

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 20185. Lease Serial No.
NMNM033312A

6. If Indian, Allottee or Tribe Name

If Unit or CA/Agreement, Name and/or No.

SUBMIT IN TRIPLICATE - Other instructions on page 2

HOBBS OCD

OCT 24 2018

RECEIVED

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
MEWBOURNE OIL COMPANYContact: JACKIE LATHAN
E-Mail: jlathan@mewbourne.com3a. Address
PO BOX 5270
HOBBS, NM 882413b. Phone No. (include area code)
Ph: 575-393-5905

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 4 T22S R34E Mer NMP SWSE 150FSL 1675FEL

8. Well Name and No.
ONION KNIGHT FEDERAL COM 203H9. API Well No.
30-025-4493910. Field and Pool or Exploratory Area
28430

11. County or Parish, State

LEA COUNTY, NM

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

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

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

Mewbourne Oil Company requests approval to make the following changes:

- 1) Change well name to Black Sheep 4 B3OB Federal Com #1H.
- 2) Change lease road distance to 1,340.70'.
- 3) Change BHL to 100' FNL & 1980' FEL.
- 4) Change flowline distance to 1,315.98'.
- 5) Change battery location to west edge of well pad.
- 6) Move surface location to 222' FSL & 2108' FEL.
- 7) Change well pad to 460' x 400'.

Approved electric line will not require changes.

Engineering is Good. 8-14-18

Approved & JAC 10/04/18 DOI-BLM-NM-P020-2018-0963-EA stipulations attached

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #434768 verified by the BLM Well Information System
For MEWBOURNE OIL COMPANY, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 09/14/2018 ()

Name (Printed/Typed) BRADLEY BISHOP

Title REGULATORY MANAGER

Signature (Electronic Submission)

Date 09/11/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <i>Cody K. Left</i>	Title <i>PRM - L & M</i>	Date <i>10/04/2018</i>
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office <i>CFO</i>

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

(Instructions on page 2)

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

KE

Additional data for EC transaction #434768 that would not fit on the form

32. Additional remarks, continued

Please see attachments containing C-102, new plats for each of the changes.
Please contact Bradley Bishop with any questions.

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 30-025-44939		² Pool Code	³ Pool Name GRAMA RIDGE; BONE SPRING
⁴ Property Code 722765	⁵ Property Name BLACK SHEEP 4 B30B FEDERAL		⁶ Well Number 1H
⁷ GRID NO. 14744	⁸ Operator Name MEWBOURNE OIL COMPANY		⁹ Elevation 3599'

¹⁰ Surface Location

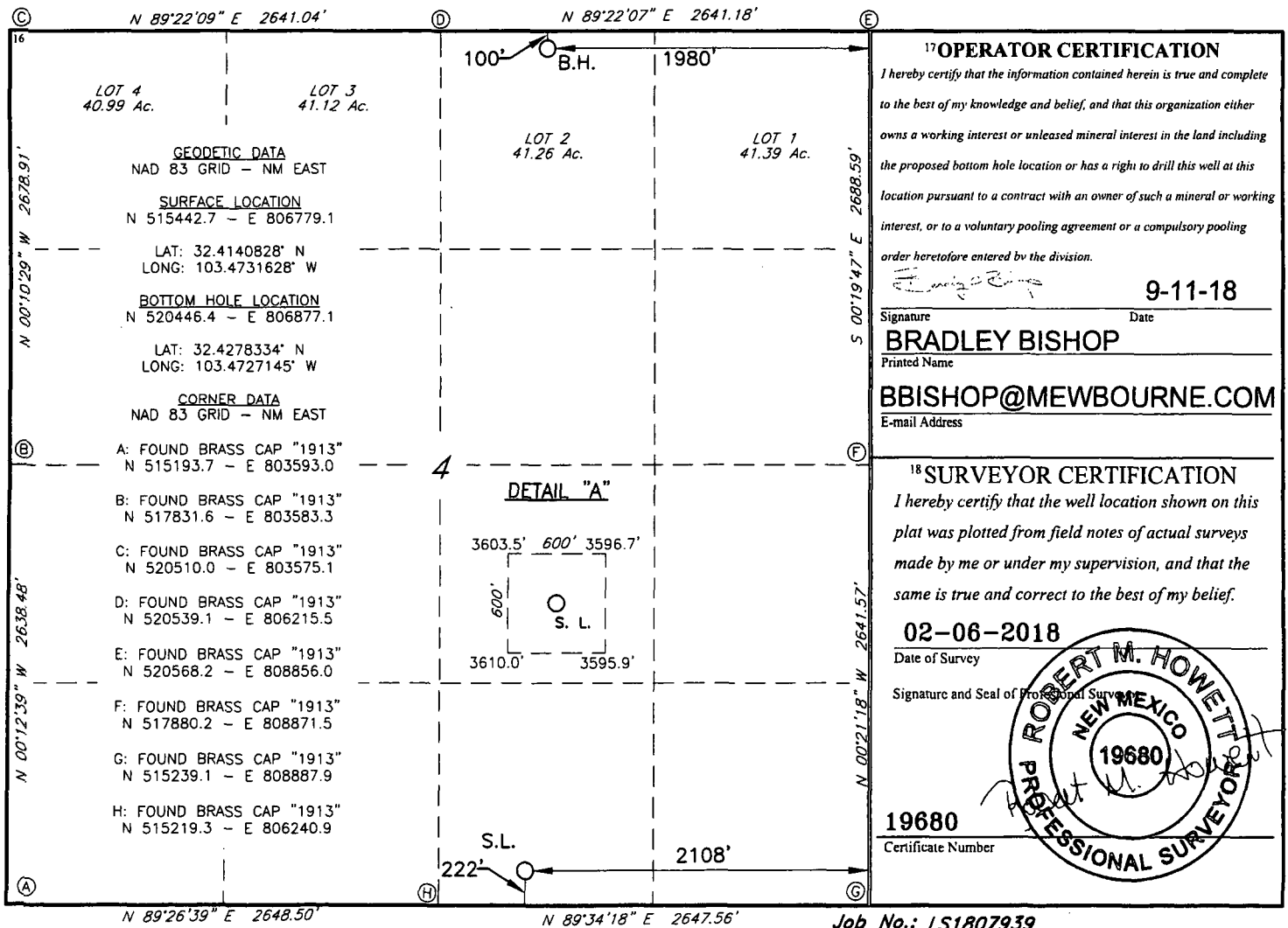
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
0	4	22S	34E		222	SOUTH	2108	EAST	LEA

¹¹ Bottom Hole Location If Different From Surface

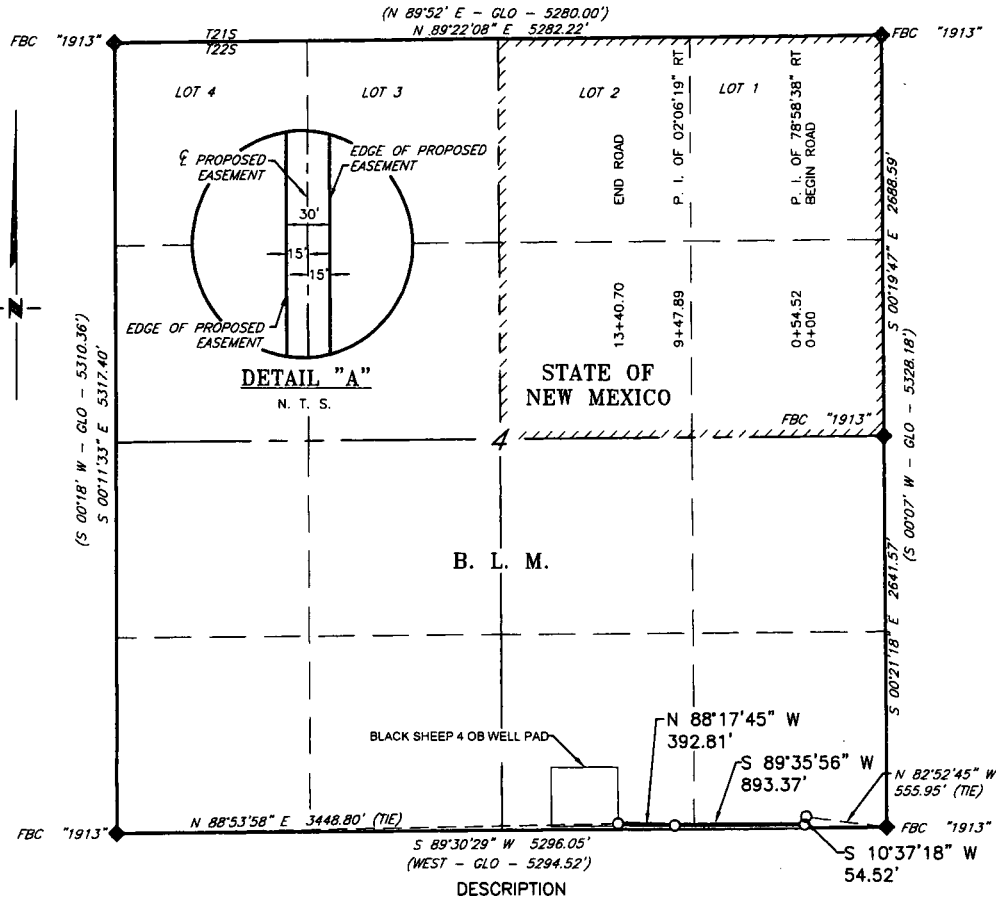
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	4	22S	34E		100	NORTH	1980	EAST	LEA

¹² Dedicated Acres 100/61.26	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.



MEWBOURNE OIL COMPANY
SURVEY OF PROPOSED ACCESS ROAD TO THE
BLACK SHEEP 4 B30B FEDERAL COM #1H
SECTION 4, T22S, R34E,
N. M. P. M., LEA CO., NEW MEXICO



A strip of land 30 feet wide, being 1,340.70 feet or 81.255 rods in length, lying in Section 4, Township 22 South, Range 34 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 0+00, a point in the Southeast quarter of Section 4, which bears, N 82°52'45" W, 555.95 feet from a brass cap, stamped "1913", found for the Southeast corner of Section 4;

Thence S 10°37'18" W, 54.52 feet, to Engr. Sta. 0+54.52, a P. I. of 78°58'38" right;

Thence S 89°35'56" W, 893.37 feet, to Engr. Sta. 9+47.89, a P. I. of 02°06'19" right;

Thence N 88°17'45" W, 392.81 feet, to Engr. Sta. 13+40.70, the End of Survey, a point in Southeast quarter of Section 4, which bears, N 88°53'58" E, 3,448.80 feet from a brass cap, stamped "1913", found for the Southwest corner of Section 4.

Said strip of land contains 0.923 acres, more or less, and is allocated by forties as follows:

SCALE: 1" = 1000'	SE 1/4 SE 1/4	49.496 Rods	0.562 Acres
0 500' 1000'	SW 1/4 SE 1/4	31.759 Rods	0.361 Acres

BEARINGS ARE GRID NAD 83
 NM EAST
 DISTANCES ARE HORIZ. GROUND.

LEGEND

() RECORD DATA - GLO

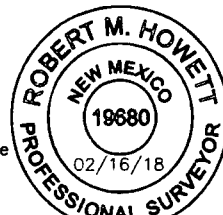
◆ FOUND MONUMENT
 AS NOTED

PROPOSED ACCESS RD

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground 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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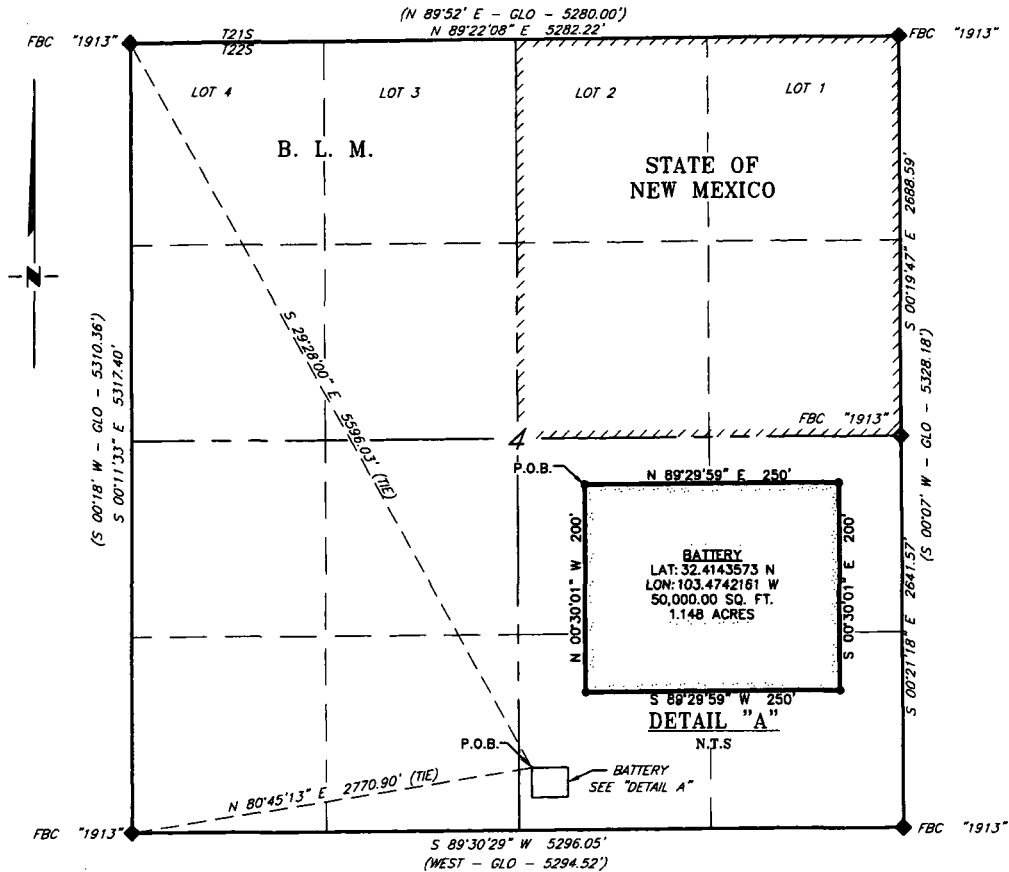
NO.	REVISION	DATE
JOB NO.:	LS1802134	
DWG. NO.:	1802134-5	

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 02/06/2018
SURVEYED BY: BK/ZS
DRAWN BY: KAKN
APPROVED BY: RMH
SHEET: 1 OF 1

**MEWBOURNE OIL COMPANY
SURVEY OF THE PROPOSED BATTERY FOR THE
BLACK SHEEP 4 B30B FEDERAL COM #1H
SECTION 4, T22S, R34E,
N. M. P. M., LEA CO., NEW MEXICO**



DESCRIPTION

A tract of land situated in Section 4, Township 22 South, Range 34 East, N. M. P. M., Lea County, New Mexico, across B. L. M. land, and being more particularly described by metes and bounds as follows:

BEGINNING at a point, which bears S 29°28'00" E, 5,596.03 feet, from a brass cap, stamped "1913", found for the Northwest corner of Section 4 and bears N 80°45'13" E, 2,770.90 feet from a brass cap, stamped "1913", found for the Southwest corner of Section 4;

Thence N 89°29'59" E, 250.00 feet, to a point;

Thence S 00°30'01" E 200.00 feet, to a point;

Thence S 89°29'59" W, 250.00 feet, to a point;

Thence N 00°30'01" W, 200.00 feet, to the Point of Beginning.

Said tract of land contains 50,000.00 square feet or 1.148 acres, more or less and is allocated by forties as follows:

SW 1/4 SE 1/4 50,000.00 Sq. Ft. 1.148 Acres

SCALE: 1" = 1000'
0 500' 1000'

BEARINGS ARE GRID NAD 83
NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND

() RECORD DATA - GLO
◆ FOUND MONUMENT
AS NOTED
P.O.B. POINT OF BEGINNING

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground 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
JOB NO.:	LS1802134	
DWG. NO.:	1802134-7	

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE:	1" = 1000'
DATE:	02/06/2018
SURVEYED BY:	BK/ZS
DRAWN BY:	KAKN
APPROVED BY:	RMH
SHEET:	1 OF 1

MEWBOURNE OIL COMPANY
SURVEY OF PROPOSED FLOWLINE FOR THE
BLACK SHEEP 4 B3OB FEDERAL COM #1H
SECTION 4, T22S, R34E,
N. M. P. M., LEA CO., NEW MEXICO

(N 89°52' E - GLO - 5280.00')
 N 89°22'08" E 5282.22'

FBC "1913"

LOT 4 LOT 3 LOT 2 LOT 1

EDGE OF PROPOSED EASEMENT

EDGE OF PROPOSED EASEMENT

EDGE OF PROPOSED EASEMENT

EDGE OF PROPOSED EASEMENT

30'

15'

15'

DETAIL "A"
 N. T. S.

STATE OF NEW MEXICO

B. L. M.

0+00

3+92.89

12+73.84

13+15.98

P. I. OF 02°06'13" LT

P. I. OF 78°58'38" LT

END FLOWLINE

2688.59'

S 00°19'47" E

S 00°18' W - GLO - 5310.36'

S 00°11'33" E 5317.40'

FBC "1913"

BLACK SHEEP 4 OB WELL PAD

S 88°17'51" E 392.89'

N 89°35'56" E 880.95'

N 82°47'21" W 570.93' (TIE)

N 10°37'18" E 42.14'

N 88°39'02" E 3448.99' (TIE)

S 89°30'28" W 5296.05' (WEST - GLO - 5294.52')

DESCRIPTION

A strip of land 30 feet wide, being 1,315.98 feet or 79.756 rods in length, lying in Section 4, Township 22 South, Range 34 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 0+00, a point in the Southwest quarter of Section 4, which bears, N 88°39'02" E, 3,448.99 feet from a brass cap, stamped "1913", found for the Southwest corner of Section 4;

Thence S 88°17'51" E, 392.89 feet, to Engr. Sta. 3+92.89, a P. I. of 02°08'13" left;

Thence N 89°35'56" E, 880.95 feet, to Engr. Sta. 12+73.84, a P. I. of 78°58'38" left;

Thence N 10°37'18" E, 42.14 feet, to Engr. Sta. 13+15.98, the End of Survey, a point in Southeast quarter of Section 4, which bears, N 82°47'21" W, 570.93 feet from a brass cap, stamped "1913", found for the Southeast corner of Section 4.

Said strip of land contains 0.906 acres, more or less, and is allocated by forties as follows:

SCALE: 1" = 1000'			
0	500'	1000'	
SW 1/4 SE 1/4	31.761 Rods	0.361 Acres	
SE 1/4 SE 1/4	47.995 Rods	0.545 Acres	

LEGEND

() RECORD DATA - GLO

◆ FOUND MONUMENT AS NOTED

— PROPOSED FLOWLINE

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground 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.

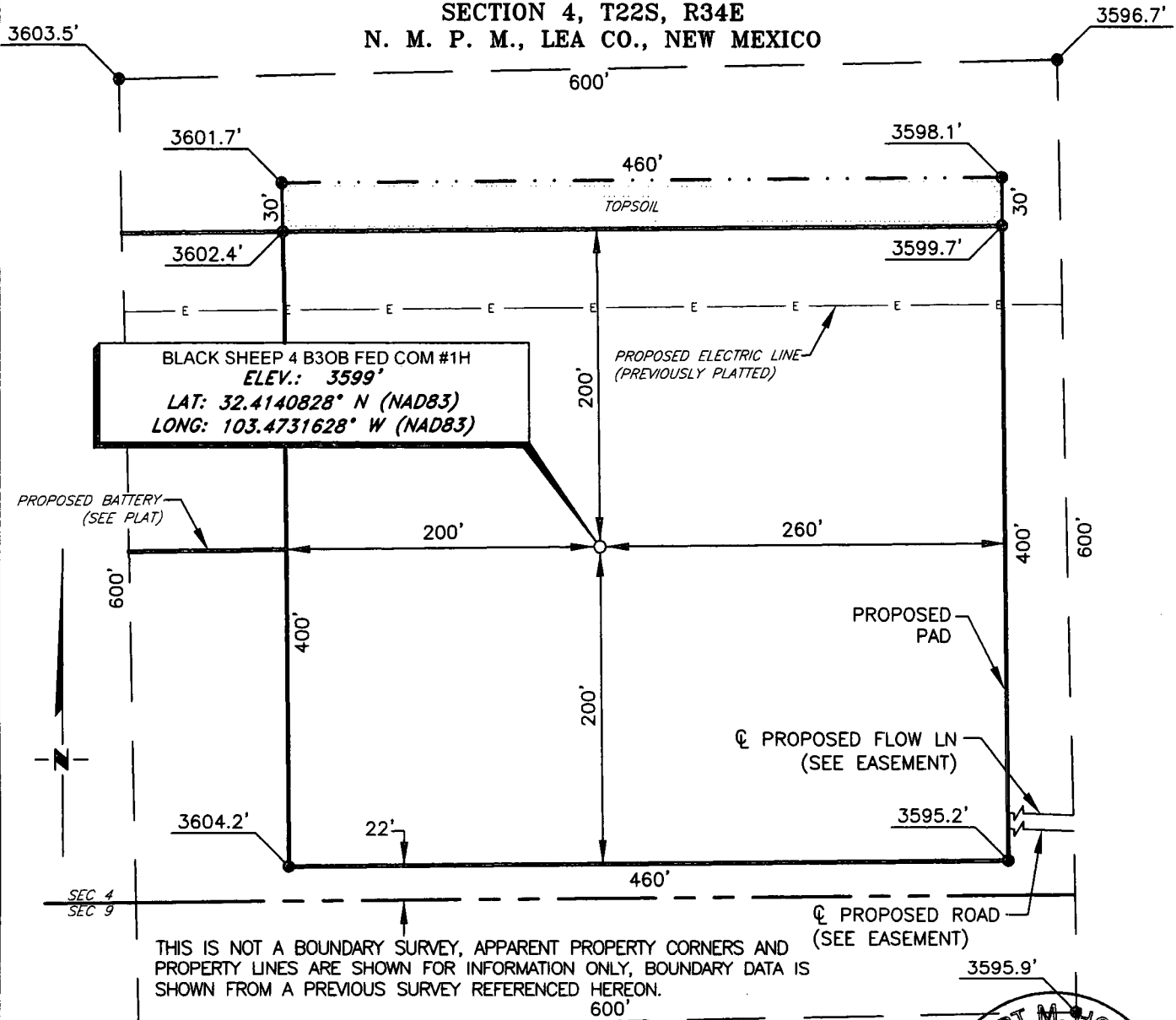
Robert M. Howett
 Robert M. Howett NM PS 19680

ROBERT M. HOWETT
 NEW MEXICO
 19680
 02/16/18
 PROFESSIONAL SURVEYOR

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MEWBOURNE OIL COMPANY
 BLACK SHEEP 4 B3OB FED COM #1H
 (222' FSL & 2108' FEL)
 SECTION 4, T22S, R34E
 N. M. P. M., LEA CO., NEW MEXICO



BLACK SHEEP 4 B3OB FED COM #1H
 ELEV.: 3599'
 LAT: 32.4140828° N (NAD83)
 LONG: 103.4731628° W (NAD83)

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this unclassified survey of a well location from an actual survey made on the ground 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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SCALE: 1" = 100'

BEARINGS ARE
 NAD 83 GRID - NM EAST
 DISTANCES ARE
 GROUND.

NO.	REVISION	DATE
JOB NO.:	LS1802134	
DWG. NO.:	1802134-11	

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE:	N. T. S.
DATE:	02/06/2018
SURVEYED BY:	BK/ZS
DRAWN BY:	KAKN
APPROVED BY:	RMH
SHEET:	1 OF 1

Mewbourne Oil Company, Black Sheep 4 B3OB Fed Com #1H

Sec 4, T22S, R34E

SL: 222' FSL & 2048' FEL

BHL: 100' FNL & 1980' FEL

1. Geologic Formations

TVD of target	11284'	Pilot hole depth	NA
MD at TD:	16287'	Deepest expected fresh water:	25'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface		
Rustler	1704		
Top of Salt	2184		
Base of Salt	3754		
Yates	3999		
Capitan	4334	Oil/Gas	
Lamar	5474	Oil/Gas	
Cherry Canyon	5894	Oil/Gas	
Manzanita	6044	Oil/Gas	
Brushy Canyon	6924	Oil/Gas	
Bone Spring	8439	Oil/Gas	
1 st Bone Spring Sand	9549	Oil/Gas	
2 nd Bone Spring Sand	10073	Oil/Gas	
3 rd Bone Spring Sand	10938	Target Zone	
Abo			
Wolfcamp			
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

*H₂S, water flows, loss of circulation, abnormal pressures, etc.

Mewbourne Oil Company, Black Sheep 4 B3OB Fed Com #1H

Sec 4, T22S, R34E

SL: 222' FSL & 2048' FEL

BHL: 100' FNL & 1980' FEL

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
	From	To								
17.5"	0'	1496'	13.375"	48	H40	STC	1.13	2.53	3.69	7.54
17.5"	1496'	1779'	13.375"	54.5	J55	STC	1.39	3.35	33.29	55.25
12.25"	0'	3453'	9.625"	36	J55	LTC	1.13	1.96	2.24	2.79
12.25"	3453'	4393'	9.625"	40	J55	LTC	1.13	1.73	6.68	8.09
12.25"	4393'	5282'	9.625"	40	N80	LTC	1.13	2.09	18.32	25.76
12.25"	5282'	5399'	9.625"	40	HCL80	LTC	1.51	2.05	178.92	195.81
8.75"	0'	11552'	7"	26	HCP110	LTC	1.43	1.83	2.17	2.76
6.125"	10802'	16287'	4.5"	13.5	P110	LTC	1.82	2.11	4.56	5.70
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company, Black Sheep 4 B3OB Fed Com #1H

Sec 4, T22S, R34E

SL: 222' FSL & 2048' FEL

BHL: 100' FNL & 1980' FEL

3. Cementing Program

Casing	# Sk	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	1045	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM
	200	14.8	1.34	6.3	8	Tail: Class C + Retarder
Inter.	945	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM
	200	14.8	1.34	6.3	8	Tail: Class C + Retarder
Prod.	435	12.5	2.12	11	9	Lead: Class C + Gel + Retarder + Defoamer + Extender
	400	15.6	1.18	5.2	10	Tail: Class H + Retarder + Fluid Loss + Defoamer
Liner	230	11.2	2.97	18	16	Class C + Salt + Gel + Fluid Loss + Retarder + Dispersant + Defoamer + Anti-Settling Agent

A copy of cement test will be available on location at time of cement job providing pump times & compressive strengths.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	25%
Production	4284'	25%
Liner	10802'	25%

Mewbourne Oil Company, Black Sheep 4 B3OB Fed Com #1H

Sec 4, T22S, R34E

SL: 222' FSL & 2048' FEL

BHL: 100' FNL & 1980' FEL

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	System Rated WP	Type	✓	Tested to:
12-1/4"	13-5/8"	5M	Annular	X	2500#
			Blind Ram	X	5000#
			Pipe Ram	X	
			Double Ram		
			Other*		

*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The system may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.	
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.	
	N	Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.	
	<ul style="list-style-type: none"> Provide description here: See attached schematic. 	

Mewbourne Oil Company, Black Sheep 4 B3OB Fed Com #1H
Sec 4, T22S, R34E
SL: 222' FSL & 2048' FEL
BHL: 100' FNL & 1980' FEL

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0'	1779'	FW Gel	8.6-8.8	28-34	N/C
1779'	5399'	Saturated Brine	10.0	28-34	N/C
5399'	10798'	Cut Brine	8.6-9.7	28-34	N/C
10798'	11284'	OBM	8.6-10.0	30-40	<10cc

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	Visual Monitoring
---	-------------------

6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	Will run GR/CNL from KOP (10802') to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Additional logs planned		Interval
X	Gamma Ray	10802' (KOP) to TD
	Density	
	CBL	
	Mud log	
	PEX	

Mewbourne Oil Company, Black Sheep 4 B3OB Fed Com #1H
Sec 4, T22S, R34E
SL: 222' FSL & 2048' FEL
BHL: 100' FNL & 1980' FEL

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	5868 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers in surface hole.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

	H2S is present
X	H2S Plan attached

8. Other facets of operation

Is this a walking operation? If yes, describe.

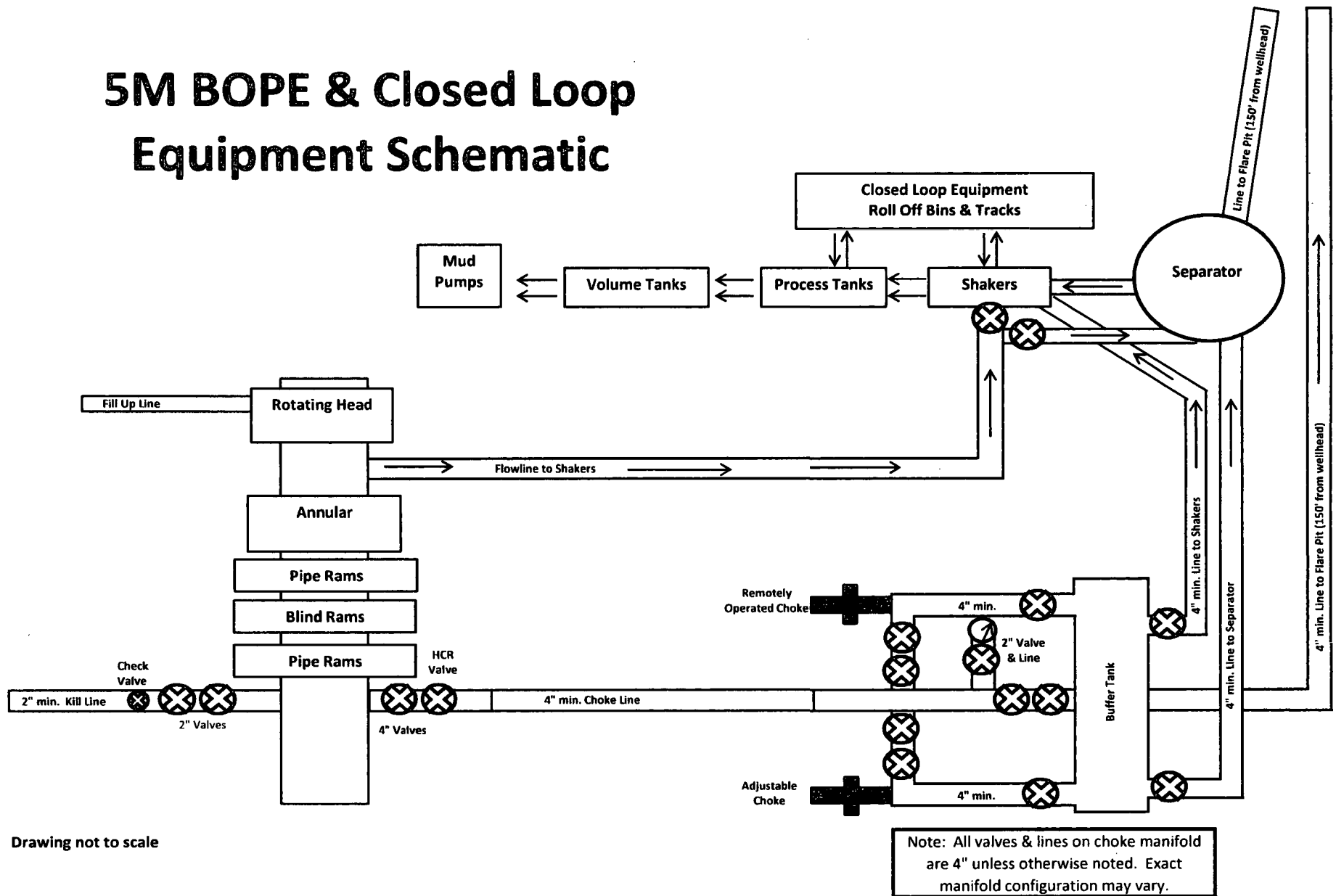
Will be pre-setting casing? If yes, describe.

Attachments

___ Directional Plan

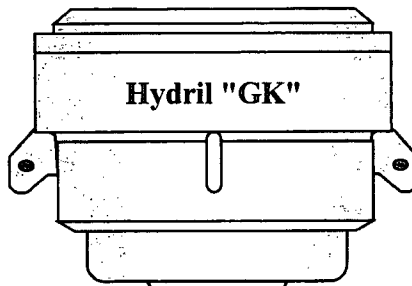
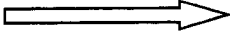
___ Other, describe

5M BOPE & Closed Loop Equipment Schematic



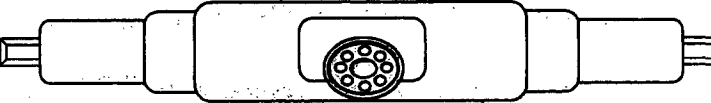
Drawing not to scale

Hydril "GK"
13 5/8" 5M

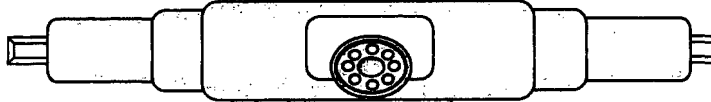


Hydril "GK"

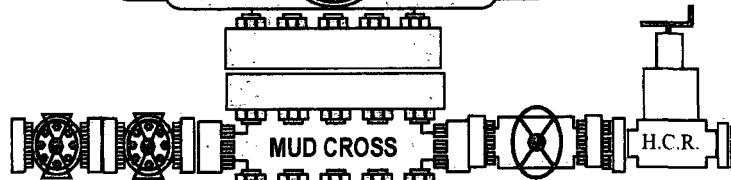
Cameron Type U
13 5/8" 5M



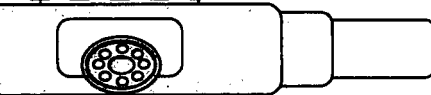
4 1/2" x 5 7/8" VBR



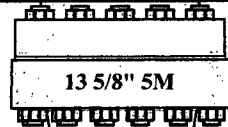
BLIND RAMS



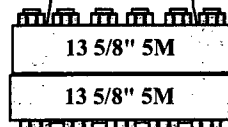
13 5/8" 5M



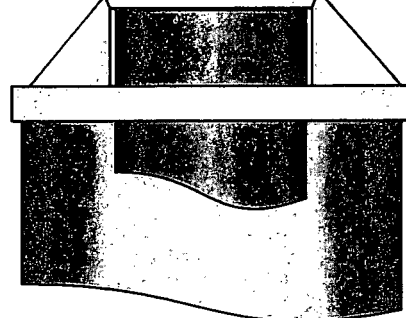
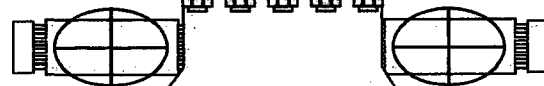
7" RAMS



13 5/8" 5M



13 5/8" 5M





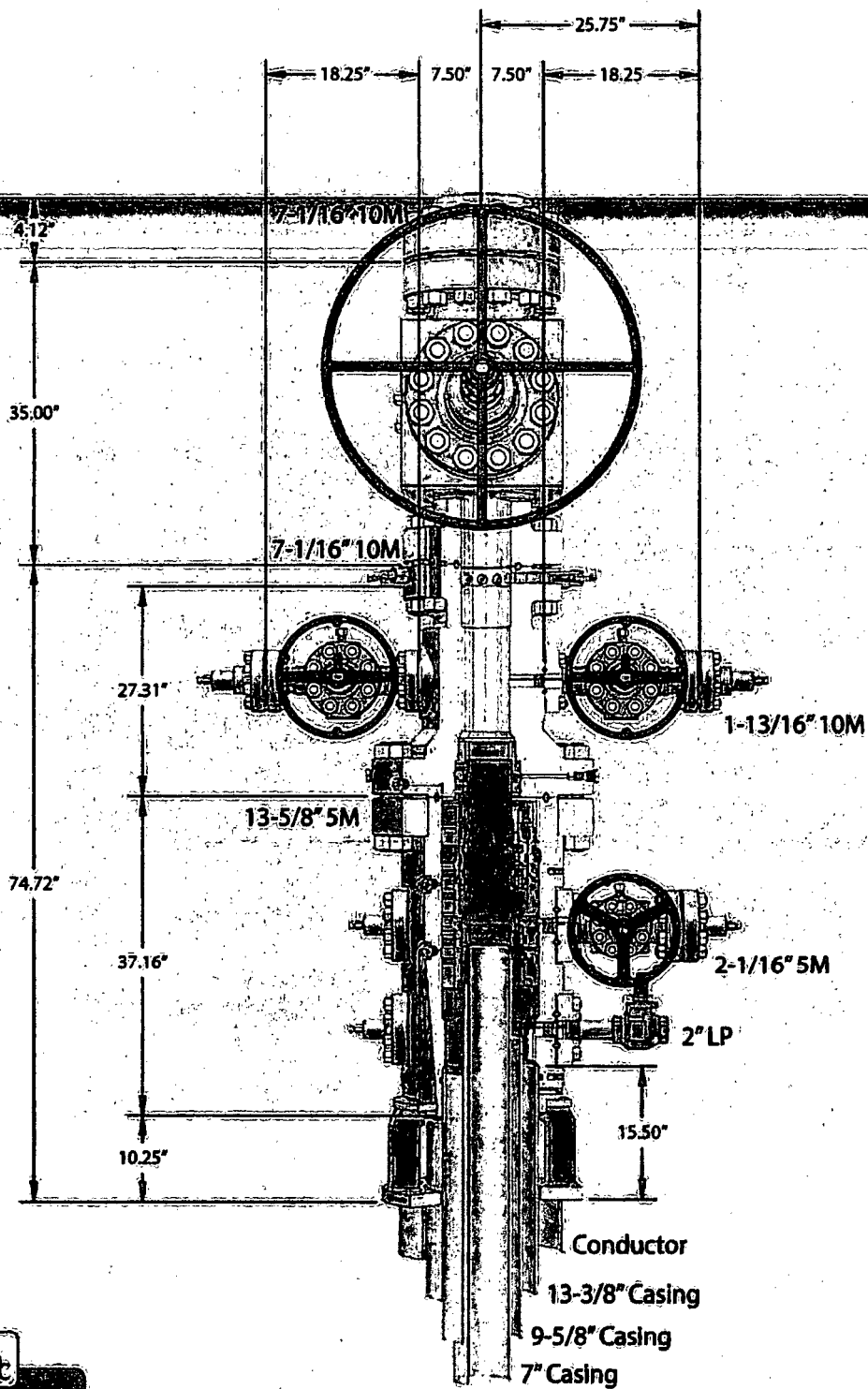
CAMERON

A Schlumberger Company

13-5/8" MN-DS Wellhead System

Ground Level

Ground Level



Clipping Range 57' conductor cut-off
79

C7585
Rev. 02

NOTE: All dimensions on this drawing are estimated measurements and should be evaluated by engineering.



GATES E & S NORTH AMERICA, INC.
134 44TH STREET
CORPUS CHRISTI, TEXAS 78405

PHONE: 361-887-9807
FAX: 361-887-0812
EMAIL: Tim.Cantu@gates.com
WEB: www.gates.com

10K CEMENTING ASSEMBLY PRESSURE TEST CERTIFICATE

Customer :	AUSTIN DISTRIBUTING	Test Date:	4/30/2015
Customer Ref. :	4060578	Hose Serial No.:	D-043015-7
Invoice No. :	500506	Created By:	JUSTIN CROPPER
Product Description:	10K3.548.0CK4.1/1610KFLGE/E LE		
End Fitting 1 :	4 1/16 10K FLG	End Fitting 2 :	4 1/16 10K FLG
Gates Part No. :	4773-6290	Assembly Code :	L36554102914D-043015-7
Working Pressure :	10,000 PSI	Test Pressure :	15,000 PSI

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 15,000 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

Quality Manager :
Date :
Signature :

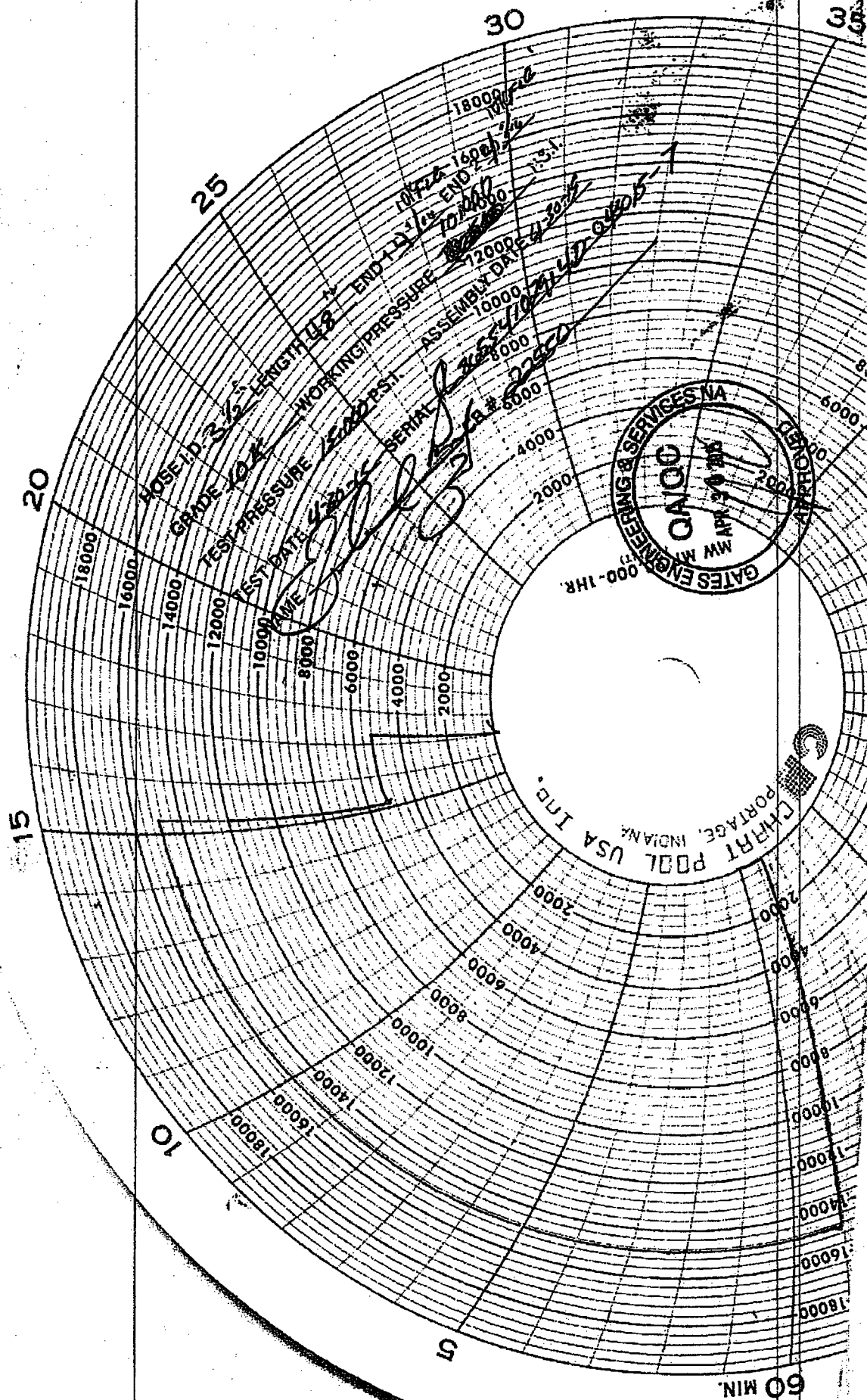
QUALITY
4/30/2015
<i>Justin Cropper</i>

Production:
Date :
Signature :

PRODUCTION
4/30/2015
<i>Justin Cropper</i>

Form PTC - 01 Rev.02





Hydrogen Sulfide Drilling Operations Plan
Mewbourne Oil Company

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.

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.

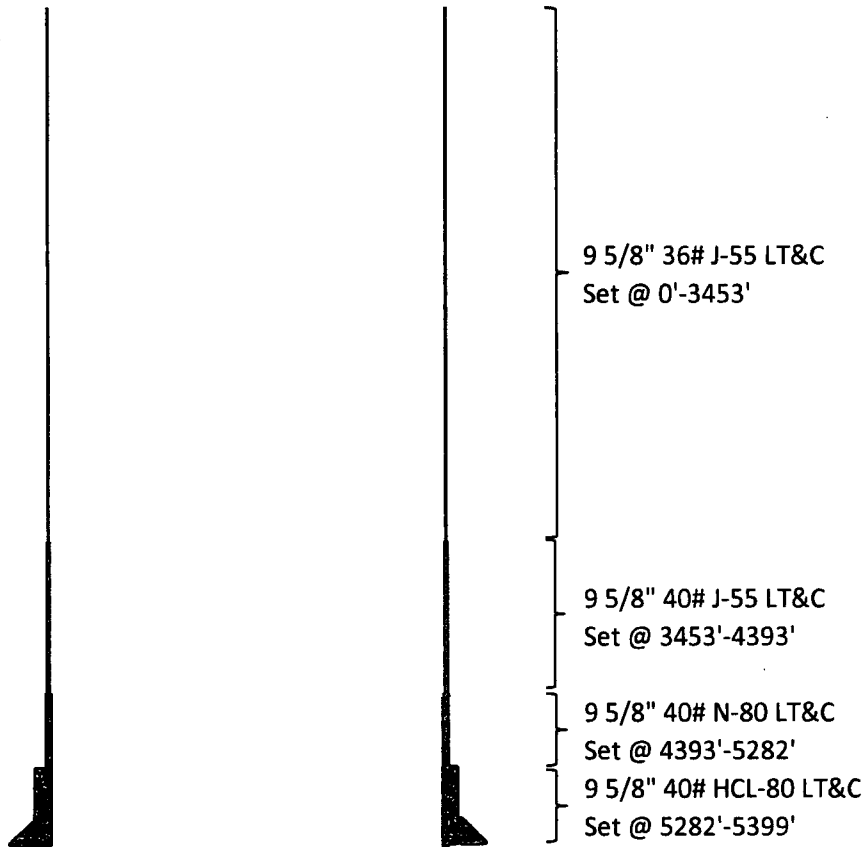
8. **Emergency Phone Numbers**

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	Robin Terrell	575-390-4816
Drilling Superintendent	Frosty Lathan	575-390-4103
	Bradley Bishop	575-390-6838
Drilling Foreman	Wesley Noseff	575-441-0729

Black Sheep 4 B3OB Fed Com #1H
Intermediate Casing



Casing	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
36# J-55	1.13	1.96	2.24	2.79
40# J-55	1.13	1.73	6.68	8.09
40# N-80	1.13	2.09	18.32	25.76
40# HCL-80	1.51	2.05	178.92	195.81

Mewbourne Oil Company

Lea County, New Mexico NAD 83

Black Sheep 4 B3OB Fed Com #1H

Sec 4, T22S, R34E

SL 222' FSL & 2108' FEL

BHL: 100' FNL & 1980' FEL

Plan: Design #1

Standard Planning Report

25 July, 2018

Planning Report

Database: Hobbs
Company: Mewbourne Oil Company
Project: Lea County, New Mexico NAD 83
Site: Black Sheep 4 B3OB Fed Com #1H
Well: Sec 4, T22S, R34E
Wellbore: BHL: 100' FNL & 1980' FEL
Design: Design #1

Local Co-ordinate Reference: Site Black Sheep 4 B3OB Fed Com #1H
TVD Reference: WELL @ 3624.0usft (Original Well Elev)
MD Reference: WELL @ 3624.0usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Lea County, New Mexico NAD 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site:	Black Sheep 4 B3OB Fed Com #1H		
Site Position:	Northing:	515,443.00 usft	Latitude: 32.4140837
From: Map	Easting:	806,779.00 usft	Longitude: -103.4731630
Position Uncertainty:	0.0 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.46 °

Well	Sec 4, T22S, R34E		
Well Position	+N/-S	0.0 usft	Northing: 515,443.00 usft
	+E/-W	0.0 usft	Easting: 806,779.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	3,624.0 usft
		Ground Level:	3,597.0 usft

Wellbore	BHL: 100' FNL & 1980' FEL		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	7/23/2018	(°)
			6.67
			Dip Angle (°)
			60.19
			Field Strength (nT)
			48,028

Design	Design #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction (°)
			1.12

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	
5,369.0	0.00	0.00	5,369.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,501.8	2.66	148.32	5,501.7	-2.6	1.6	2.00	2.00	0.00	148.32	
10,670.9	2.66	148.32	10,665.3	-206.4	127.4	0.00	0.00	0.00	0.00	
10,803.6	0.00	0.00	10,798.0	-209.0	129.0	2.00	-2.00	0.00	180.00	KOP @ 10798'
11,553.7	89.90	359.66	11,276.0	268.2	126.2	11.99	11.99	0.00	-0.34	
16,288.6	89.90	359.66	11,284.0	5,003.0	98.0	0.00	0.00	0.00	0.00	BHL: 100' FNL & 198

Planning Report

Database: Hobbs
 Company: Mewbourne Oil Company
 Project: Lea County, New Mexico NAD 83
 Site: Black Sheep 4 B3OB Fed Com #1H
 Well: Sec 4, T22S, R34E
 Wellbore: BHL: 100' FNL & 1980' FEL
 Design: Design #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Site Black Sheep 4 B3OB Fed Com #1H
 WELL @ 3624.0usft (Original Well Elev)
 WELL @ 3624.0usft (Original Well Elev)
 Grid
 Minimum Curvature

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
SL: 222' FSL 7 2108' FEL									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00

Planning Report

Database: Hobbs
 Company: Mewbourne Oil Company
 Project: Lea County, New Mexico NAD 83
 Site: Black Sheep 4 B3OB Fed Com #1H
 Well: Sec 4, T22S, R34E
 Wellbore: BHL: 100' FNL & 1980' FEL
 Design: Design #1

Local Co-ordinate Reference:
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 North Reference:
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Site Black Sheep 4 B3OB Fed Com #1H
 WELL @ 3624.0usft (Original Well Elev)
 WELL @ 3624.0usft (Original Well Elev)
 Grid
 Minimum Curvature

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)
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,369.0	0.00	0.00	5,369.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.62	148.32	5,400.0	-0.1	0.1	-0.1	2.00	2.00	0.00
5,500.0	2.62	148.32	5,500.0	-2.5	1.6	-2.5	2.00	2.00	0.00
5,501.8	2.66	148.32	5,501.7	-2.6	1.6	-2.6	2.00	2.00	0.00
5,600.0	2.66	148.32	5,599.8	-6.5	4.0	-6.4	0.00	0.00	0.00
5,700.0	2.66	148.32	5,699.7	-10.4	6.4	-10.3	0.00	0.00	0.00
5,800.0	2.66	148.32	5,799.6	-14.4	8.9	-14.2	0.00	0.00	0.00
5,900.0	2.66	148.32	5,899.5	-18.3	11.3	-18.1	0.00	0.00	0.00
6,000.0	2.66	148.32	5,999.4	-22.3	13.7	-22.0	0.00	0.00	0.00
6,100.0	2.66	148.32	6,099.3	-26.2	16.2	-25.9	0.00	0.00	0.00
6,200.0	2.66	148.32	6,199.2	-30.1	18.6	-29.8	0.00	0.00	0.00
6,300.0	2.66	148.32	6,299.1	-34.1	21.0	-33.7	0.00	0.00	0.00
6,400.0	2.66	148.32	6,399.0	-38.0	23.5	-37.6	0.00	0.00	0.00
6,500.0	2.66	148.32	6,498.9	-42.0	25.9	-41.5	0.00	0.00	0.00
6,600.0	2.66	148.32	6,598.8	-45.9	28.3	-45.3	0.00	0.00	0.00
6,700.0	2.66	148.32	6,698.7	-49.9	30.8	-49.2	0.00	0.00	0.00
6,800.0	2.66	148.32	6,798.6	-53.8	33.2	-53.1	0.00	0.00	0.00
6,900.0	2.66	148.32	6,898.5	-57.7	35.6	-57.0	0.00	0.00	0.00
7,000.0	2.66	148.32	6,998.3	-61.7	38.1	-60.9	0.00	0.00	0.00
7,100.0	2.66	148.32	7,098.2	-65.6	40.5	-64.8	0.00	0.00	0.00
7,200.0	2.66	148.32	7,198.1	-69.6	42.9	-68.7	0.00	0.00	0.00
7,300.0	2.66	148.32	7,298.0	-73.5	45.4	-72.6	0.00	0.00	0.00
7,400.0	2.66	148.32	7,397.9	-77.4	47.8	-76.5	0.00	0.00	0.00
7,500.0	2.66	148.32	7,497.8	-81.4	50.2	-80.4	0.00	0.00	0.00
7,600.0	2.66	148.32	7,597.7	-85.3	52.7	-84.3	0.00	0.00	0.00
7,700.0	2.66	148.32	7,697.6	-89.3	55.1	-88.2	0.00	0.00	0.00
7,800.0	2.66	148.32	7,797.5	-93.2	57.5	-92.1	0.00	0.00	0.00
7,900.0	2.66	148.32	7,897.4	-97.2	60.0	-96.0	0.00	0.00	0.00
8,000.0	2.66	148.32	7,997.3	-101.1	62.4	-99.9	0.00	0.00	0.00
8,100.0	2.66	148.32	8,097.2	-105.0	64.8	-103.7	0.00	0.00	0.00
8,200.0	2.66	148.32	8,197.1	-109.0	67.3	-107.6	0.00	0.00	0.00
8,300.0	2.66	148.32	8,296.9	-112.9	69.7	-111.5	0.00	0.00	0.00
8,400.0	2.66	148.32	8,396.8	-116.9	72.1	-115.4	0.00	0.00	0.00
8,500.0	2.66	148.32	8,496.7	-120.8	74.6	-119.3	0.00	0.00	0.00
8,600.0	2.66	148.32	8,596.6	-124.7	77.0	-123.2	0.00	0.00	0.00
8,700.0	2.66	148.32	8,696.5	-128.7	79.4	-127.1	0.00	0.00	0.00
8,800.0	2.66	148.32	8,796.4	-132.6	81.9	-131.0	0.00	0.00	0.00
8,900.0	2.66	148.32	8,896.3	-136.6	84.3	-134.9	0.00	0.00	0.00
9,000.0	2.66	148.32	8,996.2	-140.5	86.7	-138.8	0.00	0.00	0.00
9,100.0	2.66	148.32	9,096.1	-144.5	89.2	-142.7	0.00	0.00	0.00
9,200.0	2.66	148.32	9,196.0	-148.4	91.6	-146.6	0.00	0.00	0.00
9,300.0	2.66	148.32	9,295.9	-152.3	94.0	-150.5	0.00	0.00	0.00
9,400.0	2.66	148.32	9,395.8	-156.3	96.5	-154.4	0.00	0.00	0.00
9,500.0	2.66	148.32	9,495.7	-160.2	98.9	-158.3	0.00	0.00	0.00
9,600.0	2.66	148.32	9,595.6	-164.2	101.3	-162.2	0.00	0.00	0.00
9,700.0	2.66	148.32	9,695.4	-168.1	103.8	-166.0	0.00	0.00	0.00
9,800.0	2.66	148.32	9,795.3	-172.1	106.2	-169.9	0.00	0.00	0.00
9,900.0	2.66	148.32	9,895.2	-176.0	108.6	-173.8	0.00	0.00	0.00
10,000.0	2.66	148.32	9,995.1	-179.9	111.1	-177.7	0.00	0.00	0.00
10,100.0	2.66	148.32	10,095.0	-183.9	113.5	-181.6	0.00	0.00	0.00
10,200.0	2.66	148.32	10,194.9	-187.8	115.9	-185.5	0.00	0.00	0.00
10,300.0	2.66	148.32	10,294.8	-191.8	118.4	-189.4	0.00	0.00	0.00
10,400.0	2.66	148.32	10,394.7	-195.7	120.8	-193.3	0.00	0.00	0.00

Planning Report

Database: Hobbs
 Company: Mewbourne Oil Company
 Project: Lea County, New Mexico NAD 83
 Site: Black Sheep 4 B3OB Fed Com #1H
 Well: Sec 4, T22S, R34E
 Wellbore: BHL: 100' FNL & 1980' FEL
 Design: Design #1

Local Co-ordinate Reference: Site Black Sheep 4 B3OB Fed Com #1H
 TVD Reference: WELL @ 3624.0usft (Original Well Elev)
 MD Reference: WELL @ 3624.0usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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)
10,500.0	2.66	148.32	10,494.6	-199.6	123.2	-197.2	0.00	0.00	0.00
10,600.0	2.66	148.32	10,594.5	-203.6	125.7	-201.1	0.00	0.00	0.00
10,670.9	2.66	148.32	10,665.3	-206.4	127.4	-203.8	0.00	0.00	0.00
10,700.0	2.07	148.32	10,694.4	-207.4	128.0	-204.9	2.00	-2.00	0.00
10,800.0	0.07	148.32	10,794.4	-209.0	129.0	-206.4	2.00	-2.00	0.00
10,803.6	0.00	0.00	10,798.0	-209.0	129.0	-206.4	2.00	-2.00	0.00
KOP @ 10798'									
10,900.0	11.55	359.66	10,893.7	-199.3	128.9	-196.8	11.99	11.99	0.00
11,000.0	23.54	359.66	10,988.9	-169.2	128.8	-166.7	11.99	11.99	0.00
11,100.0	35.52	359.66	11,075.7	-120.0	128.5	-117.5	11.99	11.99	0.00
11,101.8	35.74	359.66	11,077.2	-119.0	128.5	-116.5	11.99	11.99	0.00
FTP: 100' FSL & 1980' FEL									
11,200.0	47.51	359.66	11,150.5	-53.9	128.1	-51.4	11.99	11.99	0.00
11,300.0	59.50	359.66	11,209.8	26.4	127.6	28.9	11.99	11.99	0.00
11,400.0	71.48	359.66	11,251.3	117.2	127.1	119.7	11.99	11.99	0.00
11,500.0	83.47	359.66	11,272.9	214.6	126.5	217.1	11.99	11.99	0.00
11,553.7	89.90	359.66	11,276.0	268.2	126.2	270.6	11.99	11.99	0.00
LP: 487' FSL & 1980' FEL									
11,600.0	89.90	359.66	11,276.1	314.5	125.9	316.9	0.00	0.00	0.00
11,700.0	89.90	359.66	11,276.2	414.5	125.3	416.9	0.00	0.00	0.00
11,800.0	89.90	359.66	11,276.4	514.5	124.7	516.8	0.00	0.00	0.00
11,900.0	89.90	359.66	11,276.6	614.5	124.1	616.8	0.00	0.00	0.00
12,000.0	89.90	359.66	11,276.8	714.5	123.5	716.8	0.00	0.00	0.00
12,100.0	89.90	359.66	11,276.9	814.5	122.9	816.7	0.00	0.00	0.00
12,200.0	89.90	359.66	11,277.1	914.5	122.3	916.7	0.00	0.00	0.00
12,300.0	89.90	359.66	11,277.3	1,014.5	121.7	1,016.7	0.00	0.00	0.00
12,400.0	89.90	359.66	11,277.4	1,114.5	121.1	1,116.6	0.00	0.00	0.00
12,500.0	89.90	359.66	11,277.6	1,214.5	120.5	1,216.6	0.00	0.00	0.00
12,600.0	89.90	359.66	11,277.8	1,314.5	119.9	1,316.6	0.00	0.00	0.00
12,700.0	89.90	359.66	11,277.9	1,414.5	119.3	1,416.6	0.00	0.00	0.00
12,800.0	89.90	359.66	11,278.1	1,514.5	118.7	1,516.5	0.00	0.00	0.00
12,900.0	89.90	359.66	11,278.3	1,614.5	118.2	1,616.5	0.00	0.00	0.00
13,000.0	89.90	359.66	11,278.4	1,714.5	117.6	1,716.5	0.00	0.00	0.00
13,100.0	89.90	359.66	11,278.6	1,814.5	117.0	1,816.4	0.00	0.00	0.00
13,200.0	89.90	359.66	11,278.8	1,914.5	116.4	1,916.4	0.00	0.00	0.00
13,300.0	89.90	359.66	11,279.0	2,014.5	115.8	2,016.4	0.00	0.00	0.00
13,400.0	89.90	359.66	11,279.1	2,114.5	115.2	2,116.3	0.00	0.00	0.00
13,500.0	89.90	359.66	11,279.3	2,214.5	114.6	2,216.3	0.00	0.00	0.00
13,600.0	89.90	359.66	11,279.5	2,314.5	114.0	2,316.3	0.00	0.00	0.00
13,700.0	89.90	359.66	11,279.6	2,414.5	113.4	2,416.2	0.00	0.00	0.00
13,708.5	89.90	359.66	11,279.6	2,423.0	113.3	2,424.8	0.00	0.00	0.00
PPP-2: 2642' FSL & 1980' FEL									
13,800.0	89.90	359.66	11,279.8	2,514.5	112.8	2,516.2	0.00	0.00	0.00
13,900.0	89.90	359.66	11,280.0	2,614.5	112.2	2,616.2	0.00	0.00	0.00
14,000.0	89.90	359.66	11,280.1	2,714.5	111.6	2,716.1	0.00	0.00	0.00
14,100.0	89.90	359.66	11,280.3	2,814.5	111.0	2,816.1	0.00	0.00	0.00
14,200.0	89.90	359.66	11,280.5	2,914.5	110.4	2,916.1	0.00	0.00	0.00
14,300.0	89.90	359.66	11,280.6	3,014.5	109.8	3,016.0	0.00	0.00	0.00
14,400.0	89.90	359.66	11,280.8	3,114.5	109.2	3,116.0	0.00	0.00	0.00
14,500.0	89.90	359.66	11,281.0	3,214.4	108.6	3,216.0	0.00	0.00	0.00
14,600.0	89.90	359.66	11,281.1	3,314.4	108.0	3,315.9	0.00	0.00	0.00
14,700.0	89.90	359.66	11,281.3	3,414.4	107.4	3,415.9	0.00	0.00	0.00
14,800.0	89.90	359.66	11,281.5	3,514.4	106.9	3,515.9	0.00	0.00	0.00

Planning Report

Database: Hobbs
 Company: Mewbourne Oil Company
 Project: Lea County, New Mexico NAD 83
 Site: Black Sheep 4 B3OB Fed Com #1H
 Well: Sec 4, T22S, R34E
 Wellbore: BHL: 100' FNL & 1980' FEL
 Design: Design #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Site Black Sheep 4 B3OB Fed Com #1H
 WELL @ 3624.0usft (Original Well Elev)
 WELL @ 3624.0usft (Original Well Elev)
 Grid
 Minimum Curvature

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)
14,900.0	89.90	359.66	11,281.7	3,614.4	106.3	3,615.8	0.00	0.00	0.00
15,000.0	89.90	359.66	11,281.8	3,714.4	105.7	3,715.8	0.00	0.00	0.00
15,100.0	89.90	359.66	11,282.0	3,814.4	105.1	3,815.8	0.00	0.00	0.00
15,200.0	89.90	359.66	11,282.2	3,914.4	104.5	3,915.7	0.00	0.00	0.00
15,300.0	89.90	359.66	11,282.3	4,014.4	103.9	4,015.7	0.00	0.00	0.00
15,400.0	89.90	359.66	11,282.5	4,114.4	103.3	4,115.7	0.00	0.00	0.00
15,500.0	89.90	359.66	11,282.7	4,214.4	102.7	4,215.6	0.00	0.00	0.00
15,600.0	89.90	359.66	11,282.8	4,314.4	102.1	4,315.6	0.00	0.00	0.00
15,700.0	89.90	359.66	11,283.0	4,414.4	101.5	4,415.6	0.00	0.00	0.00
15,800.0	89.90	359.66	11,283.2	4,514.4	100.9	4,515.5	0.00	0.00	0.00
15,900.0	89.90	359.66	11,283.3	4,614.4	100.3	4,615.5	0.00	0.00	0.00
16,000.0	89.90	359.66	11,283.5	4,714.4	99.7	4,715.5	0.00	0.00	0.00
16,100.0	89.90	359.66	11,283.7	4,814.4	99.1	4,815.4	0.00	0.00	0.00
16,200.0	89.90	359.66	11,283.9	4,914.4	98.5	4,915.4	0.00	0.00	0.00
16,288.6	89.90	359.66	11,284.0	5,003.0	98.0	5,004.0	0.00	0.00	0.00
BHL: 100' FNL & 1980' FEL									

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
SL: 222' FSL 7 2108' FE - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	515,443.00	806,779.00	32.4140837	-103.4731630
KOP @ 10798' - plan hits target center - Point	0.00	0.00	10,798.0	-209.0	129.0	515,234.00	806,908.00	32.4135064	-103.4727505
FTP: 100' FSL & 1980' I - plan hits target center - Point	0.00	0.00	11,077.2	-119.0	128.5	515,324.00	806,907.46	32.4137538	-103.4727499
LP: 487' FSL & 1980' FE - plan hits target center - Point	0.00	0.00	11,276.0	268.2	126.2	515,711.19	806,905.16	32.4148181	-103.4727472
PPP-2: 2642' FSL & 1980' I - plan hits target center - Point	0.00	0.00	11,279.6	2,423.0	113.3	517,866.00	806,892.34	32.4207409	-103.4727325
BHL: 100' FNL & 1980' I - plan hits target center - Point	0.00	0.00	11,284.0	5,003.0	98.0	520,446.00	806,877.00	32.4278324	-103.4727149

Black Sheep 4 B3OB Fed Com #1H

