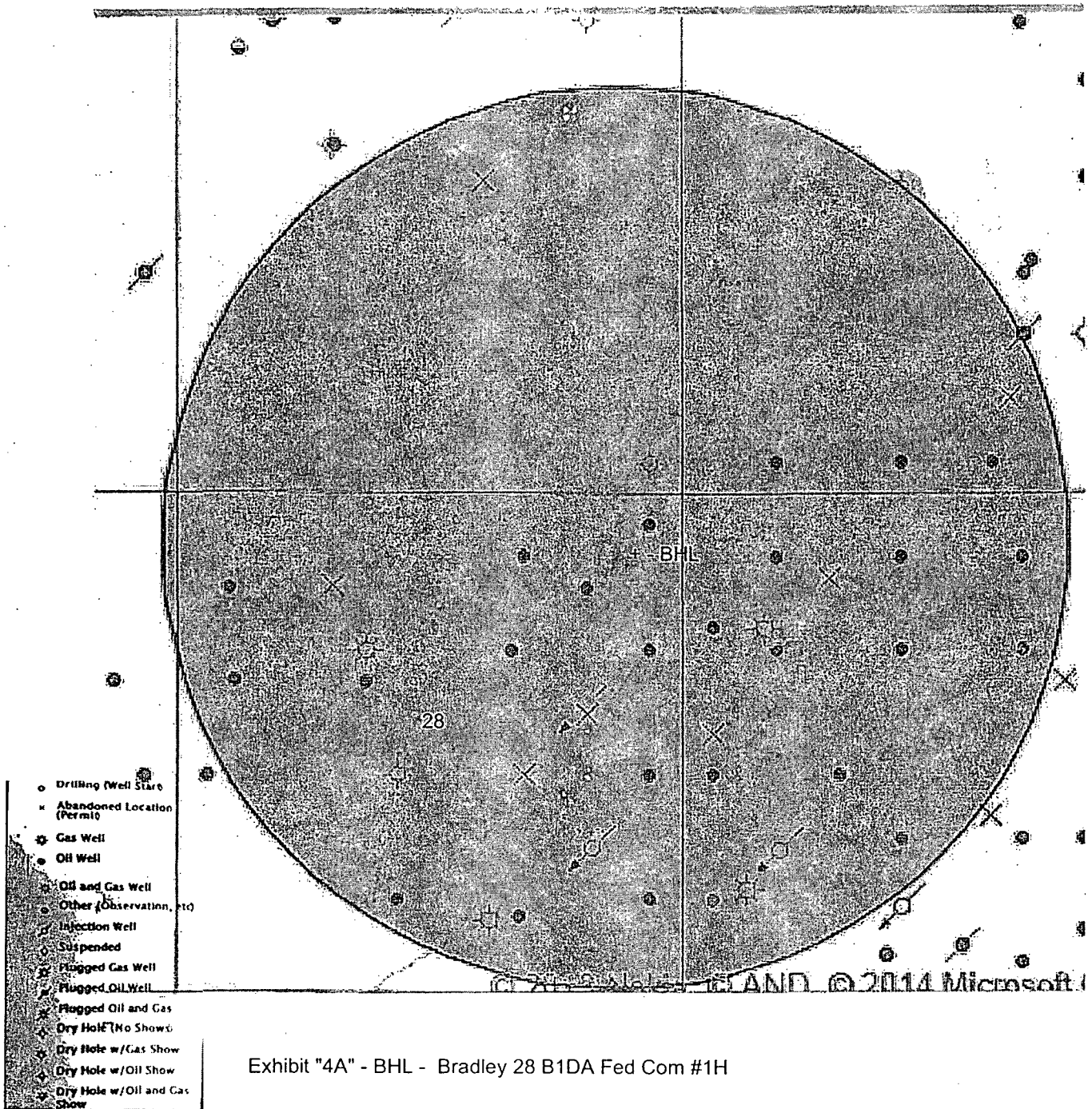


Exhibit "4A" - BHL - Bradley 28 B1DA Fed Com #1H

Drilling Program
Mewbourne Oil Company
Bradley 28 B1DA Fed Com #1H
660' FNL & 200' FWL (SHL)
Sec 28-T18S-R30E
Eddy County, New Mexico

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

Rustler	325'
Top Salt	420'
Base Salt/Tansill	1250'
Yates	1420'
Seven Rivers	1650'
Queen	2560'
Capitan	NP
Grayburg	2980'
San Andres	3475'
Lamar	4050'
*Bone Springs	4840'
*1 st Bone Spring Sand	7150'
*2 nd Bone Spring Sand	Will not penetrate
3rd BS Sand	Will not penetrate
Wolfcamp	Will not penetrate

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

Water	Fresh water is anticipated @ 210' & will be protected by setting surface casing at 350' 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:

See COA - low pressure test

A 2000# WP annular will be installed after running 13 3/8" casing. A 3000# WP double ram BOP and 3000# WP Annular will be installed after running 9 5/8" & 7" casing. Pressure tests will be conducted prior to drilling out under all casing strings. BOP controls will be installed prior to drilling under surface casing and will remain in use until completion of drilling operations. BOPs will be inspected and operated as recommended in Onshore Order #2. A Kelly cock and a sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position when the Kelly is not in use. Will test the 13 3/8" annular to 1500# and the 9 5/8" & 7" BOPE to 3000# and annular to 1500# with a third party testing company before drilling below each shoe, but will test again, if needed, in 30 days from the 1st test as per BLM Onshore Oil and Gas Order #2.

4. MOC proposes to drill a vertical wellbore to 6741' & kick off to horizontal @7218' TVD. The well will be drilled to 11761' MD (7303' TVD). See attached directional plan.

5. Proposed casing and cementing program:

A. Casing Program:

Hole Size	Casing	Wt/Ft.	Grade	Depth	Jt Type
17 1/2"	13 3/8" (new)	48#	H40	0'-350'	ST&C
12 1/4"	9 5/8" (new)	36#	J55	0'-1370' <i>1450'</i>	LT&C
8 3/4"	7" (new)	26#	P110	0'-6741' MD	LT&C
8 3/4"	7" (new)	26#	P110	6741'-7218' MD	BT&C
6 1/8"	4 1/2" (new)	13.5#	P110	7018'-11761' MD	LT&C

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

*Subject to availability of casing.

See COA

B. Cementing Program:

- i. Surface Casing: 370 sks Class "C" cement w/ 2% CaCl₂. Yield at 1.34 cuft/sk. Mix water @ 6.33 gal/sk. Cmt circulated to surface w/ 100% excess.
- ii. Intermediate Casing: 230 sacks Class "C" light cement w/ salt & LCM additives. Yield at 2.10 cuft/sk. Mix water @ 11.17 gal/sk. 200 sacks Class "C" cement w/ 2% CaCl₂. Yield at 1.34 cuft/sk. Mix water @ 6.33 gal/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. Mix water @ 11.32 gal/sk. 400 sacks Class "H" cement w/ salt & FLA additives. Yield at 1.18 cuft/sk. Mix water @ 5.22 gal/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:

See COR

Interval	Type System	Weight	Viscosity	Fluid Loss
0' - 350'	FW spud mud	8.6-9.0	32-34	NA
350' - 1370'	Brine water	10.0-10.2	28-30	NA
1370' - 6741' (KOP)	FW	8.5-8.7	28-30	15
6741' - 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 COR
Samples: 10' samples from surface casing to TD
Logging: GR & Gyro from KOP -100' (6641') to surface. GR from 6641' 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 7303' = 3167 psi)
MOC does not anticipate H₂S, however H₂S contingency plan is attached.

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 28-18S-30E

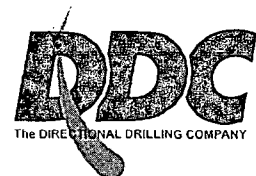
Bradley 28 B1DA Fed Com #1H

Wellbore #1

Plan: Design #1

DDC Well Planning Report

05 March, 2014



DDC
Well Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Bradley 28 B1DA Fed Com #1H
Company:	Mewbourne Oil Co	TVD Reference:	Well @ 3443.0usft (Patterson)
Project:	Eddy County, New Mexico	MD Reference:	Well @ 3443.0usft (Patterson)
Site:	Sec 28-18S-30E	North Reference:	Grid
Well:	Bradley 28 B1DA 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 28-18S-30E		
Site Position:		Northing:	626,279.25 usft
From:	Map	Easting:	607,181.52 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 43' 16.513 N
		Longitude:	103° 59' 5.373 W
		Grid Convergence:	0.19 °

Well	Bradley 28 B1DA Fed Com #1H		
Well Position	+N/-S	920.4 usft	Northing:
	+E/-W	131.9 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	32° 43' 25.616 N
		Longitude:	103° 59' 3.794 W
		Ground Level:	3,423.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF 2010	3/3/2014	7.48
			Dip Angle
			60.51
			Field Strength
			48,600

Design	Design #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			89.92

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	
6,740.6	0.00	0.00	6,740.6	0.0	0.0	0.00	0.00	0.00	0.00	
7,481.1	88.86	89.92	7,218.0	0.6	468.0	12.00	12.00	12.14	89.92	
11,760.8	88.86	89.92	7,303.0	6.4	4,746.8	0.00	0.00	0.00	0.00	PBHL Bradley B1DA I

DDC
Well Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Bradley 28 B1DA Fed Com #1H
Company:	Mewbourne Oil Co	TVD Reference:	Well @ 3443.0usft (Patterson)
Project:	Eddy County, New Mexico	MD Reference:	Well @ 3443.0usft (Patterson)
Site:	Sec 28-18S-30E	North Reference:	Grid
Well:	Bradley 28 B1DA 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'									
6,740.6	0.00	0.00	6,740.6	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	7.13	89.92	6,799.8	0.0	3.7	3.7	12.00	12.00	0.00
6,900.0	19.13	89.92	6,897.1	0.0	26.4	26.4	12.00	12.00	0.00
7,000.0	31.13	89.92	6,987.4	0.1	68.7	68.7	12.00	12.00	0.00
7,100.0	43.13	89.92	7,067.0	0.2	129.0	129.0	12.00	12.00	0.00
7,200.0	55.13	89.92	7,132.3	0.3	204.5	204.5	12.00	12.00	0.00
7,300.0	67.13	89.92	7,180.5	0.4	291.9	291.9	12.00	12.00	0.00
7,400.0	79.13	89.92	7,209.5	0.5	387.4	387.4	12.00	12.00	0.00
End of Curve / 88.86° Inc / 89.92° Azm / 72.18' TVD									
7,481.1	88.86	89.92	7,218.0	0.6	468.0	468.0	12.00	12.00	0.00
7,500.0	88.86	89.92	7,218.3	0.7	486.9	486.9	0.00	0.00	0.00
7,600.0	88.86	89.92	7,220.3	0.8	586.8	586.8	0.00	0.00	0.00
7,700.0	88.86	89.92	7,222.3	0.9	686.8	686.8	0.00	0.00	0.00
7,800.0	88.86	89.92	7,224.3	1.1	786.8	786.8	0.00	0.00	0.00
7,900.0	88.86	89.92	7,226.3	1.2	886.8	886.8	0.00	0.00	0.00
8,000.0	88.86	89.92	7,228.3	1.3	986.8	986.8	0.00	0.00	0.00
8,100.0	88.86	89.92	7,230.3	1.5	1,086.7	1,086.7	0.00	0.00	0.00
8,200.0	88.86	89.92	7,232.3	1.6	1,186.7	1,186.7	0.00	0.00	0.00
8,300.0	88.86	89.92	7,234.2	1.7	1,286.7	1,286.7	0.00	0.00	0.00
8,400.0	88.86	89.92	7,236.2	1.9	1,386.7	1,386.7	0.00	0.00	0.00
8,500.0	88.86	89.92	7,238.2	2.0	1,486.7	1,486.7	0.00	0.00	0.00
8,600.0	88.86	89.92	7,240.2	2.1	1,586.6	1,586.6	0.00	0.00	0.00
8,700.0	88.86	89.92	7,242.2	2.3	1,686.6	1,686.6	0.00	0.00	0.00
8,800.0	88.86	89.92	7,244.2	2.4	1,786.6	1,786.6	0.00	0.00	0.00
8,900.0	88.86	89.92	7,246.2	2.5	1,886.6	1,886.6	0.00	0.00	0.00
9,000.0	88.86	89.92	7,248.1	2.7	1,986.6	1,986.6	0.00	0.00	0.00
9,100.0	88.86	89.92	7,250.1	2.8	2,086.5	2,086.5	0.00	0.00	0.00
9,200.0	88.86	89.92	7,252.1	2.9	2,186.5	2,186.5	0.00	0.00	0.00
9,300.0	88.86	89.92	7,254.1	3.1	2,286.5	2,286.5	0.00	0.00	0.00
9,400.0	88.86	89.92	7,256.1	3.2	2,386.5	2,386.5	0.00	0.00	0.00
9,500.0	88.86	89.92	7,258.1	3.3	2,486.5	2,486.5	0.00	0.00	0.00
9,600.0	88.86	89.92	7,260.1	3.5	2,586.4	2,586.4	0.00	0.00	0.00
9,700.0	88.86	89.92	7,262.1	3.6	2,686.4	2,686.4	0.00	0.00	0.00
9,800.0	88.86	89.92	7,264.0	3.7	2,786.4	2,786.4	0.00	0.00	0.00
9,900.0	88.86	89.92	7,266.0	3.9	2,886.4	2,886.4	0.00	0.00	0.00
10,000.0	88.86	89.92	7,268.0	4.0	2,986.4	2,986.4	0.00	0.00	0.00
10,100.0	88.86	89.92	7,270.0	4.1	3,086.3	3,086.3	0.00	0.00	0.00
10,200.0	88.86	89.92	7,272.0	4.3	3,186.3	3,186.3	0.00	0.00	0.00
10,300.0	88.86	89.92	7,274.0	4.4	3,286.3	3,286.3	0.00	0.00	0.00
10,400.0	88.86	89.92	7,276.0	4.6	3,386.3	3,386.3	0.00	0.00	0.00
10,500.0	88.86	89.92	7,278.0	4.7	3,486.3	3,486.3	0.00	0.00	0.00
10,600.0	88.86	89.92	7,279.9	4.8	3,586.2	3,586.2	0.00	0.00	0.00
10,700.0	88.86	89.92	7,281.9	5.0	3,686.2	3,686.2	0.00	0.00	0.00
10,800.0	88.86	89.92	7,283.9	5.1	3,786.2	3,786.2	0.00	0.00	0.00
10,900.0	88.86	89.92	7,285.9	5.2	3,886.2	3,886.2	0.00	0.00	0.00
11,000.0	88.86	89.92	7,287.9	5.4	3,986.2	3,986.2	0.00	0.00	0.00
11,100.0	88.86	89.92	7,289.9	5.5	4,086.1	4,086.2	0.00	0.00	0.00
11,200.0	88.86	89.92	7,291.9	5.6	4,186.1	4,186.1	0.00	0.00	0.00
11,300.0	88.86	89.92	7,293.8	5.8	4,286.1	4,286.1	0.00	0.00	0.00
11,400.0	88.86	89.92	7,295.8	5.9	4,386.1	4,386.1	0.00	0.00	0.00
11,500.0	88.86	89.92	7,297.8	6.0	4,486.1	4,486.1	0.00	0.00	0.00
11,600.0	88.86	89.92	7,299.8	6.2	4,586.0	4,586.1	0.00	0.00	0.00
11,700.0	88.86	89.92	7,301.8	6.3	4,686.0	4,686.0	0.00	0.00	0.00

DDC
Well Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Bradley 28 B1DA Fed Com #1H
Company:	Mewbourne Oil Co	TVD Reference:	Well @ 3443.0usft (Patterson)
Project:	Eddy County, New Mexico	MD Reference:	Well @ 3443.0usft (Patterson)
Site:	Sec 28-18S-30E	North Reference:	Grid
Well:	Bradley 28 B1DA 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)
TD @ 11761' MD / 7303' TVD									
11,760.8	88.86	89.92	7,303.0	6.4	4,746.8	4,746.8	0.00	0.00	0.00

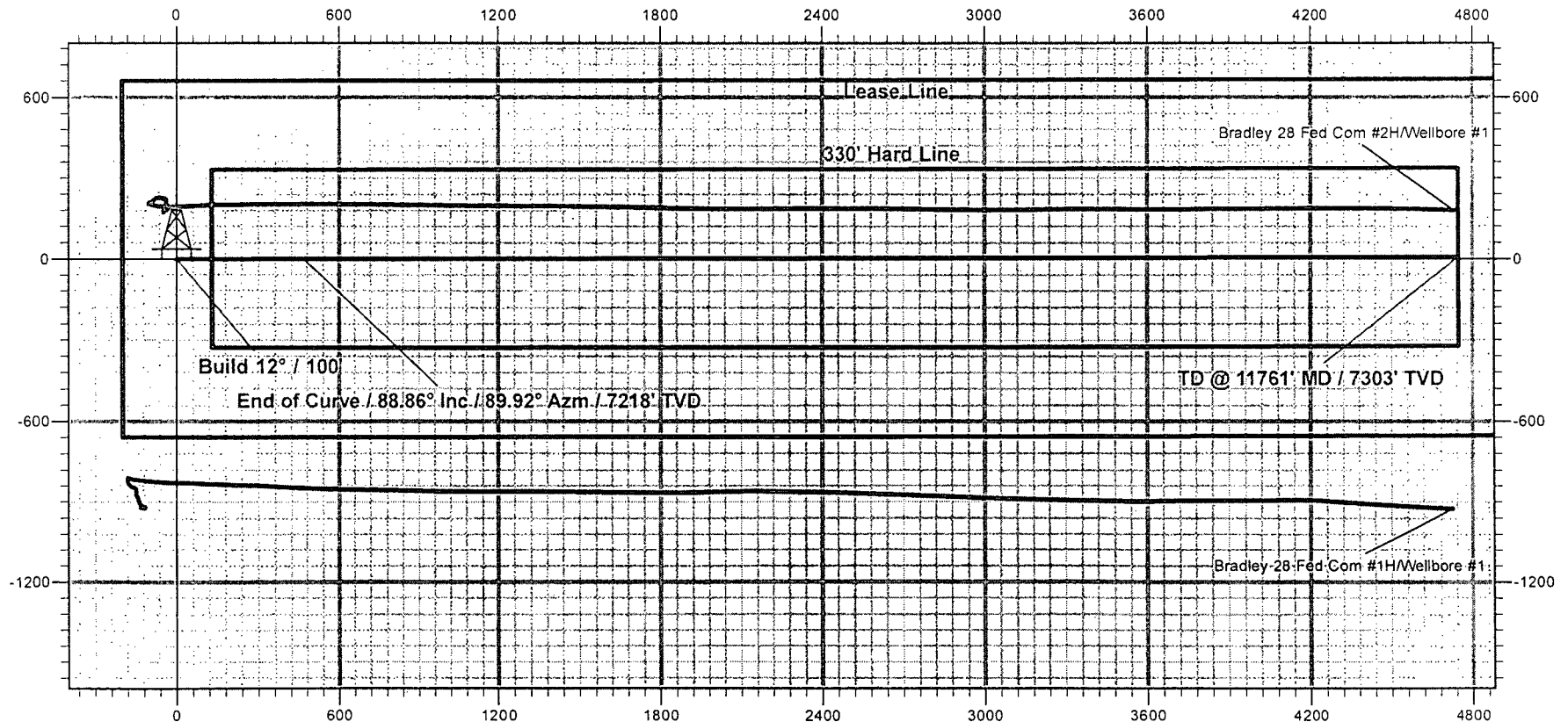
Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
hit/miss target									
Shape									
PBHL Bradley B1DA Fer	0.00	0.00	7,303.0	6.4	4,746.8	627,205.98	612,060.20	32° 43' 25.521 N	103° 58' 8.229 W
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,740.6	6,740.6	0.0	0.0	Build 12° / 100'
7,481.1	7,218.0	0.6	468.0	End of Curve / 88.86° Inc / 89.92° Azm / 7218' TVD
11,760.8	7,303.0	6.4	4,746.8	TD @ 11761' MD / 7303' TVD

Mewbourne Oil Co

Eddy County, New Mexico
Bradley 28 B1DA Fed Com #1H
Design #1

DDC
The DIRECTIONAL DRILLING COMPANY

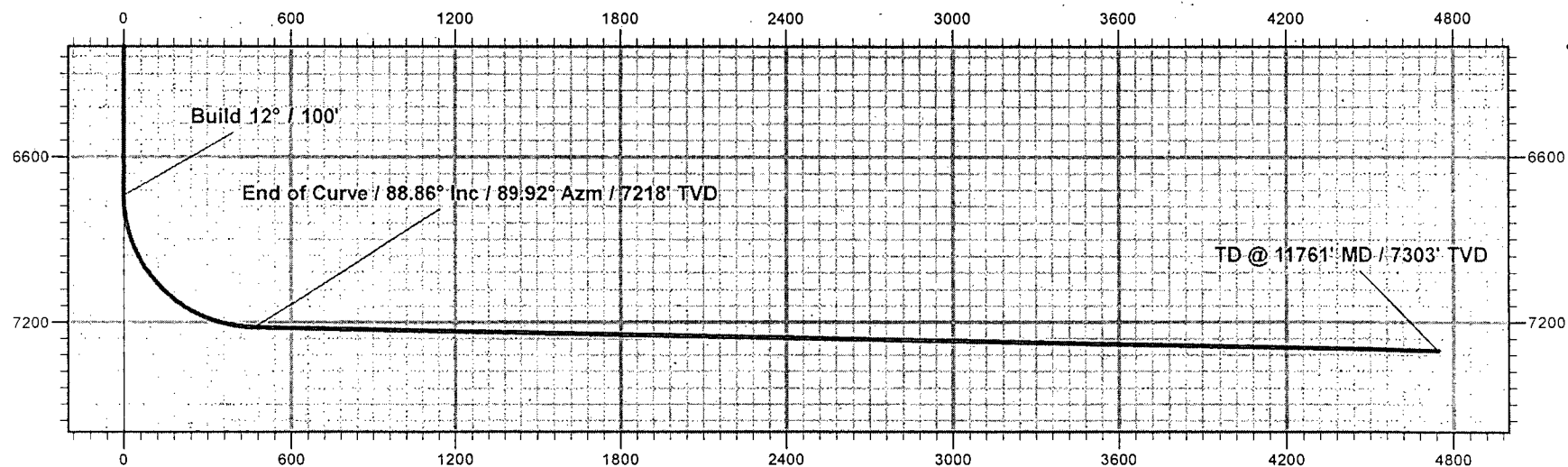
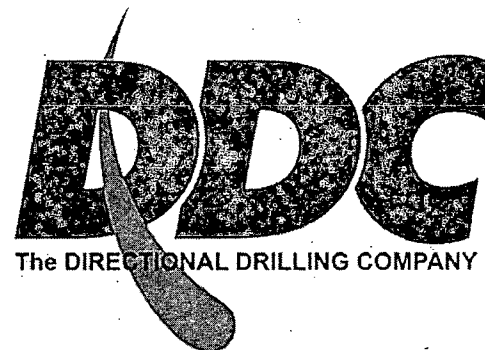


Mewbourne Oil Company

Eddy County, New Mexico

Bradley 28 B1DA Fed Com #1H

Design #1



Vertical Section at 89.92° (600 usft/in)

13 5/8" 2M BOPE & Closed Loop Equipment Schematic

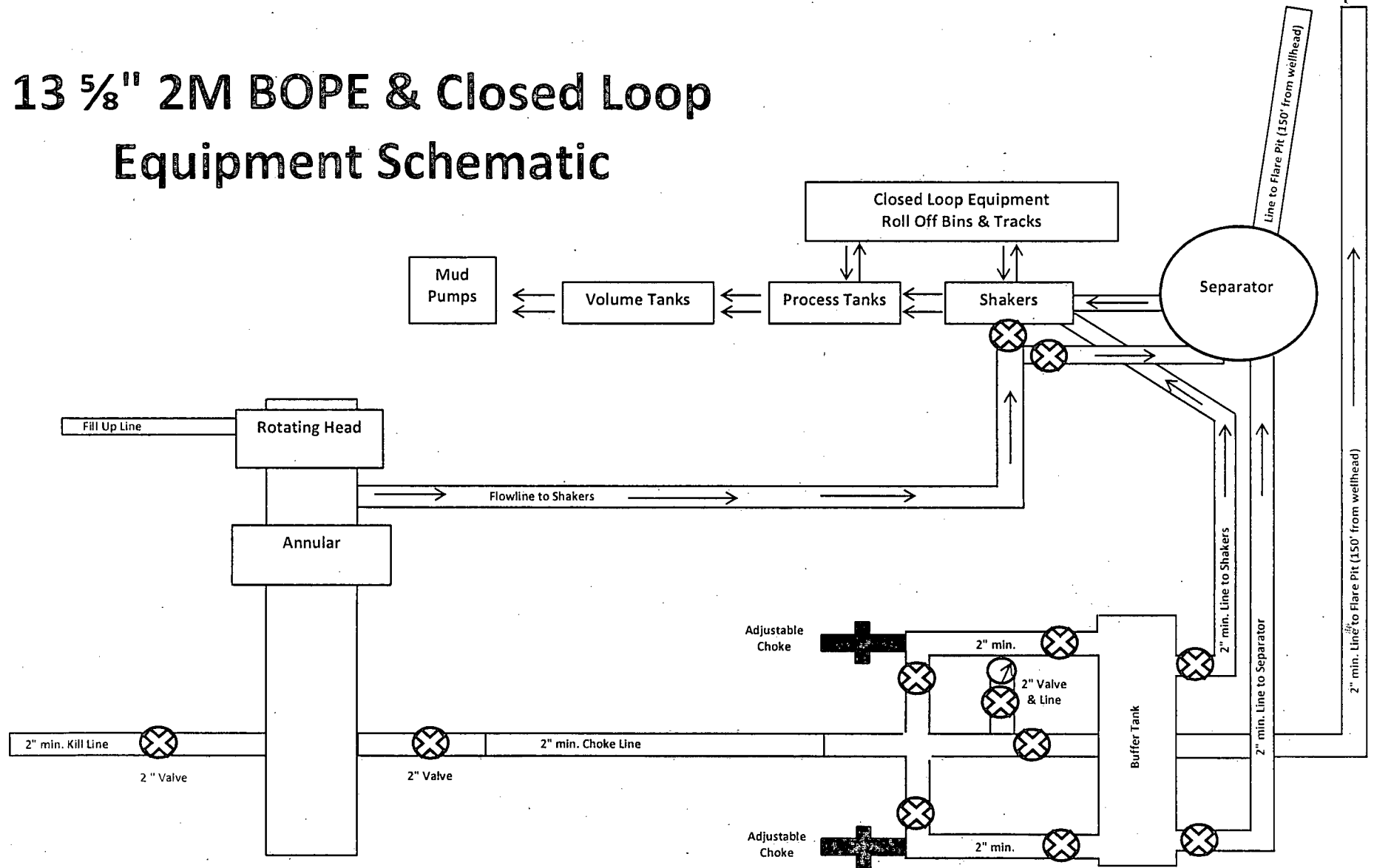
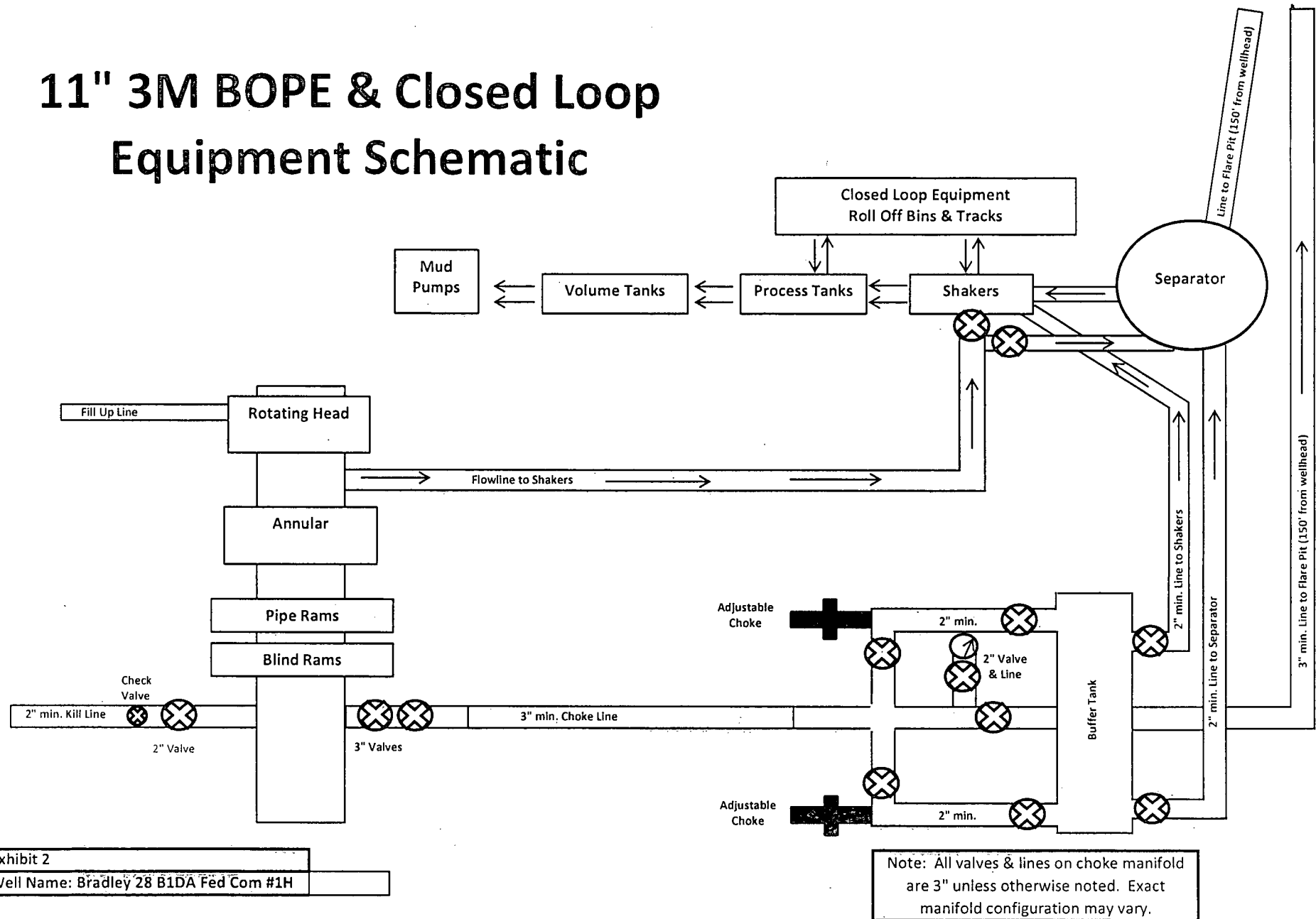


Exhibit 2A
Well Name: Bradley 28 B1DA Fed Com #1H

11" 3M BOPE & Closed Loop Equipment Schematic



Notes Regarding Blowout Preventer

Mewbourne Oil Company

Bradley 28 B1DA Fed Com #1H

660' FNL & 200' FWL (SHL)

Sec 28-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.

Exhibit 6

Closed Loop Pad Dimensions 280' x 320'

existing location

Bradley 28 Fed Com #2H

North

Well

Buried flow line

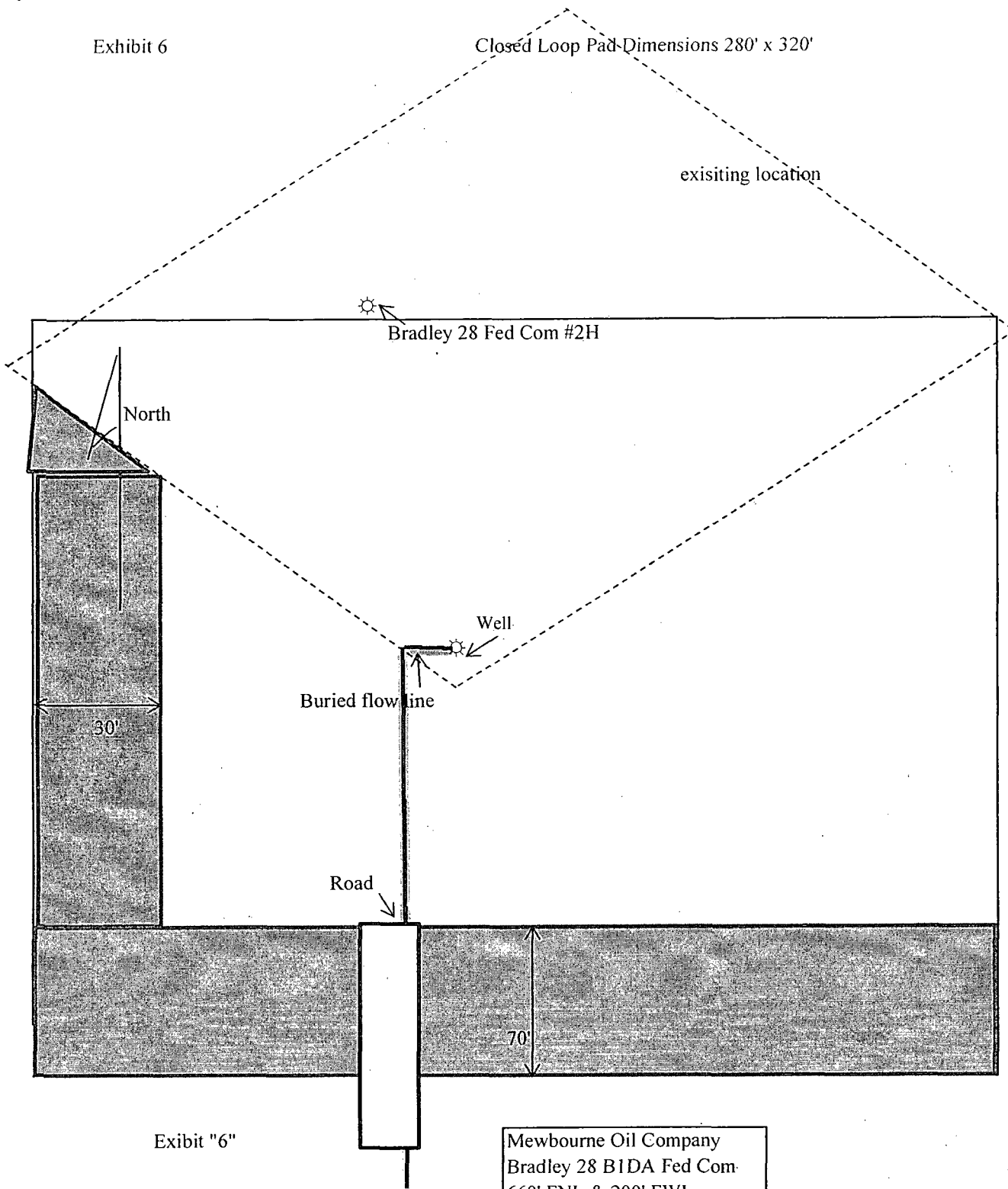
30'

Road

70'

Exhibit "6"

Mewbourne Oil Company
Bradley 28 B1DA Fed Com
660' FNL & 200' FWL
Sec. 28 T18S R30E
Eddy County, NM



Hydrogen Sulfide Drilling Operations Plan

Mewbourne Oil Company

Bradley 28 B1DA Fed Com #1H

660' FNL & 200' FWL

Sec 28-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 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 9 5/8" intermediate casing.

1. Well Control Equipment

- A. Choke manifold with minimum of one adjustable choke/remote 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 to comply with Onshore Order 6.

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, Exhibit 5.
- 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
	2 nd 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

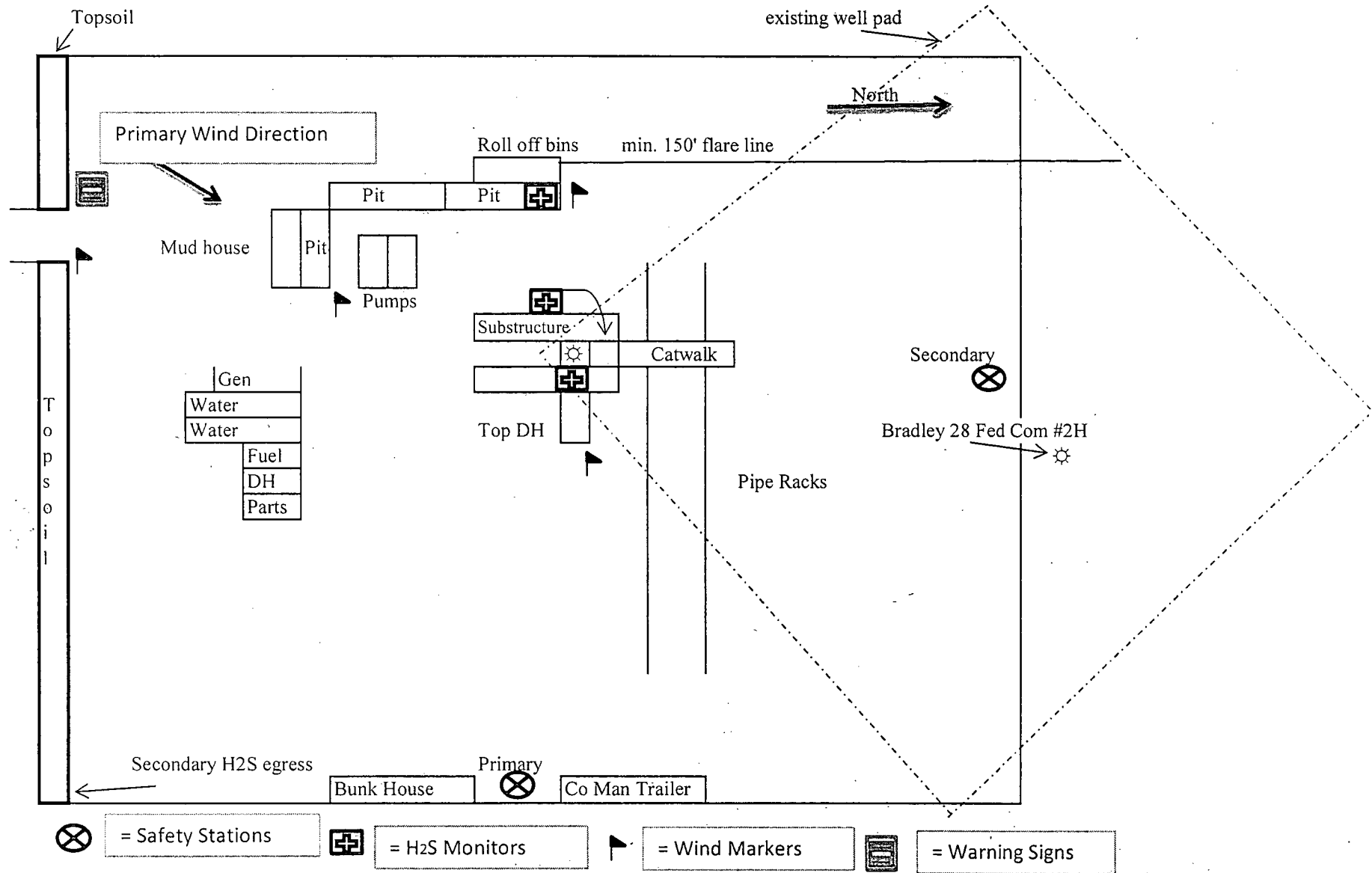


Exhibit 5

H2S Diagram

Closed Loop Pad Dimensions 280' x 320'

Mewbourne Oil Company
Aries 20 B1LI Fed Com #1H
1650' FSL & 220' FWL
Sec. 20 T18S R30E
Eddy County, NM

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

MEWBOURNE OIL COMPANY

Bradley 28 B1DA Fed Com #1H

660' FNL & 200' FWL (SHL)

Sec 28-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 HWY 360 and Duvall Shaft Rd, go down Duvall Shaft Road 1.1 mile and to lease road, turn west and go 1 mile to intersection, turn right and go north to Bradley 28 Fed #2H pad. Location is on right at south corner of existing pad.
- C. Existing roads will be maintained in a condition the same as or better than before operations begin.

2. Proposed Access Road:

- A. No new road construction will be needed.
- B. The maximum width of the driving surface will be 14 feet. The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1 foot deep with 3:1 slopes. The road will be surfaced with rolled and compacted caliche.
- C. Mewbourne Oil Co. will cooperate with other operators in the maintenance of lease roads.

3. Location of Existing Wells:

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

4. Location of Existing and/or Proposed Facilities:

- A. There are production facilities on this lease at the present time.
- B. In the event that the well is productive, production facilities will be located at the existing Bradley 28 & 29 Fed Com #1H battery. Approximately 800' of a low pressure 2 7/8" steel flow line carrying all well fluids will be laid on the following existing lease roads to battery. An existing overhead electric line will need to be rerouted around this location. See Exhibit "3C" for electric line reroute.
- 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.
- F. MOC will utilize a closed loop system during drilling operations.

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. Archaeology is cleared through BLM MOA.

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:

BLM is the surface owner.

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

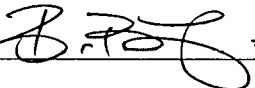
Mewbourne Oil Company

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

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 6 day of March, 2014.

Name: NM Young

Signature:  for NM Young

Position Title: Hobbs District Manager

Address: PO Box 5270, Hobbs NM 88241

Telephone: 575-393-5905

E-mail: myoung@mewbourne.com

Well-Site Evaluation Field Form

Operator Name: Mewbourne Well Name Bradley 28 DA Fed Com #1H
 SHL: Section 28, T. 19 S. R. 30 E. Footage 660 FNL & 150 FWL
 Well Type: Horizontal Vertical / Oil Gas NOS/APD Received? NOS APD No
 Surface Management Agency (SMA): BLM FEE STATE SMA Contacted? Yes No
 Operator Representative/ Contact Name: Bradley Bishop Phone —
 BLM Onsite Representatives Tanner Nygren Date 10/22/13

Description & Topography: (cut & fill, etc.) Upon existing pad

Sand dune country

Soils: Sandy Cave Area: low

Vegetation: Shinnery oak, mesquite, grasses

Hydrology: (playas, floodplain, drainages, erosive soils, etc.)

NA

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

Range Improvements: (fences, etc.) NA

Well Infrastructure

V-Door Direction: N Topsoil: South

Pad Size: 320' x 280'

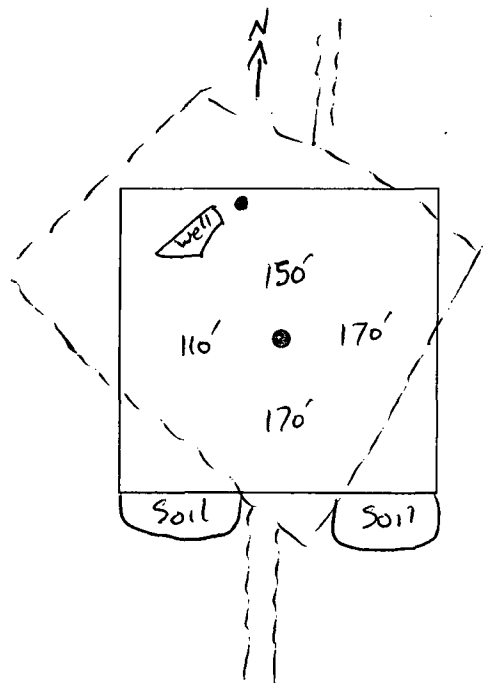
Road Route: Existing road

Prod. Facility Placement: off site

Interim Rec: 70' off S+W;

Other: Sharing pad

Evaluation: (Moved?) 660FNL 200FWL



PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Mewbourne Oil Company
LEASE NO.:	NMLC-028978A
WELL NAME & NO.:	Bradley 28 B1DA Fed Com 1H
SURFACE HOLE FOOTAGE:	0660' FNL & 0200' FWL
BOTTOM HOLE FOOTAGE:	0660' FNL & 0330' FEL
LOCATION:	Section 28, 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.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
 - Lesser Prairie-Chicken Timing Stipulations
 - Ground-level Abandoned Well Marker
 - Communitization Agreement
- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - Cement Requirements
 - H2S Requirements
 - Secretary's Potash
 - Logging Requirements
 - Waste Material and Fluids
- ☒ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

LPC: Conditions of Approval

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 1 through June 15 annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and 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 ft. from the source of the noise.

Upon abandonment, a low profile abandoned well marker will be installed to prevent raptor perching.

The proponent of the proposed action is a Participating Cooperator in the Candidate Conservation Agreement (CCA) for the lesser prairie-chicken (*Tympanuchus pallidicinctus*) and dunes sagebrush lizard (*Sceloporus arenicolus*).

The goal of the Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (USFWS), Center of Excellence for Hazardous Materials Management (CEHMM) and the Participating Cooperator is to reduce and/or eliminate threats to the LPC. By agreeing to conduct the conservation measures described by the CCA, and contribute funding or providing in-kind services for conservation.

The Certificate of Participation (CP) associated with the CCA is voluntary between CEHMM, BLM, USFWS and the Participating Cooperator. Through the CP, the Participating Cooperator voluntarily commits to implement or fund specific conservation actions that will reduce and/or eliminate threats to the LPC. Funds contributed as part of the CP will be used to implement conservation measures and associated activities. The funds will be directed to the highest priority projects to restore or reclaim habitat at the sole discretion of BLM and USFWS.

The following Conservation Measures are to be accomplished in addition to those described in the CCA and Pecos District Special Status Species Resource Management Plan Amendment (RMPA):

1. To the extent determined by the BLM representative at the Plan of Development stage, all infrastructures supporting the development of a well (including roads, power lines, and pipelines) will be constructed within the same corridor.

2. On enrolled parcels that contain inactive wells, roads and/or facilities that are not reclaimed to current standards, the Participating Cooperator shall remediate and reclaim their facilities within three years of executing this CP, unless the Cooperator can demonstrate they will put the facilities back to beneficial use for the enrolled parcel(s). If an extension is requested by the Cooperator, they shall submit a detailed plan (including dates) and receive BLM approval prior to the three year deadline. All remediation and reclamation shall be performed in accordance with BLM requirements and be approved in advance by the Authorized Officer.
3. Utilize alternative techniques to minimize new surface disturbance when required and as determined by the BLM representative at the Plan of Development stage.
4. Install fence markings along fences owned, controlled, or constructed by the Participating Cooperator that cross through occupied habitat within two miles of an active LPC lek.
5. Bury new powerlines that are within two (2) miles of LPC lek sites active at least once within the past 5 years (measured from the lek). The avoidance distance is subject to change based on new information received from peer reviewed science.
6. Bury new powerlines that are within one (1) mile of historic LPC lek sites where at least one LPC has been observed within the past three years (measured from the historic lek). The avoidance distance is subject to change based on new information received from peer reviewed science.
7. Management recommendations may be developed based on new information received from peer reviewed science to mitigate impacts from H₂S and/or the accumulation of sulfates in the soil related to production of gas containing H₂S on the LPC. Such management recommendations will be applied by the Participating Cooperator as Conservation Measures under this CP in suitable and occupied LPC habitat where peer-reviewed science has shown that H₂S levels threaten the LPC.

Drilling:

Communitization Agreement

The well sign shall include the surface and bottom hole lease numbers. The Communitization Agreement number shall also be on the sign.

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 strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area 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. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. 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.

Turnouts

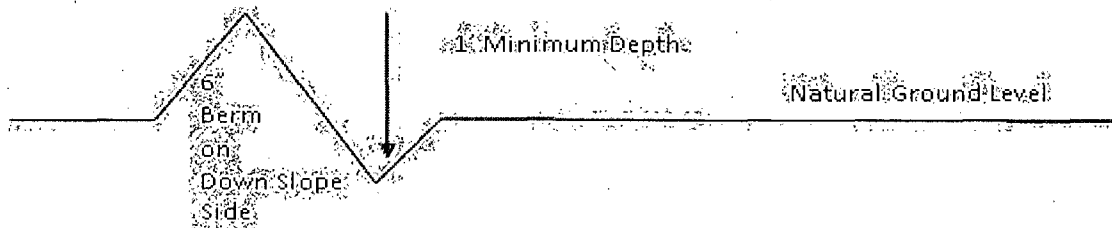
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outslowing 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:

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

Cattleguards

An appropriately sized cattleguard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattleguards on the access road route 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 cattleguards that are in place and are utilized during lease operations.

Fence Requirement

Where entry is granted 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 fences.

Public Access

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

Construction Steps

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

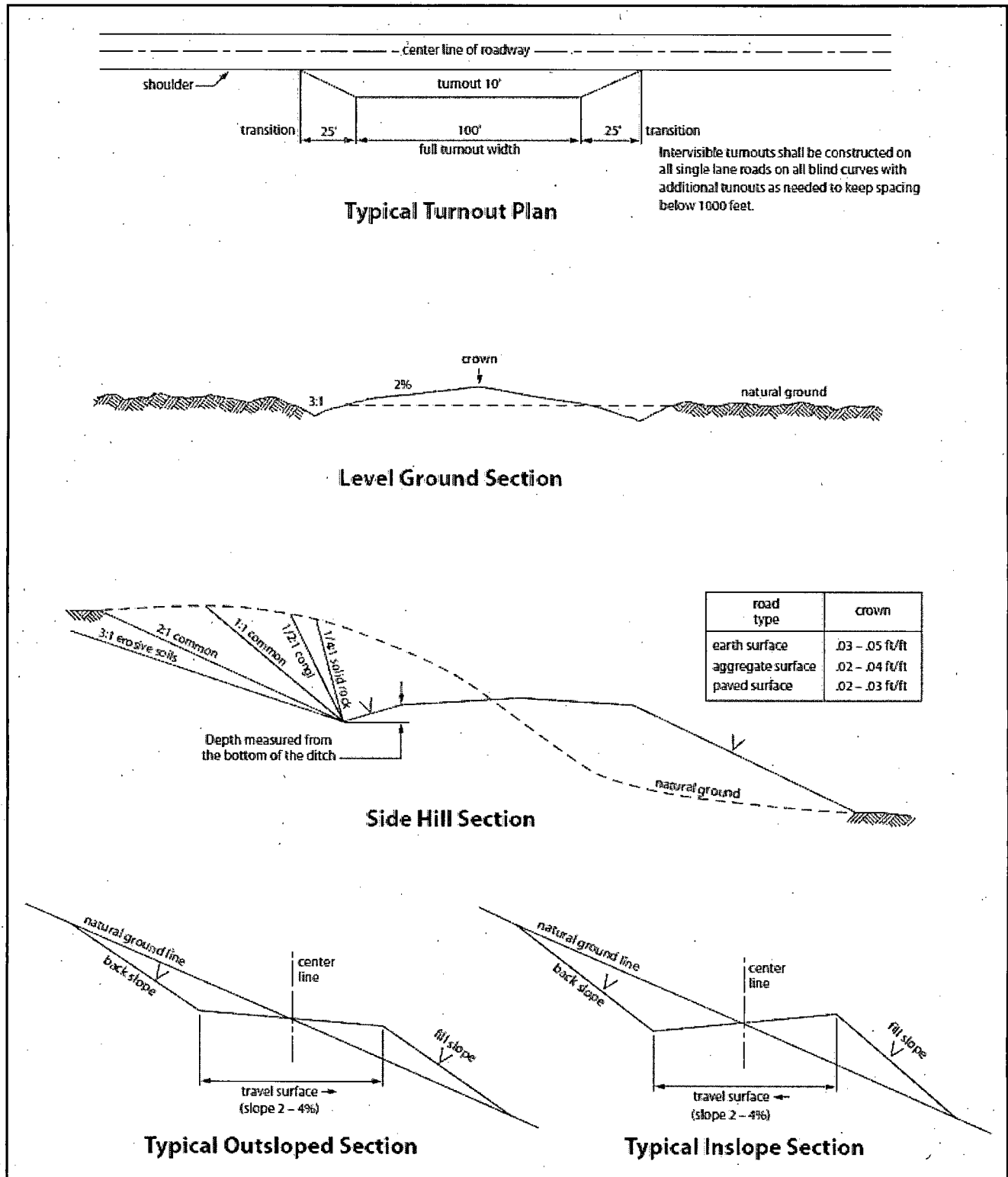


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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 and a Hydrogen Sulfide (H₂S) Drilling Plan shall be activated 500 feet prior to drilling into the Queen formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (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. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. 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

Possibility of water flows in the Artesia Group, Salado, and Queen.

Possibility of lost circulation in the Artesia Group, Rustler, Grayburg, San Andres, and Delaware.

1. The 13-3/8 inch surface casing shall be set at approximately 350 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, which shall be set at approximately **1450** feet, is:
 - ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

Centralizers required through the curve and a minimum of one every other joint.

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.
4. Cement not required on the 4-1/2" casing. **Packer system being used.**
5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.
 - a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8 intermediate casing shoe shall be **3000 (3M)** psi.

4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In 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. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two 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.

JAM 062414

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.

Exclosure Netting (Open-top Tanks)

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the

largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

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

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

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901; et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

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

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

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

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

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

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

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

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

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

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

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

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

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

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation.

measures will be made by the authorized officer after consulting with the holder.

16. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, powerline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

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

IX. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory

revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture for LPC Sand/Shinnery 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:

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*Pounds of pure live seed:

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