

HOBBS OCD
FEB 14 2019
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Mewbourne Oil Company

Lea County, New Mexico (Nad 83)

Sec 15, T23S, R34E

Ibex 10 B3MD Federal Com #1H

Wellbore #1

Design: Wellbore #1

QES Survey Certification Report

18 December, 2018



Quintana Energy Services

11390 FM 830

Willis, TX 77318

Phone: (936) 856-4332

Fax: (936) 856-8678



Survey Certification Sheet

Company	Job Number	Date
Mewbourne Oil Company	WT-181368	12/18/2018

Lease	Well Name	County & State
SEC 15, T-23S, R34E	Ibex 10 B3MD Federal Com #1H	Lea County, NM

API No.	Survey Depth Range	Survey Type
30-025-44585	107 feet to 16775 feet MD	MWD

Sidetrack Information	Directional Supervisor/Surveyor
Click here to enter text.	Jeff Newton

Certification Statement

The data and calculations for this survey have been checked by me and conform to the standards and procedures set forth by Quintana Energy Services (QES). This report represents a true and correct directional survey of this well based on the original data obtained at the well site. Wellbore coordinates are calculated using minimum curvature.

Christopher Hughes

Digitally signed by Christopher Hughes
DN: cn=Christopher Hughes, o=QES,
ou=compliance, email=chrish@qeslp.com, c=US
Date: 2019.02.12 08:03:10 -06'00'

Christopher Hughes
MWD Compliance Manager

Quintana Energy Services



QES Survey Certification Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ibex 10 B3MD Federal Com #1H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Ibex 10 B3MD Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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	Sec 15, T23S, R34E		
Site Position:		Northing:	478,076.70 usft
From:	Map	Easting:	809,284.20 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"
		Latitude:	32° 18' 40.772 N
		Longitude:	103° 27' 57.696 W
		Grid Convergence:	0.46 °

Well	Ibex 10 B3MD Federal Com #1H		
Well Position	+N/-S	0.0 usft	Northing: 478,076.70 usft
	+E/-W	0.0 usft	Easting: 809,284.20 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 18' 40.772 N
		Longitude:	103° 27' 57.696 W
		Ground Level:	3,403.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/20/2018	6.76	60.14	47,854.14309951

Design	Wellbore #1			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	3.28

Survey Program	Date 12/18/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
107.0	16,775.0	QES MWD Surveys (Wellbore #1)	OWSG (Rev2) MWD	OWSG MWD - Standard

Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00
	107.0	0.90	35.30	107.0	0.7	0.5	0.8	35.30
First MWD Survey @ 107.0' MD / 107.0' TVD								
	169.0	0.80	37.60	169.0	1.4	1.0	1.8	35.87
	219.0	0.90	44.40	219.0	2.0	1.5	2.5	37.44
	311.0	1.00	18.20	311.0	3.3	2.3	4.0	34.89
	371.0	1.00	10.70	371.0	4.3	2.5	5.0	30.68
	429.0	1.10	10.50	429.0	5.3	2.7	6.0	27.18
	490.0	1.10	7.70	489.9	6.5	2.9	7.1	24.25
	551.0	1.20	1.40	550.9	7.7	3.0	8.3	21.37
	613.0	1.00	4.20	612.9	8.9	3.1	9.4	19.04
	672.0	0.90	6.50	671.9	9.9	3.2	10.3	17.76



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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
732.0	0.40	17.40	731.9	10.5	3.3	11.0	17.27
830.0	0.40	119.70	829.9	10.7	3.7	11.3	18.97
924.0	1.30	147.30	923.9	9.6	4.5	10.6	25.23
1,019.0	2.90	160.10	1,018.8	6.5	5.9	8.8	42.59
1,114.0	3.80	158.20	1,113.7	1.3	7.9	8.0	80.88
1,209.0	3.20	155.40	1,208.5	-4.1	10.2	11.0	111.73
1,303.0	1.60	144.10	1,302.4	-7.5	12.1	14.2	121.93
1,409.0	1.60	124.10	1,408.4	-9.5	14.1	17.1	123.99
1,496.0	1.80	131.40	1,495.3	-11.1	16.2	19.6	124.51
1,591.0	0.70	111.60	1,590.3	-12.3	17.8	21.7	124.64
1,654.0	0.30	73.80	1,653.3	-12.4	18.4	22.2	124.09
1,718.0	0.90	69.80	1,717.3	-12.2	19.0	22.6	122.72
1,781.0	1.00	89.60	1,780.3	-12.0	20.0	23.3	121.02
1,878.0	0.70	90.70	1,877.3	-12.0	21.4	24.6	119.29
1,972.0	0.70	75.70	1,971.3	-11.9	22.6	25.5	117.78
2,066.0	0.30	27.00	2,065.3	-11.5	23.2	25.9	116.39
2,160.0	0.50	44.30	2,159.3	-11.0	23.6	26.1	114.99
2,255.0	0.30	1.50	2,254.3	-10.5	23.9	26.1	113.63
2,349.0	0.70	25.80	2,348.3	-9.7	24.2	26.1	111.87
2,444.0	0.90	35.30	2,443.2	-8.6	24.9	26.3	109.03
2,539.0	1.20	11.00	2,538.2	-7.0	25.5	26.4	105.34
2,633.0	1.70	15.30	2,632.2	-4.7	26.0	26.5	100.19
2,727.0	0.40	87.30	2,726.2	-3.3	26.7	26.9	97.08
2,822.0	1.10	123.40	2,821.2	-3.8	27.8	28.1	97.79
2,917.0	1.10	99.80	2,916.2	-4.5	29.5	29.8	98.61
3,011.0	1.50	94.90	3,010.1	-4.7	31.6	32.0	98.50
3,105.0	2.30	79.20	3,104.1	-4.5	34.7	35.0	97.35
3,200.0	1.20	99.40	3,199.0	-4.3	37.5	37.8	96.50
3,294.0	2.00	216.20	3,293.0	-5.8	37.5	38.0	98.73
3,388.0	1.90	217.60	3,387.0	-8.3	35.6	36.6	103.15
3,483.0	1.20	183.80	3,481.9	-10.6	34.6	36.2	106.98
3,577.0	1.30	127.80	3,575.9	-12.2	35.4	37.4	109.03
3,672.0	1.50	110.50	3,670.9	-13.3	37.4	39.7	109.57
3,767.0	1.10	129.70	3,765.9	-14.3	39.3	41.8	110.03
3,862.0	0.70	173.80	3,860.8	-15.5	40.0	42.9	111.14
3,956.0	1.90	226.20	3,954.8	-17.1	39.0	42.6	113.72
4,051.0	2.80	238.00	4,049.7	-19.4	35.9	40.8	118.47
4,146.0	2.80	233.20	4,144.6	-22.1	32.0	38.9	124.56
4,240.0	2.30	226.50	4,238.5	-24.7	28.8	38.0	130.63
4,335.0	1.20	227.90	4,333.5	-26.7	26.7	37.8	135.01
4,429.0	0.40	196.80	4,427.5	-27.7	25.9	37.9	136.93
4,524.0	0.60	76.10	4,522.5	-27.9	26.3	38.3	136.71
4,618.0	0.80	81.00	4,616.5	-27.7	27.4	38.9	135.28
4,713.0	0.70	65.20	4,711.5	-27.3	28.6	39.5	133.71



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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
4,807.0	1.10	81.50	4,805.5	-26.9	30.0	40.3	131.94
4,896.0	1.40	76.10	4,894.4	-26.6	31.9	41.5	129.79
5,002.0	1.90	85.90	5,000.4	-26.1	34.9	43.6	126.81
5,097.0	2.20	133.90	5,095.3	-27.3	37.8	46.6	125.82
5,191.0	3.80	168.00	5,189.2	-31.6	39.7	50.7	128.47
5,285.0	3.10	180.00	5,283.0	-37.2	40.4	54.9	132.62
5,380.0	2.70	182.10	5,377.9	-42.0	40.3	58.2	136.16
5,475.0	2.70	179.10	5,472.8	-46.4	40.2	61.5	139.08
5,569.0	2.90	178.60	5,566.7	-51.0	40.3	65.0	141.67
5,664.0	3.20	176.10	5,661.6	-56.1	40.6	69.2	144.11
5,759.0	3.20	172.60	5,756.4	-61.4	41.1	73.8	146.18
5,853.0	3.00	175.00	5,850.3	-66.4	41.7	78.4	147.90
5,948.0	3.00	175.90	5,945.1	-71.4	42.0	82.8	149.49
6,043.0	3.10	176.30	6,040.0	-76.4	42.4	87.4	150.98
6,138.0	3.00	176.30	6,134.9	-81.4	42.7	92.0	152.32
6,232.0	3.20	173.30	6,228.7	-86.5	43.2	96.7	153.47
6,326.0	3.40	171.50	6,322.6	-91.9	43.9	101.8	154.46
6,421.0	3.70	170.10	6,417.4	-97.7	44.8	107.5	155.34
6,515.0	3.00	180.70	6,511.2	-103.1	45.3	112.6	156.27
6,610.0	2.80	189.10	6,606.1	-107.9	44.9	116.9	157.39
6,705.0	2.70	189.40	6,701.0	-112.4	44.2	120.8	158.53
6,799.0	2.90	189.40	6,794.9	-116.9	43.5	124.7	159.61
6,893.0	3.10	188.10	6,888.8	-121.8	42.7	129.1	160.67
6,988.0	3.40	187.20	6,983.6	-127.1	42.0	133.9	161.72
7,082.0	3.70	187.00	7,077.4	-132.9	41.3	139.2	162.75
7,177.0	2.50	175.60	7,172.3	-138.0	41.1	144.0	163.43
7,271.0	1.90	159.90	7,266.2	-141.5	41.8	147.6	163.56
7,366.0	1.70	166.30	7,361.2	-144.4	42.6	150.5	163.55
7,461.0	1.50	163.60	7,456.1	-146.9	43.3	153.2	163.57
7,555.0	1.50	163.80	7,550.1	-149.3	44.0	155.6	163.58
7,649.0	1.20	168.70	7,644.1	-151.4	44.5	157.9	163.61
7,744.0	1.20	163.80	7,739.1	-153.4	45.0	159.8	163.64
7,838.0	1.20	165.00	7,833.0	-155.3	45.5	161.8	163.65
7,933.0	1.60	160.30	7,928.0	-157.5	46.2	164.1	163.63
8,027.0	1.60	161.90	8,022.0	-160.0	47.1	166.7	163.59
8,122.0	1.50	161.70	8,116.9	-162.4	47.9	169.3	163.57
8,217.0	2.10	158.50	8,211.9	-165.2	48.9	172.3	163.50
8,313.0	2.10	154.30	8,307.8	-168.4	50.3	175.8	163.36
8,407.0	1.90	180.00	8,401.8	-171.5	51.1	179.0	163.42
8,503.0	1.80	201.10	8,497.7	-174.5	50.5	181.7	163.85
8,598.0	2.50	210.70	8,592.7	-177.7	48.9	184.3	164.60
8,693.0	3.70	198.10	8,687.5	-182.4	46.9	188.3	165.57
8,787.0	3.40	202.80	8,781.3	-187.8	44.9	193.1	166.55
8,882.0	3.00	213.70	8,876.2	-192.5	42.4	197.1	167.57
8,977.0	3.00	219.70	8,971.1	-196.5	39.5	200.4	168.64

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
9,071.0	2.80	222.00	9,064.9	-200.1	36.4	203.4	169.70
9,166.0	2.50	188.20	9,159.8	-203.9	34.5	206.8	170.39
9,261.0	1.50	194.70	9,254.8	-207.1	33.9	209.9	170.70
9,355.0	0.90	216.00	9,348.8	-208.9	33.2	211.5	170.98
9,450.0	0.60	224.30	9,443.8	-209.9	32.4	212.4	171.23
9,544.0	0.80	219.00	9,537.8	-210.7	31.6	213.1	171.47
9,639.0	0.70	244.60	9,632.7	-211.5	30.7	213.7	171.75
9,733.0	1.10	194.60	9,726.7	-212.6	29.9	214.7	171.99
9,828.0	1.60	157.50	9,821.7	-214.7	30.2	216.8	171.99
9,922.0	1.90	139.20	9,915.7	-217.1	31.7	219.4	171.69
10,016.0	2.10	134.10	10,009.6	-219.5	34.0	222.1	171.20
10,111.0	2.70	135.80	10,104.5	-222.3	36.8	225.3	170.60
10,205.0	2.50	133.60	10,198.4	-225.3	39.8	228.8	169.98
10,300.0	3.00	130.20	10,293.3	-228.3	43.2	232.4	169.28
10,395.0	2.60	131.80	10,388.2	-231.4	46.7	236.1	168.58
10,489.0	2.80	139.20	10,482.1	-234.5	49.8	239.8	168.01
10,542.0	2.80	141.80	10,535.0	-236.5	51.5	242.1	167.73
10,636.0	2.50	145.90	10,628.9	-240.0	54.0	246.0	167.31
10,731.0	1.90	149.70	10,723.9	-243.1	56.0	249.5	167.03
10,798.0	1.50	151.00	10,790.8	-244.8	57.0	251.4	166.90
10,825.0	1.70	144.40	10,817.8	-245.5	57.4	252.1	166.84
<u>10,857.0</u>	1.70	87.50	10,849.8	<u>-245.8</u>	<u>58.1</u>	252.6	166.70
10,888.0	6.00	33.90	10,880.7	-244.5	59.5	251.6	166.32
10,919.0	11.80	30.20	10,911.4	-240.4	62.0	248.3	165.54
10,951.0	19.00	28.60	10,942.2	-233.0	66.1	242.2	164.15
10,982.0	24.20	27.00	10,971.0	-222.9	71.4	234.1	162.23
11,014.0	27.70	26.50	10,999.8	-210.4	77.7	224.3	159.72
11,045.0	29.20	26.30	11,027.0	-197.1	84.3	214.4	156.85
11,076.0	31.00	26.70	11,053.8	-183.2	91.2	204.7	153.53
11,108.0	33.70	26.10	11,080.9	-167.9	98.9	194.8	149.51
11,139.0	39.50	24.80	11,105.8	-151.2	106.8	185.1	144.77
11,171.0	46.60	24.20	11,129.1	-131.3	115.8	175.1	138.59
11,202.0	51.40	24.80	11,149.5	-110.1	125.5	166.9	131.24
11,234.0	55.50	24.40	11,168.5	-86.7	136.2	161.5	122.47
11,265.0	59.00	24.20	11,185.3	-62.9	147.0	159.9	113.18
11,297.0	61.50	22.60	11,201.2	-37.4	158.0	162.4	103.33
11,329.0	62.80	21.80	11,216.1	-11.2	168.7	169.0	93.81
11,360.0	64.50	20.00	11,229.9	14.7	178.6	179.2	85.29
11,391.0	65.70	19.50	11,242.9	41.2	188.1	192.5	77.65
11,423.0	66.60	18.80	11,255.9	68.8	197.7	209.3	70.81
11,454.0	67.40	18.40	11,268.0	95.9	206.8	227.9	65.13
11,486.0	68.30	18.20	11,280.0	124.0	216.1	249.1	60.15
11,517.0	69.60	18.60	11,291.2	151.5	225.2	271.4	56.08
11,549.0	70.70	18.20	11,302.0	180.0	234.7	295.8	52.51

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11,563.0	71.20	18.40	11,306.6	192.6	238.9	306.8	51.12	
11,638.0	75.90	18.10	11,327.8	260.9	261.4	369.3	45.06	
11,670.0	78.00	17.00	11,335.1	290.6	270.8	397.2	42.98	
11,701.0	79.30	16.10	11,341.2	319.7	279.4	424.6	41.15	
11,733.0	81.90	14.90	11,346.4	350.1	287.9	453.3	39.43	
11,764.0	84.20	14.90	11,350.1	379.9	295.8	481.5	37.91	
11,796.0	86.30	14.70	11,352.8	410.7	303.9	510.9	36.50	
11,827.0	89.00	13.30	11,354.1	440.8	311.4	539.7	35.24	
11,858.0	90.80	11.70	11,354.1	471.0	318.1	568.4	34.04	
11,890.0	91.60	10.00	11,353.4	502.4	324.2	597.9	32.83	
11,922.0	91.40	8.10	11,352.6	534.0	329.2	627.3	31.65	
11,953.0	90.90	6.30	11,352.0	564.8	333.1	655.7	30.53	
11,985.0	89.50	4.70	11,351.9	596.6	336.1	684.8	29.40	
12,079.0	89.30	1.40	11,352.9	690.5	341.1	770.2	26.29	
12,174.0	89.00	1.20	11,354.3	785.4	343.3	857.2	23.61	
12,269.0	90.60	0.70	11,354.6	880.4	344.9	945.6	21.39	
12,363.0	90.40	0.80	11,353.8	974.4	346.1	1,034.1	19.55	
12,458.0	90.30	1.00	11,353.2	1,069.4	347.6	1,124.5	18.01	
12,552.0	89.70	1.00	11,353.2	1,163.4	349.2	1,214.7	16.71	
12,647.0	89.90	0.80	11,353.5	1,258.4	350.7	1,306.3	15.57	
12,742.0	89.80	0.50	11,353.8	1,353.4	351.8	1,398.3	14.57	
12,837.0	89.30	0.10	11,354.5	1,448.4	352.3	1,490.6	13.67	
12,932.0	90.00	0.30	11,355.1	1,543.4	352.6	1,583.1	12.87	
13,026.0	91.70	1.50	11,353.7	1,637.3	354.1	1,675.2	12.20	
13,121.0	91.50	0.70	11,351.1	1,732.3	355.9	1,768.5	11.61	
13,216.0	89.50	359.80	11,350.2	1,827.3	356.3	1,861.7	11.04	
13,311.0	88.30	0.50	11,352.0	1,922.2	356.6	1,955.0	10.51	
13,406.0	90.20	359.80	11,353.3	2,017.2	356.8	2,048.6	10.03	
13,501.0	96.60	1.20	11,347.7	2,112.0	357.7	2,142.1	9.61	
13,595.0	95.10	1.40	11,338.1	2,205.5	359.8	2,234.6	9.27	
13,690.0	92.30	1.00	11,332.0	2,300.3	361.8	2,328.5	8.94	
13,785.0	92.40	1.50	11,328.1	2,395.2	363.8	2,422.6	8.64	
13,880.0	91.30	1.70	11,325.0	2,490.1	366.5	2,516.9	8.37	
13,974.0	90.30	0.70	11,323.7	2,584.0	368.5	2,610.2	8.12	
14,069.0	90.00	0.80	11,323.4	2,679.0	369.7	2,704.4	7.86	
14,164.0	89.00	1.20	11,324.3	2,774.0	371.4	2,798.8	7.62	
14,259.0	90.80	357.90	11,324.4	2,869.0	370.6	2,892.8	7.36	
14,353.0	91.00	359.10	11,322.9	2,963.0	368.2	2,985.7	7.08	
14,448.0	91.30	358.20	11,321.0	3,057.9	365.9	3,079.7	6.82	
14,543.0	92.00	358.90	11,318.3	3,152.8	363.5	3,173.7	6.58	
14,638.0	92.30	359.30	11,314.7	3,247.8	362.0	3,267.9	6.36	
14,732.0	92.90	359.60	11,310.5	3,341.7	361.1	3,361.1	6.17	
14,827.0	92.20	359.80	11,306.2	3,436.6	360.6	3,455.4	5.99	
14,921.0	90.90	359.60	11,303.7	3,530.5	360.1	3,548.8	5.82	

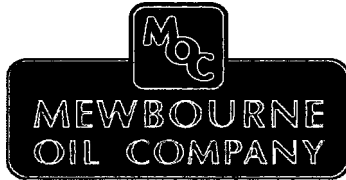
Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ibex 10 B3MD Federal Com #1H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Ibex 10 B3MD Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
15,016.0	90.80	0.00	11,302.3	3,625.5	359.8	3,643.3	5.67
15,110.0	90.80	0.10	11,301.0	3,719.5	359.9	3,736.9	5.53
15,205.0	90.00	0.10	11,300.3	3,814.5	360.1	3,831.5	5.39
15,300.0	91.40	359.10	11,299.2	3,909.5	359.4	3,926.0	5.25
15,394.0	91.90	358.40	11,296.5	4,003.4	357.3	4,019.3	5.10
15,489.0	93.10	359.80	11,292.3	4,098.3	355.8	4,113.7	4.96
15,583.0	92.50	358.00	11,287.7	4,192.2	354.0	4,207.1	4.83
15,678.0	91.70	358.70	11,284.2	4,287.1	351.3	4,301.4	4.68
15,772.0	91.40	359.30	11,281.7	4,381.0	349.7	4,395.0	4.56
15,866.0	90.00	359.60	11,280.5	4,475.0	348.8	4,488.6	4.46
15,961.0	90.40	359.80	11,280.2	4,570.0	348.3	4,583.3	4.36
16,055.0	90.80	0.70	11,279.2	4,664.0	348.7	4,677.0	4.28
16,150.0	91.10	0.50	11,277.7	4,759.0	349.7	4,771.8	4.20
16,244.0	90.90	0.30	11,276.0	4,853.0	350.3	4,865.6	4.13
16,339.0	91.60	0.50	11,273.9	4,947.9	351.0	4,960.4	4.06
16,433.0	90.80	357.90	11,272.0	5,041.9	349.7	5,054.0	3.97
16,529.0	91.90	359.80	11,269.7	5,137.9	347.8	5,149.6	3.87
16,623.0	92.00	359.80	11,266.5	5,231.8	347.4	5,243.3	3.80
16,713.0	92.10	0.00	11,263.3	5,321.7	347.3	5,333.1	3.73
16,775.0	92.10	0.00	11,261.0	5,383.7	347.3	5,383.3	3.69

TD @ 16775.0' MD / 11261.0' TVD
Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
107.0	107.0	0.7	0.5	First MWD Survey @ 107.0' MD / 107.0' TVD
16,775.0	11,261.0	5,383.7	347.3	TD @ 16775.0' MD / 11261.0' TVD



Mewbourne Oil Company

Lea County, New Mexico (Nad 83)

Sec 15, T23S, R34E

Ibex 10 B3MD Federal Com #1H

Wellbore #1

Design: Wellbore #1

QES Survey Report

18 December, 2018





Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ibex 10 B3MD Federal Com #1H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Ibex 10 B3MD Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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	Sec 15, T23S, R34E				
Site Position:		Northing:	478,076.70 usft	Latitude:	32° 18' 40.772 N
From:	Map	Easting:	809,284.20 usft	Longitude:	103° 27' 57.696 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.46 °

Well	Ibex 10 B3MD Federal Com #1H				
Well Position	+N/-S	0.0 usft	Northing:	478,076.70 usft	Latitude: 32° 18' 40.772 N
	+E/-W	0.0 usft	Easting:	809,284.20 usft	Longitude: 103° 27' 57.696 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level: 3,403.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/20/2018	6.76	60.14	47,854.14309951

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	3.28	

Survey Program	Date 12/18/2018				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
107.0	16,775.0	QES MWD Surveys (Wellbore #1)	OWSG (Rev2) MWD	OWSG MWD - Standard	

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
First MWD Survey @ 107.0' MD / 107.0' TVD									
107.0	0.90	35.30	107.0	0.7	0.5	0.7	0.84	0.84	0.00
169.0	0.80	37.60	169.0	1.4	1.0	1.5	0.17	-0.16	3.71
219.0	0.90	44.40	219.0	2.0	1.5	2.1	0.28	0.20	13.60
311.0	1.00	18.20	311.0	3.3	2.3	3.4	0.48	0.11	-28.48
371.0	1.00	10.70	371.0	4.3	2.5	4.4	0.22	0.00	-12.50
429.0	1.10	10.50	429.0	5.3	2.7	5.5	0.17	0.17	-0.34
490.0	1.10	7.70	489.9	6.5	2.9	6.6	0.09	0.00	-4.59
551.0	1.20	1.40	550.9	7.7	3.0	7.9	0.26	0.16	-10.33
613.0	1.00	4.20	612.9	8.9	3.1	9.0	0.33	-0.32	4.52

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ibex 10 B3MD Federal Com #1H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Ibex 10 B3MD Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
672.0	0.90	6.50	671.9	9.9	3.2	10.0	0.18	-0.17	3.90
732.0	0.40	17.40	731.9	10.5	3.3	10.7	0.85	-0.83	18.17
830.0	0.40	119.70	829.9	10.7	3.7	10.9	0.64	0.00	104.39
924.0	1.30	147.30	923.9	9.6	4.5	9.9	1.03	0.96	29.36
1,019.0	2.90	160.10	1,018.8	6.5	5.9	6.8	1.74	1.68	13.47
1,114.0	3.80	158.20	1,113.7	1.3	7.9	1.7	0.95	0.95	-2.00
1,209.0	3.20	155.40	1,208.5	-4.1	10.2	-3.5	0.66	-0.63	-2.95
1,303.0	1.60	144.10	1,302.4	-7.5	12.1	-6.8	1.77	-1.70	-12.02
1,409.0	1.60	124.10	1,408.4	-9.5	14.1	-8.7	0.52	0.00	-18.87
1,496.0	1.80	131.40	1,495.3	-11.1	16.2	-10.2	0.34	0.23	8.39
1,591.0	0.70	111.60	1,590.3	-12.3	17.8	-11.3	1.23	-1.16	-20.84
1,654.0	0.30	73.80	1,653.3	-12.4	18.4	-11.3	0.79	-0.63	-60.00
1,718.0	0.90	69.80	1,717.3	-12.2	19.0	-11.1	0.94	0.94	-6.25
1,781.0	1.00	89.60	1,780.3	-12.0	20.0	-10.9	0.54	0.16	31.43
1,878.0	0.70	90.70	1,877.3	-12.0	21.4	-10.8	0.31	-0.31	1.13
1,972.0	0.70	75.70	1,971.3	-11.9	22.6	-10.6	0.19	0.00	-15.96
2,066.0	0.30	27.00	2,065.3	-11.5	23.2	-10.2	0.59	-0.43	-51.81
2,160.0	0.50	44.30	2,159.3	-11.0	23.6	-9.6	0.25	0.21	18.40
2,255.0	0.30	1.50	2,254.3	-10.5	23.9	-9.1	0.36	-0.21	-45.05
2,349.0	0.70	25.80	2,348.3	-9.7	24.2	-8.3	0.47	0.43	25.85
2,444.0	0.90	35.30	2,443.2	-8.6	24.9	-7.1	0.25	0.21	10.00
2,539.0	1.20	11.00	2,538.2	-7.0	25.5	-5.5	0.56	0.32	-25.58
2,633.0	1.70	15.30	2,632.2	-4.7	26.0	-3.2	0.54	0.53	4.57
2,727.0	0.40	87.30	2,726.2	-3.3	26.7	-1.8	1.73	-1.38	76.60
2,822.0	1.10	123.40	2,821.2	-3.8	27.8	-2.2	0.85	0.74	38.00
2,917.0	1.10	99.80	2,916.2	-4.5	29.5	-2.8	0.47	0.00	-24.84
3,011.0	1.50	94.90	3,010.1	-4.7	31.6	-2.9	0.44	0.43	-5.21
3,105.0	2.30	79.20	3,104.1	-4.5	34.7	-2.5	1.01	0.85	-16.70
3,200.0	1.20	99.40	3,199.0	-4.3	37.5	-2.1	1.31	-1.16	21.26
3,294.0	2.00	216.20	3,293.0	-5.8	37.5	-3.6	2.93	0.85	124.26
3,388.0	1.90	217.60	3,387.0	-8.3	35.6	-6.3	0.12	-0.11	1.49
3,483.0	1.20	183.80	3,481.9	-10.6	34.6	-8.6	1.18	-0.74	-35.58
3,577.0	1.30	127.80	3,575.9	-12.2	35.4	-10.2	1.25	0.11	-59.57
3,672.0	1.50	110.50	3,670.9	-13.3	37.4	-11.1	0.49	0.21	-18.21
3,767.0	1.10	129.70	3,765.9	-14.3	39.3	-12.0	0.62	-0.42	20.21
3,862.0	0.70	173.80	3,860.8	-15.5	40.0	-13.2	0.81	-0.42	46.42
3,956.0	1.90	226.20	3,954.8	-17.1	39.0	-14.9	1.67	1.28	55.74
4,051.0	2.80	238.00	4,049.7	-19.4	35.9	-17.4	1.07	0.95	12.42
4,146.0	2.80	233.20	4,144.6	-22.1	32.0	-20.2	0.25	0.00	-5.05
4,240.0	2.30	226.50	4,238.5	-24.7	28.8	-23.0	0.62	-0.53	-7.13
4,335.0	1.20	227.90	4,333.5	-26.7	26.7	-25.1	1.16	-1.16	1.47
4,429.0	0.40	196.80	4,427.5	-27.7	25.9	-26.2	0.94	-0.85	-33.09
4,524.0	0.60	76.10	4,522.5	-27.9	26.3	-26.3	0.92	0.21	-127.05

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Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Ibex 10 B3MD Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
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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)
4,618.0	0.80	81.00	4,616.5	-27.7	27.4	-26.1	0.22	0.21	5.21
4,713.0	0.70	65.20	4,711.5	-27.3	28.6	-25.6	0.24	-0.11	-16.63
4,807.0	1.10	81.50	4,805.5	-26.9	30.0	-25.2	0.50	0.43	17.34
4,896.0	1.40	76.10	4,894.4	-26.6	31.9	-24.7	0.36	0.34	-6.07
5,002.0	1.90	85.90	5,000.4	-26.1	34.9	-24.1	0.54	0.47	9.25
5,097.0	2.20	133.90	5,095.3	-27.3	37.8	-25.1	1.78	0.32	50.53
5,191.0	3.80	168.00	5,189.2	-31.6	39.7	-29.2	2.48	1.70	36.28
5,285.0	3.10	180.00	5,283.0	-37.2	40.4	-34.8	1.07	-0.74	12.77
5,380.0	2.70	182.10	5,377.9	-42.0	40.3	-39.6	0.44	-0.42	2.21
5,475.0	2.70	179.10	5,472.8	-46.4	40.2	-44.1	0.15	0.00	-3.16
5,569.0	2.90	178.60	5,566.7	-51.0	40.3	-48.6	0.21	0.21	-0.53
5,664.0	3.20	176.10	5,661.6	-56.1	40.6	-53.7	0.35	0.32	-2.63
5,759.0	3.20	172.60	5,756.4	-61.4	41.1	-58.9	0.21	0.00	-3.68
5,853.0	3.00	175.00	5,850.3	-66.4	41.7	-63.9	0.25	-0.21	2.55
5,948.0	3.00	175.90	5,945.1	-71.4	42.0	-68.8	0.05	0.00	0.95
6,043.0	3.10	176.30	6,040.0	-76.4	42.4	-73.9	0.11	0.11	0.42
6,138.0	3.00	176.30	6,134.9	-81.4	42.7	-78.9	0.11	-0.11	0.00
6,232.0	3.20	173.30	6,228.7	-86.5	43.2	-83.9	0.27	0.21	-3.19
6,326.0	3.40	171.50	6,322.6	-91.9	43.9	-89.2	0.24	0.21	-1.91
6,421.0	3.70	170.10	6,417.4	-97.7	44.8	-94.9	0.33	0.32	-1.47
6,515.0	3.00	180.70	6,511.2	-103.1	45.3	-100.4	0.99	-0.74	11.28
6,610.0	2.80	189.10	6,606.1	-107.9	44.9	-105.2	0.49	-0.21	8.84
6,705.0	2.70	189.40	6,701.0	-112.4	44.2	-109.7	0.11	-0.11	0.32
6,799.0	2.90	189.40	6,794.9	-116.9	43.5	-114.2	0.21	0.21	0.00
6,893.0	3.10	188.10	6,888.8	-121.8	42.7	-119.1	0.22	0.21	-1.38
6,988.0	3.40	187.20	6,983.6	-127.1	42.0	-124.5	0.32	0.32	-0.95
7,082.0	3.70	187.00	7,077.4	-132.9	41.3	-130.3	0.32	0.32	-0.21
7,177.0	2.50	175.60	7,172.3	-138.0	41.1	-135.4	1.41	-1.26	-12.00
7,271.0	1.90	159.90	7,266.2	-141.5	41.8	-138.9	0.90	-0.64	-16.70
7,366.0	1.70	166.30	7,361.2	-144.4	42.6	-141.7	0.30	-0.21	6.74
7,461.0	1.50	163.60	7,456.1	-146.9	43.3	-144.2	0.22	-0.21	-2.84
7,555.0	1.50	163.80	7,550.1	-149.3	44.0	-146.5	0.01	0.00	0.21
7,649.0	1.20	168.70	7,644.1	-151.4	44.5	-148.6	0.34	-0.32	5.21
7,744.0	1.20	163.80	7,739.1	-153.4	45.0	-150.5	0.11	0.00	-5.16
7,838.0	1.20	165.00	7,833.0	-155.3	45.5	-152.4	0.03	0.00	1.28
7,933.0	1.60	160.30	7,928.0	-157.5	46.2	-154.6	0.44	0.42	-4.95
8,027.0	1.60	161.90	8,022.0	-160.0	47.1	-157.0	0.05	0.00	1.70
8,122.0	1.50	161.70	8,116.9	-162.4	47.9	-159.4	0.11	-0.11	-0.21
8,217.0	2.10	158.50	8,211.9	-165.2	48.9	-162.1	0.64	0.63	-3.37
8,313.0	2.10	154.30	8,307.8	-168.4	50.3	-165.3	0.16	0.00	-4.38
8,407.0	1.90	180.00	8,401.8	-171.5	51.1	-168.3	0.97	-0.21	27.34
8,503.0	1.80	201.10	8,497.7	-174.5	50.5	-171.4	0.71	-0.10	21.98
8,598.0	2.50	210.70	8,592.7	-177.7	48.9	-174.6	0.83	0.74	10.11

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ibx 10 B3MD Federal Com #1H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Ibx 10 B3MD Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
8,693.0	3.70	198.10	8,687.5	-182.4	46.9	-179.4	1.45	1.26	-13.26
8,787.0	3.40	202.80	8,781.3	-187.8	44.9	-185.0	0.44	-0.32	5.00
8,882.0	3.00	213.70	8,876.2	-192.5	42.4	-189.8	0.76	-0.42	11.47
8,977.0	3.00	219.70	8,971.1	-196.5	39.5	-193.9	0.33	0.00	6.32
9,071.0	2.80	222.00	9,064.9	-200.1	36.4	-197.7	0.25	-0.21	2.45
9,166.0	2.50	188.20	9,159.8	-203.9	34.5	-201.6	1.65	-0.32	-35.58
9,261.0	1.50	194.70	9,254.8	-207.1	33.9	-204.8	1.08	-1.05	6.84
9,355.0	0.90	216.00	9,348.8	-208.9	33.2	-206.7	0.78	-0.64	22.66
9,450.0	0.60	224.30	9,443.8	-209.9	32.4	-207.7	0.34	-0.32	8.74
9,544.0	0.80	219.00	9,537.8	-210.7	31.6	-208.6	0.22	0.21	-5.64
9,639.0	0.70	244.60	9,632.7	-211.5	30.7	-209.4	0.36	-0.11	26.95
9,733.0	1.10	194.60	9,726.7	-212.6	29.9	-210.6	0.90	0.43	-53.19
9,828.0	1.60	157.50	9,821.7	-214.7	30.2	-212.6	1.03	0.53	-39.05
9,922.0	1.90	139.20	9,915.7	-217.1	31.7	-214.9	0.67	0.32	-19.47
10,016.0	2.10	134.10	10,009.6	-219.5	34.0	-217.2	0.28	0.21	-5.43
10,111.0	2.70	135.80	10,104.5	-222.3	36.8	-219.8	0.64	0.63	1.79
10,205.0	2.50	133.60	10,198.4	-225.3	39.8	-222.7	0.24	-0.21	-2.34
10,300.0	3.00	130.20	10,293.3	-228.3	43.2	-225.5	0.55	0.53	-3.58
10,395.0	2.60	131.80	10,388.2	-231.4	46.7	-228.3	0.43	-0.42	1.68
10,489.0	2.80	139.20	10,482.1	-234.5	49.8	-231.3	0.43	0.21	7.87
10,542.0	2.80	141.80	10,535.0	-236.5	51.5	-233.2	0.24	0.00	4.91
10,636.0	2.50	145.90	10,628.9	-240.0	54.0	-236.6	0.38	-0.32	4.36
10,731.0	1.90	149.70	10,723.9	-243.1	56.0	-239.5	0.65	-0.63	4.00
10,798.0	1.50	151.00	10,790.8	-244.8	57.0	-241.2	0.60	-0.60	1.94
10,825.0	1.70	144.40	10,817.8	-245.5	57.4	-241.8	1.01	0.74	-24.44
10,857.0	1.70	87.50	10,849.8	-245.8	58.1	-242.1	5.06	0.00	-177.81
10,888.0	6.00	33.90	10,880.7	-244.5	59.5	-240.7	16.69	13.87	-172.90
10,919.0	11.80	30.20	10,911.4	-240.4	62.0	-236.5	18.79	18.71	-11.94
10,951.0	19.00	28.60	10,942.2	-233.0	66.1	-228.8	22.54	22.50	-5.00
10,982.0	24.20	27.00	10,971.0	-222.9	71.4	-218.4	16.88	16.77	-5.16
11,014.0	27.70	26.50	10,999.8	-210.4	77.7	-205.6	10.96	10.94	-1.56
11,045.0	29.20	26.30	11,027.0	-197.1	84.3	-192.0	4.85	4.84	-0.65
11,076.0	31.00	26.70	11,053.8	-183.2	91.2	-177.7	5.84	5.81	1.29
11,108.0	33.70	26.10	11,080.9	-167.9	98.9	-162.0	8.50	8.44	-1.88
11,139.0	39.50	24.80	11,105.8	-151.2	106.8	-144.9	18.88	18.71	-4.19
11,171.0	46.60	24.20	11,129.1	-131.3	115.8	-124.5	22.22	22.19	-1.88
11,202.0	51.40	24.80	11,149.5	-110.1	125.5	-102.7	15.55	15.48	1.94
11,234.0	55.50	24.40	11,168.5	-86.7	136.2	-78.8	12.85	12.81	-1.25
11,265.0	59.00	24.20	11,185.3	-62.9	147.0	-54.4	11.30	11.29	-0.65
11,297.0	61.50	22.60	11,201.2	-37.4	158.0	-28.3	8.94	7.81	-5.00
11,329.0	62.80	21.80	11,216.1	-11.2	168.7	-1.6	4.62	4.06	-2.50
11,360.0	64.50	20.00	11,229.9	14.7	178.6	24.9	7.56	5.48	-5.81
11,391.0	65.70	19.50	11,242.9	41.2	188.1	51.9	4.14	3.87	-1.61
11,423.0	66.60	18.80	11,255.9	68.8	197.7	80.0	3.45	2.81	-2.19

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ibox 10 B3MD Federal Com #1H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Ibox 10 B3MD Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
11,454.0	67.40	18.40	11,268.0	95.9	206.8	107.5	2.84	2.58	-1.29
11,486.0	68.30	18.20	11,280.0	124.0	216.1	136.2	2.87	2.81	-0.63
11,517.0	69.60	18.60	11,291.2	151.5	225.2	164.1	4.36	4.19	1.29
11,549.0	70.70	18.20	11,302.0	180.0	234.7	193.1	3.63	3.44	-1.25
11,563.0	71.20	18.40	11,306.6	192.6	238.9	205.9	3.82	3.57	1.43
Crossed LL@ 11578.7' MD / 11311.5' TVD									
11,578.7	72.18	18.34	11,311.5	206.7	243.6	220.3	6.28	6.27	-0.41
11,638.0	75.90	18.10	11,327.8	260.9	261.4	275.4	6.28	6.27	-0.40
11,670.0	78.00	17.00	11,335.1	290.6	270.8	305.6	7.37	6.56	-3.44
Crossed 100' HL@ 11687.4' MD / 11338.6' TVD									
11,687.4	78.73	16.49	11,338.6	306.9	275.7	322.2	5.07	4.19	-2.91
11,701.0	79.30	16.10	11,341.2	319.7	279.4	335.2	5.07	4.20	-2.90
11,733.0	81.90	14.90	11,346.4	350.1	287.9	366.0	8.93	8.13	-3.75
11,764.0	84.20	14.90	11,350.1	379.9	295.8	396.2	7.42	7.42	0.00
11,796.0	86.30	14.70	11,352.8	410.7	303.9	427.4	6.59	6.56	-0.63
11,827.0	89.00	13.30	11,354.1	440.8	311.4	457.9	9.81	8.71	-4.52
11,858.0	90.80	11.70	11,354.1	471.0	318.1	488.5	7.77	5.81	-5.16
11,890.0	91.60	10.00	11,353.4	502.4	324.2	520.2	5.87	2.50	-5.31
11,922.0	91.40	8.10	11,352.6	534.0	329.2	552.0	5.97	-0.63	-5.94
11,953.0	90.90	6.30	11,352.0	564.8	333.1	582.9	6.03	-1.61	-5.81
11,985.0	89.50	4.70	11,351.9	596.6	336.1	614.9	6.64	-4.38	-5.00
12,079.0	89.30	1.40	11,352.9	690.5	341.1	708.9	3.52	-0.21	-3.51
12,174.0	89.00	1.20	11,354.3	785.4	343.3	803.8	0.38	-0.32	-0.21
12,269.0	90.60	0.70	11,354.6	880.4	344.9	898.7	1.76	1.68	-0.53
12,363.0	90.40	0.80	11,353.8	974.4	346.1	992.6	0.24	-0.21	0.11
12,458.0	90.30	1.00	11,353.2	1,069.4	347.6	1,087.5	0.24	-0.11	0.21
12,552.0	89.70	1.00	11,353.2	1,163.4	349.2	1,181.5	0.64	-0.64	0.00
12,647.0	89.90	0.80	11,353.5	1,258.4	350.7	1,276.4	0.30	0.21	-0.21
12,742.0	89.80	0.50	11,353.8	1,353.4	351.8	1,371.3	0.33	-0.11	-0.32
12,837.0	89.30	0.10	11,354.5	1,448.4	352.3	1,466.1	0.67	-0.53	-0.42
12,932.0	90.00	0.30	11,355.1	1,543.4	352.6	1,561.0	0.77	0.74	0.21
13,026.0	91.70	1.50	11,353.7	1,637.3	354.1	1,654.9	2.21	1.81	1.28
13,121.0	91.50	0.70	11,351.1	1,732.3	355.9	1,749.8	0.87	-0.21	-0.84
13,216.0	89.50	359.80	11,350.2	1,827.3	356.3	1,844.7	2.31	-2.11	-0.95
13,311.0	88.30	0.50	11,352.0	1,922.2	356.6	1,939.5	1.46	-1.26	0.74
13,406.0	90.20	359.80	11,353.3	2,017.2	356.8	2,034.3	2.13	2.00	-0.74
13,501.0	96.60	1.20	11,347.7	2,112.0	357.7	2,129.0	6.90	6.74	1.47
13,595.0	95.10	1.40	11,338.1	2,205.5	359.8	2,222.5	1.61	-1.60	0.21
13,690.0	92.30	1.00	11,332.0	2,300.3	361.8	2,317.2	2.98	-2.95	-0.42
13,785.0	92.40	1.50	11,328.1	2,395.2	363.8	2,412.1	0.54	0.11	0.53
13,880.0	91.30	1.70	11,325.0	2,490.1	366.5	2,507.0	1.18	-1.16	0.21
13,974.0	90.30	0.70	11,323.7	2,584.0	368.5	2,600.9	1.50	-1.06	-1.06
14,069.0	90.00	0.80	11,323.4	2,679.0	369.7	2,695.8	0.33	-0.32	0.11

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ibex 10 B3MD Federal Com #1H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Ibex 10 B3MD Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
14,164.0	89.00	1.20	11,324.3	2,774.0	371.4	2,790.7	1.13	-1.05	0.42
14,259.0	90.80	357.90	11,324.4	2,869.0	370.6	2,885.5	3.96	1.89	-3.47
14,353.0	91.00	359.10	11,322.9	2,963.0	368.2	2,979.2	1.29	0.21	1.28
14,448.0	91.30	358.20	11,321.0	3,057.9	365.9	3,073.8	1.00	0.32	-0.95
14,543.0	92.00	358.90	11,318.3	3,152.8	363.5	3,168.5	1.04	0.74	0.74
14,638.0	92.30	359.30	11,314.7	3,247.8	362.0	3,263.1	0.53	0.32	0.42
14,732.0	92.90	359.60	11,310.5	3,341.7	361.1	3,356.8	0.71	0.64	0.32
14,827.0	92.20	359.80	11,306.2	3,436.6	360.6	3,451.6	0.77	-0.74	0.21
14,921.0	90.90	359.60	11,303.7	3,530.5	360.1	3,545.3	1.40	-1.38	-0.21
15,016.0	90.80	0.00	11,302.3	3,625.5	359.8	3,640.2	0.43	-0.11	0.42
15,110.0	90.80	0.10	11,301.0	3,719.5	359.9	3,734.0	0.11	0.00	0.11
15,205.0	90.00	0.10	11,300.3	3,814.5	360.1	3,828.8	0.84	-0.84	0.00
15,300.0	91.40	359.10	11,299.2	3,909.5	359.4	3,923.6	1.81	1.47	-1.05
15,394.0	91.90	358.40	11,296.5	4,003.4	357.3	4,017.3	0.91	0.53	-0.74
15,489.0	93.10	359.80	11,292.3	4,098.3	355.8	4,112.0	1.94	1.26	1.47
15,583.0	92.50	358.00	11,287.7	4,192.2	354.0	4,205.6	2.02	-0.64	-1.91
15,678.0	91.70	358.70	11,284.2	4,287.1	351.3	4,300.2	1.12	-0.84	0.74
15,772.0	91.40	359.30	11,281.7	4,381.0	349.7	4,393.9	0.71	-0.32	0.64
15,866.0	90.00	359.60	11,280.5	4,475.0	348.8	4,487.6	1.52	-1.49	0.32
15,961.0	90.40	359.80	11,280.2	4,570.0	348.3	4,582.5	0.47	0.42	0.21
16,055.0	90.80	0.70	11,279.2	4,664.0	348.7	4,676.3	1.05	0.43	0.96
16,150.0	91.10	0.50	11,277.7	4,759.0	349.7	4,771.2	0.38	0.32	-0.21
16,244.0	90.90	0.30	11,276.0	4,853.0	350.3	4,865.1	0.30	-0.21	-0.21
16,339.0	91.60	0.50	11,273.9	4,947.9	351.0	4,959.9	0.77	0.74	0.21
16,433.0	90.80	357.90	11,272.0	5,041.9	349.7	5,053.7	2.89	-0.85	-2.77
16,529.0	91.90	359.80	11,269.7	5,137.9	347.8	5,149.3	2.29	1.15	1.98
16,623.0	92.00	359.80	11,266.5	5,231.8	347.4	5,243.1	0.11	0.11	0.00
16,713.0	92.10	0.00	11,263.3	5,321.7	347.3	5,332.9	0.25	0.11	0.22
TD @ 16775.0' MD / 11261.0' TVD									
16,775.0	92.10	0.00	11,261.0	5,383.7	347.3	5,394.7	0.00	0.00	0.00

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
107.0	107.0	0.7	0.5	First MWD Survey @ 107.0' MD / 107.0' TVD
11,578.7	11,311.5	206.7	243.6	Crossed LL@ 11578.7' MD / 11311.5' TVD
11,687.4	11,338.6	306.9	275.7	Crossed 100' HL@ 11687.4' MD / 11338.6' TVD
16,775.0	11,261.0	5,383.7	347.3	TD @ 16775.0' MD / 11261.0' TVD



Mewbourne Oil Company

Lea County, New Mexico (Nad 83)

Sec 15, T23S, R34E

Ibex 10 B3MD Federal Com #1H

Wellbore #1

Design: Wellbore #1

Survey Report - Geographic

18 December, 2018





Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ibex 10 B3MD Federal Com #1H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Ibex 10 B3MD Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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	Sec 15, T23S, R34E				
Site Position:		Northing:	478,076.70 usft	Latitude:	32° 18' 40.772 N
From:	Map	Easting:	809,284.20 usft	Longitude:	103° 27' 57.696 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.46 °

Well	Ibex 10 B3MD Federal Com #1H				
Well Position	+N/-S	0.0 usft	Northing:	478,076.70 usft	Latitude: 32° 18' 40.772 N
	+E/-W	0.0 usft	Easting:	809,284.20 usft	Longitude: 103° 27' 57.696 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft	Ground Level: 3,403.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/20/2018	6.76	60.14	47,854.14309951

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	3.28	

Survey Program	Date 12/18/2018				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
107.0	16,775.0	QES MWD Surveys (Wellbore #1)	OWSG (Rev2) MWD	OWSG MWD - Standard	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	478,076.70	809,284.20	32° 18' 40.772 N	103° 27' 57.696 W
107.0	0.90	35.30	107.0	0.7	0.5	478,077.39	809,284.68	32° 18' 40.779 N	103° 27' 57.691 W
First MWD Survey @ 107.0' MD / 107.0' TVD									
169.0	0.80	37.60	169.0	1.4	1.0	478,078.13	809,285.23	32° 18' 40.786 N	103° 27' 57.684 W
219.0	0.90	44.40	219.0	2.0	1.5	478,078.68	809,285.72	32° 18' 40.792 N	103° 27' 57.678 W
311.0	1.00	18.20	311.0	3.3	2.3	478,079.96	809,286.47	32° 18' 40.804 N	103° 27' 57.669 W
371.0	1.00	10.70	371.0	4.3	2.5	478,080.97	809,286.73	32° 18' 40.814 N	103° 27' 57.666 W
429.0	1.10	10.50	429.0	5.3	2.7	478,082.02	809,286.93	32° 18' 40.825 N	103° 27' 57.664 W
490.0	1.10	7.70	489.9	6.5	2.9	478,083.18	809,287.11	32° 18' 40.836 N	103° 27' 57.662 W
551.0	1.20	1.40	550.9	7.7	3.0	478,084.39	809,287.21	32° 18' 40.848 N	103° 27' 57.660 W
613.0	1.00	4.20	612.9	8.9	3.1	478,085.58	809,287.26	32° 18' 40.860 N	103° 27' 57.660 W
672.0	0.90	6.50	671.9	9.9	3.2	478,086.56	809,287.35	32° 18' 40.870 N	103° 27' 57.659 W

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ibex 10 B3MD Federal Com #1H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Ibex 10 B3MD Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
732.0	0.40	17.40	731.9	10.5	3.3	478,087.22	809,287.47	32° 18' 40.876 N	103° 27' 57.657 W
830.0	0.40	119.70	829.9	10.7	3.7	478,087.38	809,287.87	32° 18' 40.878 N	103° 27' 57.652 W
924.0	1.30	147.30	923.9	9.6	4.5	478,086.32	809,288.73	32° 18' 40.867 N	103° 27' 57.643 W
1,019.0	2.90	160.10	1,018.8	6.5	5.9	478,083.15	809,290.13	32° 18' 40.836 N	103° 27' 57.627 W
1,114.0	3.80	158.20	1,113.7	1.3	7.9	478,077.97	809,292.12	32° 18' 40.784 N	103° 27' 57.604 W
1,209.0	3.20	155.40	1,208.5	-4.1	10.2	478,072.64	809,294.39	32° 18' 40.731 N	103° 27' 57.578 W
1,303.0	1.60	144.10	1,302.4	-7.5	12.1	478,069.19	809,296.25	32° 18' 40.697 N	103° 27' 57.557 W
1,409.0	1.60	124.10	1,408.4	-9.5	14.1	478,067.16	809,298.35	32° 18' 40.677 N	103° 27' 57.532 W
1,496.0	1.80	131.40	1,495.3	-11.1	16.2	478,065.58	809,300.38	32° 18' 40.661 N	103° 27' 57.509 W
1,591.0	0.70	111.60	1,590.3	-12.3	17.8	478,064.38	809,302.04	32° 18' 40.649 N	103° 27' 57.490 W
1,654.0	0.30	73.80	1,653.3	-12.4	18.4	478,064.28	809,302.55	32° 18' 40.648 N	103° 27' 57.484 W
1,718.0	0.90	69.80	1,717.3	-12.2	19.0	478,064.50	809,303.18	32° 18' 40.650 N	103° 27' 57.476 W
1,781.0	1.00	89.60	1,780.3	-12.0	20.0	478,064.68	809,304.20	32° 18' 40.652 N	103° 27' 57.464 W
1,878.0	0.70	90.70	1,877.3	-12.0	21.4	478,064.67	809,305.64	32° 18' 40.652 N	103° 27' 57.448 W
1,972.0	0.70	75.70	1,971.3	-11.9	22.6	478,064.81	809,306.77	32° 18' 40.653 N	103° 27' 57.434 W
2,066.0	0.30	27.00	2,065.3	-11.5	23.2	478,065.17	809,307.44	32° 18' 40.656 N	103° 27' 57.427 W
2,160.0	0.50	44.30	2,159.3	-11.0	23.6	478,065.68	809,307.83	32° 18' 40.661 N	103° 27' 57.422 W
2,255.0	0.30	1.50	2,254.3	-10.5	23.9	478,066.23	809,308.13	32° 18' 40.667 N	103° 27' 57.418 W
2,349.0	0.70	25.80	2,348.3	-9.7	24.2	478,066.99	809,308.39	32° 18' 40.674 N	103° 27' 57.415 W
2,444.0	0.90	35.30	2,443.2	-8.6	24.9	478,068.12	809,309.07	32° 18' 40.685 N	103° 27' 57.407 W
2,539.0	1.20	11.00	2,538.2	-7.0	25.5	478,069.71	809,309.69	32° 18' 40.701 N	103° 27' 57.400 W
2,633.0	1.70	15.30	2,632.2	-4.7	26.0	478,072.02	809,310.25	32° 18' 40.724 N	103° 27' 57.393 W
2,727.0	0.40	87.30	2,726.2	-3.3	26.7	478,073.38	809,310.94	32° 18' 40.737 N	103° 27' 57.385 W
2,822.0	1.10	123.40	2,821.2	-3.8	27.8	478,072.89	809,312.04	32° 18' 40.732 N	103° 27' 57.372 W
2,917.0	1.10	99.80	2,916.2	-4.5	29.5	478,072.24	809,313.69	32° 18' 40.726 N	103° 27' 57.353 W
3,011.0	1.50	94.90	3,010.1	-4.7	31.6	478,071.98	809,315.81	32° 18' 40.723 N	103° 27' 57.328 W
3,105.0	2.30	79.20	3,104.1	-4.5	34.7	478,072.23	809,318.89	32° 18' 40.725 N	103° 27' 57.292 W
3,200.0	1.20	99.40	3,199.0	-4.3	37.5	478,072.42	809,321.74	32° 18' 40.727 N	103° 27' 57.259 W
3,294.0	2.00	216.20	3,293.0	-5.8	37.5	478,070.94	809,321.74	32° 18' 40.712 N	103° 27' 57.259 W
3,388.0	1.90	217.60	3,387.0	-8.3	35.6	478,068.38	809,319.83	32° 18' 40.687 N	103° 27' 57.282 W
3,483.0	1.20	183.80	3,481.9	-10.6	34.6	478,066.14	809,318.80	32° 18' 40.665 N	103° 27' 57.294 W
3,577.0	1.30	127.80	3,575.9	-12.2	35.4	478,064.50	809,319.58	32° 18' 40.649 N	103° 27' 57.285 W
3,672.0	1.50	110.50	3,670.9	-13.3	37.4	478,063.41	809,321.59	32° 18' 40.638 N	103° 27' 57.262 W
3,767.0	1.10	129.70	3,765.9	-14.3	39.3	478,062.39	809,323.46	32° 18' 40.628 N	103° 27' 57.240 W
3,862.0	0.70	173.80	3,860.8	-15.5	40.0	478,061.23	809,324.22	32° 18' 40.616 N	103° 27' 57.231 W
3,956.0	1.90	226.20	3,954.8	-17.1	39.0	478,059.58	809,323.16	32° 18' 40.600 N	103° 27' 57.244 W
4,051.0	2.80	238.00	4,049.7	-19.4	35.9	478,057.26	809,320.06	32° 18' 40.577 N	103° 27' 57.280 W
4,146.0	2.80	233.20	4,144.6	-22.1	32.0	478,054.64	809,316.23	32° 18' 40.551 N	103° 27' 57.325 W
4,240.0	2.30	226.50	4,238.5	-24.7	28.8	478,051.97	809,313.02	32° 18' 40.525 N	103° 27' 57.363 W
4,335.0	1.20	227.90	4,333.5	-26.7	26.7	478,049.99	809,310.90	32° 18' 40.506 N	103° 27' 57.388 W
4,429.0	0.40	196.80	4,427.5	-27.7	25.9	478,049.01	809,310.08	32° 18' 40.496 N	103° 27' 57.397 W
4,524.0	0.60	76.10	4,522.5	-27.9	26.3	478,048.81	809,310.46	32° 18' 40.494 N	103° 27' 57.393 W
4,618.0	0.80	81.00	4,616.5	-27.7	27.4	478,049.04	809,311.59	32° 18' 40.496 N	103° 27' 57.380 W
4,713.0	0.70	65.20	4,711.5	-27.3	28.6	478,049.38	809,312.77	32° 18' 40.500 N	103° 27' 57.366 W
4,807.0	1.10	81.50	4,805.5	-26.9	30.0	478,049.76	809,314.19	32° 18' 40.503 N	103° 27' 57.349 W
4,896.0	1.40	76.10	4,894.4	-26.6	31.9	478,050.14	809,316.09	32° 18' 40.507 N	103° 27' 57.327 W
5,002.0	1.90	85.90	5,000.4	-26.1	34.9	478,050.58	809,319.10	32° 18' 40.511 N	103° 27' 57.292 W
5,097.0	2.20	133.90	5,095.3	-27.3	37.8	478,049.43	809,321.98	32° 18' 40.499 N	103° 27' 57.259 W
5,191.0	3.80	168.00	5,189.2	-31.6	39.7	478,045.13	809,323.93	32° 18' 40.457 N	103° 27' 57.236 W
5,285.0	3.10	180.00	5,283.0	-37.2	40.4	478,039.54	809,324.58	32° 18' 40.401 N	103° 27' 57.229 W
5,380.0	2.70	182.10	5,377.9	-42.0	40.3	478,034.74	809,324.49	32° 18' 40.354 N	103° 27' 57.231 W
5,475.0	2.70	179.10	5,472.8	-46.4	40.2	478,030.26	809,324.45	32° 18' 40.310 N	103° 27' 57.232 W
5,569.0	2.90	178.60	5,566.7	-51.0	40.3	478,025.67	809,324.54	32° 18' 40.264 N	103° 27' 57.231 W
5,664.0	3.20	176.10	5,661.6	-56.1	40.6	478,020.63	809,324.78	32° 18' 40.214 N	103° 27' 57.229 W
5,759.0	3.20	172.60	5,756.4	-61.4	41.1	478,015.35	809,325.30	32° 18' 40.162 N	103° 27' 57.223 W

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ibex 10 B3MD Federal Com #1H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Ibex 10 B3MD Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,853.0	3.00	175.00	5,850.3	-66.4	41.7	478,010.30	809,325.85	32° 18' 40.112 N	103° 27' 57.217 W
5,948.0	3.00	175.90	5,945.1	-71.4	42.0	478,005.34	809,326.25	32° 18' 40.063 N	103° 27' 57.213 W
6,043.0	3.10	176.30	6,040.0	-76.4	42.4	478,000.30	809,326.59	32° 18' 40.013 N	103° 27' 57.210 W
6,138.0	3.00	176.30	6,134.9	-81.4	42.7	477,995.25	809,326.92	32° 18' 39.963 N	103° 27' 57.206 W
6,232.0	3.20	173.30	6,228.7	-86.5	43.2	477,990.19	809,327.38	32° 18' 39.913 N	103° 27' 57.201 W
6,326.0	3.40	171.50	6,322.6	-91.9	43.9	477,984.83	809,328.10	32° 18' 39.860 N	103° 27' 57.193 W
6,421.0	3.70	170.10	6,417.4	-97.7	44.8	477,979.03	809,329.04	32° 18' 39.802 N	103° 27' 57.183 W
6,515.0	3.00	180.70	6,511.2	-103.1	45.3	477,973.58	809,329.53	32° 18' 39.748 N	103° 27' 57.178 W
6,610.0	2.80	189.10	6,606.1	-107.9	44.9	477,968.80	809,329.14	32° 18' 39.701 N	103° 27' 57.183 W
6,705.0	2.70	189.40	6,701.0	-112.4	44.2	477,964.30	809,328.40	32° 18' 39.657 N	103° 27' 57.192 W
6,799.0	2.90	189.40	6,794.9	-116.9	43.5	477,959.77	809,327.65	32° 18' 39.612 N	103° 27' 57.201 W
6,893.0	3.10	188.10	6,888.8	-121.8	42.7	477,954.91	809,328.91	32° 18' 39.564 N	103° 27' 57.210 W
6,988.0	3.40	187.20	6,983.6	-127.1	42.0	477,949.57	809,326.19	32° 18' 39.511 N	103° 27' 57.219 W
7,082.0	3.70	187.00	7,077.4	-132.9	41.3	477,943.80	809,325.47	32° 18' 39.454 N	103° 27' 57.228 W
7,177.0	2.50	175.60	7,172.3	-138.0	41.1	477,938.69	809,325.26	32° 18' 39.403 N	103° 27' 57.231 W
7,271.0	1.90	159.90	7,266.2	-141.5	41.8	477,935.18	809,325.95	32° 18' 39.369 N	103° 27' 57.223 W
7,366.0	1.70	166.30	7,361.2	-144.4	42.6	477,932.33	809,326.83	32° 18' 39.340 N	103° 27' 57.213 W
7,461.0	1.50	163.60	7,456.1	-146.9	43.3	477,929.77	809,327.51	32° 18' 39.315 N	103° 27' 57.205 W
7,555.0	1.50	163.80	7,550.1	-149.3	44.0	477,927.41	809,328.20	32° 18' 39.292 N	103° 27' 57.198 W
7,649.0	1.20	168.70	7,644.1	-151.4	44.5	477,925.26	809,328.74	32° 18' 39.270 N	103° 27' 57.192 W
7,744.0	1.20	163.80	7,739.1	-153.4	45.0	477,923.33	809,329.21	32° 18' 39.251 N	103° 27' 57.186 W
7,838.0	1.20	165.00	7,833.0	-155.3	45.5	477,921.44	809,329.74	32° 18' 39.232 N	103° 27' 57.180 W
7,933.0	1.60	160.30	7,928.0	-157.5	46.2	477,919.23	809,330.45	32° 18' 39.210 N	103° 27' 57.172 W
8,027.0	1.60	161.90	8,022.0	-160.0	47.1	477,916.74	809,331.30	32° 18' 39.186 N	103° 27' 57.163 W
8,122.0	1.50	161.70	8,116.9	-162.4	47.9	477,914.30	809,332.10	32° 18' 39.162 N	103° 27' 57.153 W
8,217.0	2.10	158.50	8,211.9	-165.2	48.9	477,911.50	809,333.13	32° 18' 39.134 N	103° 27' 57.142 W
8,313.0	2.10	154.30	8,307.8	-168.4	50.3	477,908.28	809,334.53	32° 18' 39.102 N	103° 27' 57.126 W
8,407.0	1.90	180.00	8,401.8	-171.5	51.1	477,905.17	809,335.28	32° 18' 39.071 N	103° 27' 57.117 W
8,503.0	1.80	201.10	8,497.7	-174.5	50.5	477,902.17	809,334.74	32° 18' 39.041 N	103° 27' 57.124 W
8,598.0	2.50	210.70	8,592.7	-177.7	48.9	477,899.00	809,333.14	32° 18' 39.010 N	103° 27' 57.143 W
8,693.0	3.70	198.10	8,687.5	-182.4	46.9	477,894.30	809,331.13	32° 18' 38.964 N	103° 27' 57.167 W
8,787.0	3.40	202.80	8,781.3	-187.8	44.9	477,888.85	809,329.11	32° 18' 38.910 N	103° 27' 57.191 W
8,882.0	3.00	213.70	8,876.2	-192.5	42.4	477,884.19	809,326.64	32° 18' 38.864 N	103° 27' 57.220 W
8,977.0	3.00	219.70	8,971.1	-196.5	39.5	477,880.20	809,323.67	32° 18' 38.825 N	103° 27' 57.255 W
9,071.0	2.80	222.00	9,064.9	-200.1	36.4	477,876.61	809,320.56	32° 18' 38.789 N	103° 27' 57.291 W
9,166.0	2.50	188.20	9,159.8	-203.9	34.5	477,872.83	809,318.72	32° 18' 38.752 N	103° 27' 57.313 W
9,261.0	1.50	194.70	9,254.8	-207.1	33.9	477,869.58	809,318.11	32° 18' 38.720 N	103° 27' 57.321 W
9,355.0	0.90	216.00	9,348.8	-208.9	33.2	477,867.79	809,317.36	32° 18' 38.702 N	103° 27' 57.330 W
9,450.0	0.60	224.30	9,443.8	-209.9	32.4	477,866.83	809,316.57	32° 18' 38.693 N	103° 27' 57.339 W
9,544.0	0.80	219.00	9,537.8	-210.7	31.6	477,865.97	809,315.82	32° 18' 38.685 N	103° 27' 57.348 W
9,639.0	0.70	244.60	9,632.7	-211.5	30.7	477,865.20	809,314.87	32° 18' 38.677 N	103° 27' 57.359 W
9,733.0	1.10	194.60	9,726.7	-212.6	29.9	477,864.08	809,314.13	32° 18' 38.666 N	103° 27' 57.368 W
9,828.0	1.60	157.50	9,821.7	-214.7	30.2	477,861.98	809,314.41	32° 18' 38.645 N	103° 27' 57.365 W
9,922.0	1.90	139.20	9,915.7	-217.1	31.7	477,859.58	809,315.93	32° 18' 38.621 N	103° 27' 57.347 W
10,016.0	2.10	134.10	10,009.6	-219.5	34.0	477,857.21	809,318.18	32° 18' 38.598 N	103° 27' 57.321 W
10,111.0	2.70	135.80	10,104.5	-222.3	36.8	477,854.39	809,320.99	32° 18' 38.570 N	103° 27' 57.289 W
10,205.0	2.50	133.60	10,198.4	-225.3	39.8	477,851.39	809,324.02	32° 18' 38.540 N	103° 27' 57.254 W
10,300.0	3.00	130.20	10,293.3	-228.3	43.2	477,848.36	809,327.42	32° 18' 38.509 N	103° 27' 57.214 W
10,395.0	2.60	131.80	10,388.2	-231.4	46.7	477,845.32	809,330.92	32° 18' 38.479 N	103° 27' 57.174 W
10,489.0	2.80	139.20	10,482.1	-234.5	49.8	477,842.16	809,334.01	32° 18' 38.448 N	103° 27' 57.138 W
10,542.0	2.80	141.80	10,535.0	-236.5	51.5	477,840.16	809,335.66	32° 18' 38.428 N	103° 27' 57.119 W
10,636.0	2.50	145.90	10,628.9	-240.0	54.0	477,836.66	809,338.23	32° 18' 38.393 N	103° 27' 57.089 W
10,731.0	1.90	149.70	10,723.9	-243.1	56.0	477,833.58	809,340.19	32° 18' 38.362 N	103° 27' 57.067 W
10,798.0	1.50	151.00	10,790.8	-244.8	57.0	477,831.86	809,341.17	32° 18' 38.345 N	103° 27' 57.056 W
10,825.0	1.70	144.40	10,817.8	-245.5	57.4	477,831.22	809,341.58	32° 18' 38.339 N	103° 27' 57.051 W

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ibox 10 B3MD Federal Com #1H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Ibox 10 B3MD Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,857.0	1.70	87.50	10,849.8	-245.8	58.1	477,830.86	809,342.33	32° 18' 38.335 N	103° 27' 57.042 W
10,888.0	6.00	33.90	10,880.7	-244.5	59.5	477,832.22	809,343.69	32° 18' 38.348 N	103° 27' 57.026 W
10,919.0	11.80	30.20	10,911.4	-240.4	62.0	477,836.31	809,346.19	32° 18' 38.389 N	103° 27' 56.997 W
10,951.0	19.00	28.60	10,942.2	-233.0	66.1	477,843.72	809,350.34	32° 18' 38.462 N	103° 27' 56.948 W
10,982.0	24.20	27.00	10,971.0	-222.9	71.4	477,853.82	809,355.64	32° 18' 38.561 N	103° 27' 56.885 W
11,014.0	27.70	26.50	10,999.8	-210.4	77.7	477,866.32	809,361.94	32° 18' 38.684 N	103° 27' 56.810 W
11,045.0	29.20	26.30	11,027.0	-197.1	84.3	477,879.55	809,368.50	32° 18' 38.815 N	103° 27' 56.733 W
11,076.0	31.00	26.70	11,053.8	-183.2	91.2	477,893.46	809,375.44	32° 18' 38.952 N	103° 27' 56.650 W
11,108.0	33.70	26.10	11,080.9	-167.9	98.9	477,908.80	809,383.05	32° 18' 39.103 N	103° 27' 56.560 W
11,139.0	39.50	24.80	11,105.8	-151.2	106.8	477,925.49	809,390.98	32° 18' 39.268 N	103° 27' 56.466 W
11,171.0	46.60	24.20	11,129.1	-131.3	115.8	477,945.36	809,400.02	32° 18' 39.463 N	103° 27' 56.359 W
11,202.0	51.40	24.80	11,149.5	-110.1	125.5	477,966.64	809,409.73	32° 18' 39.673 N	103° 27' 56.244 W
11,234.0	55.50	24.40	11,168.5	-86.7	136.2	477,990.01	809,420.42	32° 18' 39.904 N	103° 27' 56.117 W
11,265.0	59.00	24.20	11,185.3	-62.9	147.0	478,013.77	809,431.15	32° 18' 40.138 N	103° 27' 55.990 W
11,297.0	61.50	22.60	11,201.2	-37.4	158.0	478,039.26	809,442.18	32° 18' 40.389 N	103° 27' 55.859 W
11,329.0	62.80	21.80	11,216.1	-11.2	168.7	478,065.46	809,452.87	32° 18' 40.648 N	103° 27' 55.732 W
11,360.0	64.50	20.00	11,229.9	14.7	178.6	478,091.41	809,462.77	32° 18' 40.903 N	103° 27' 55.614 W
11,391.0	65.70	19.50	11,242.9	41.2	188.1	478,117.87	809,472.27	32° 18' 41.165 N	103° 27' 55.501 W
11,423.0	66.60	18.80	11,255.9	68.8	197.7	478,145.52	809,481.87	32° 18' 41.437 N	103° 27' 55.387 W
11,454.0	67.40	18.40	11,268.0	95.9	206.8	478,172.56	809,490.97	32° 18' 41.704 N	103° 27' 55.278 W
11,486.0	68.30	18.20	11,280.0	124.0	216.1	478,200.70	809,500.28	32° 18' 41.982 N	103° 27' 55.167 W
11,517.0	69.60	18.60	11,291.2	151.5	225.2	478,228.15	809,509.41	32° 18' 42.253 N	103° 27' 55.058 W
11,549.0	70.70	18.20	11,302.0	180.0	234.7	478,256.71	809,518.91	32° 18' 42.535 N	103° 27' 54.944 W
11,563.0	71.20	18.40	11,306.6	192.6	238.9	478,269.28	809,523.07	32° 18' 42.659 N	103° 27' 54.895 W
11,578.7	72.18	18.34	11,311.5	206.7	243.6	478,283.42	809,527.76	32° 18' 42.798 N	103° 27' 54.839 W
Crossed LL@ 11578.7' MD / 11311.5' TVD									
11,638.0	75.90	18.10	11,327.8	260.9	261.4	478,337.57	809,545.59	32° 18' 43.333 N	103° 27' 54.626 W
11,670.0	78.00	17.00	11,335.1	290.6	270.8	478,367.29	809,554.98	32° 18' 43.626 N	103° 27' 54.514 W
11,687.4	78.73	16.49	11,338.6	306.9	275.7	478,383.61	809,559.89	32° 18' 43.787 N	103° 27' 54.455 W
Crossed 100' HL@ 11687.4' MD / 11338.6' TVD									
11,701.0	79.30	16.10	11,341.2	319.7	279.4	478,396.43	809,563.64	32° 18' 43.914 N	103° 27' 54.410 W
11,733.0	81.90	14.90	11,346.4	350.1	287.9	478,426.84	809,572.08	32° 18' 44.214 N	103° 27' 54.309 W
11,764.0	84.20	14.90	11,350.1	379.9	295.8	478,456.58	809,579.99	32° 18' 44.507 N	103° 27' 54.214 W
11,796.0	86.30	14.70	11,352.8	410.7	303.9	478,487.41	809,588.13	32° 18' 44.812 N	103° 27' 54.116 W
11,827.0	89.00	13.30	11,354.1	440.8	311.4	478,517.46	809,595.62	32° 18' 45.109 N	103° 27' 54.026 W
11,858.0	90.80	11.70	11,354.1	471.0	318.1	478,547.72	809,602.33	32° 18' 45.407 N	103° 27' 53.945 W
11,890.0	91.60	10.00	11,353.4	502.4	324.2	478,579.14	809,608.36	32° 18' 45.718 N	103° 27' 53.872 W
11,922.0	91.40	8.10	11,352.6	534.0	329.2	478,610.73	809,613.39	32° 18' 46.030 N	103° 27' 53.810 W
11,953.0	90.90	6.30	11,352.0	564.8	333.1	478,641.48	809,617.27	32° 18' 46.334 N	103° 27' 53.762 W
11,985.0	89.50	4.70	11,351.9	596.6	336.1	478,673.33	809,620.34	32° 18' 46.649 N	103° 27' 53.723 W
12,079.0	89.30	1.40	11,352.9	690.5	341.1	478,767.18	809,625.34	32° 18' 47.577 N	103° 27' 53.656 W
12,174.0	89.00	1.20	11,354.3	785.4	343.3	478,862.15	809,627.49	32° 18' 48.517 N	103° 27' 53.622 W
12,269.0	90.60	0.70	11,354.6	880.4	344.9	478,957.13	809,629.07	32° 18' 49.456 N	103° 27' 53.595 W
12,363.0	90.40	0.80	11,353.8	974.4	346.1	479,051.12	809,630.30	32° 18' 50.386 N	103° 27' 53.572 W
12,458.0	90.30	1.00	11,353.2	1,069.4	347.6	479,146.10	809,631.79	32° 18' 51.326 N	103° 27' 53.545 W
12,552.0	89.70	1.00	11,353.2	1,163.4	349.2	479,240.09	809,633.43	32° 18' 52.256 N	103° 27' 53.517 W
12,647.0	89.90	0.80	11,353.5	1,258.4	350.7	479,335.08	809,634.92	32° 18' 53.196 N	103° 27' 53.491 W
12,742.0	89.80	0.50	11,353.8	1,353.4	351.8	479,430.07	809,636.00	32° 18' 54.135 N	103° 27' 53.469 W
12,837.0	89.30	0.10	11,354.5	1,448.4	352.3	479,525.06	809,636.50	32° 18' 55.075 N	103° 27' 53.455 W
12,932.0	90.00	0.30	11,355.1	1,543.4	352.6	479,620.06	809,636.83	32° 18' 56.015 N	103° 27' 53.442 W
13,026.0	91.70	1.50	11,353.7	1,637.3	354.1	479,714.03	809,638.31	32° 18' 56.945 N	103° 27' 53.416 W
13,121.0	91.50	0.70	11,351.1	1,732.3	355.9	479,808.98	809,640.13	32° 18' 57.884 N	103° 27' 53.386 W
13,216.0	89.50	359.80	11,350.2	1,827.3	356.3	479,903.97	809,640.54	32° 18' 58.824 N	103° 27' 53.372 W
13,311.0	88.30	0.50	11,352.0	1,922.2	356.6	479,998.95	809,640.79	32° 18' 59.764 N	103° 27' 53.360 W
13,406.0	90.20	359.80	11,353.3	2,017.2	356.8	480,093.94	809,641.04	32° 19' 0.704 N	103° 27' 53.348 W

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ibex 10 B3MD Federal Com #1H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Ibex 10 B3MD Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
13,501.0	96.60	1.20	11,347.7	2,112.0	357.7	480,188.71	809,641.86	32° 19' 1.642 N	103° 27' 53.329 W
13,595.0	95.10	1.40	11,338.1	2,205.5	359.8	480,282.20	809,643.99	32° 19' 2.566 N	103° 27' 53.296 W
13,690.0	92.30	1.00	11,332.0	2,300.3	361.8	480,376.97	809,645.97	32° 19' 3.504 N	103° 27' 53.264 W
13,785.0	92.40	1.50	11,328.1	2,395.2	363.8	480,471.87	809,648.04	32° 19' 4.443 N	103° 27' 53.231 W
13,880.0	91.30	1.70	11,325.0	2,490.1	366.5	480,566.78	809,650.69	32° 19' 5.382 N	103° 27' 53.191 W
13,974.0	90.30	0.70	11,323.7	2,584.0	368.5	480,660.75	809,652.66	32° 19' 6.311 N	103° 27' 53.159 W
14,069.0	90.00	0.80	11,323.4	2,679.0	369.7	480,755.74	809,653.90	32° 19' 7.251 N	103° 27' 53.136 W
14,164.0	89.00	1.20	11,324.3	2,774.0	371.4	480,850.72	809,655.56	32° 19' 8.191 N	103° 27' 53.107 W
14,259.0	90.80	357.90	11,324.4	2,869.0	370.6	480,945.70	809,654.82	32° 19' 9.131 N	103° 27' 53.107 W
14,353.0	91.00	359.10	11,322.9	2,963.0	368.2	481,039.65	809,652.36	32° 19' 10.061 N	103° 27' 53.127 W
14,448.0	91.30	358.20	11,321.0	3,057.9	365.9	481,134.60	809,650.12	32° 19' 11.000 N	103° 27' 53.144 W
14,543.0	92.00	358.90	11,318.3	3,152.8	363.5	481,229.53	809,647.72	32° 19' 11.940 N	103° 27' 53.163 W
14,638.0	92.30	359.30	11,314.7	3,247.8	362.0	481,324.45	809,646.22	32° 19' 12.879 N	103° 27' 53.171 W
14,732.0	92.90	359.60	11,310.5	3,341.7	361.1	481,418.35	809,645.32	32° 19' 13.808 N	103° 27' 53.173 W
14,827.0	92.20	359.80	11,306.2	3,436.6	360.6	481,513.26	809,644.83	32° 19' 14.747 N	103° 27' 53.170 W
14,921.0	90.90	359.60	11,303.7	3,530.5	360.1	481,607.22	809,644.33	32° 19' 15.677 N	103° 27' 53.167 W
15,016.0	90.80	0.00	11,302.3	3,625.5	359.8	481,702.21	809,644.00	32° 19' 16.617 N	103° 27' 53.162 W
15,110.0	90.80	0.10	11,301.0	3,719.5	359.9	481,796.20	809,644.08	32° 19' 17.547 N	103° 27' 53.152 W
15,205.0	90.00	0.10	11,300.3	3,814.5	360.1	481,891.20	809,644.25	32° 19' 18.487 N	103° 27' 53.141 W
15,300.0	91.40	359.10	11,299.2	3,909.5	359.4	481,986.18	809,643.59	32° 19' 19.427 N	103° 27' 53.140 W
15,394.0	91.90	358.40	11,296.5	4,003.4	357.3	482,080.12	809,641.54	32° 19' 20.357 N	103° 27' 53.155 W
15,489.0	93.10	359.80	11,292.3	4,098.3	355.8	482,175.01	809,640.05	32° 19' 21.296 N	103° 27' 53.163 W
15,583.0	92.50	358.00	11,287.7	4,192.2	354.0	482,268.88	809,638.24	32° 19' 22.225 N	103° 27' 53.175 W
15,678.0	91.70	358.70	11,284.2	4,287.1	351.3	482,363.78	809,635.51	32° 19' 23.164 N	103° 27' 53.198 W
15,772.0	91.40	359.30	11,281.7	4,381.0	349.7	482,457.73	809,633.87	32° 19' 24.094 N	103° 27' 53.208 W
15,866.0	90.00	359.60	11,280.5	4,475.0	348.8	482,551.71	809,632.97	32° 19' 25.024 N	103° 27' 53.210 W
15,961.0	90.40	359.80	11,280.2	4,570.0	348.3	482,646.71	809,632.47	32° 19' 25.964 N	103° 27' 53.207 W
16,055.0	90.80	0.70	11,279.2	4,664.0	348.7	482,740.70	809,632.88	32° 19' 26.894 N	103° 27' 53.193 W
16,150.0	91.10	0.50	11,277.7	4,759.0	349.7	482,835.69	809,633.88	32° 19' 27.833 N	103° 27' 53.173 W
16,244.0	90.90	0.30	11,276.0	4,853.0	350.3	482,929.67	809,634.53	32° 19' 28.763 N	103° 27' 53.156 W
16,339.0	91.60	0.50	11,273.9	4,947.9	351.0	483,024.64	809,635.19	32° 19' 29.703 N	103° 27' 53.139 W
16,433.0	90.80	357.90	11,272.0	5,041.9	349.7	483,118.60	809,633.88	32° 19' 30.633 N	103° 27' 53.146 W
16,529.0	91.90	359.80	11,269.7	5,137.9	347.8	483,214.55	809,631.96	32° 19' 31.582 N	103° 27' 53.159 W
16,623.0	92.00	359.80	11,266.5	5,231.8	347.4	483,308.50	809,631.63	32° 19' 32.512 N	103° 27' 53.154 W
16,713.0	92.10	0.00	11,263.3	5,321.7	347.3	483,398.44	809,631.47	32° 19' 33.402 N	103° 27' 53.147 W
16,775.0	92.10	0.00	11,261.0	5,383.7	347.3	483,460.40	809,631.47	32° 19' 34.015 N	103° 27' 53.142 W

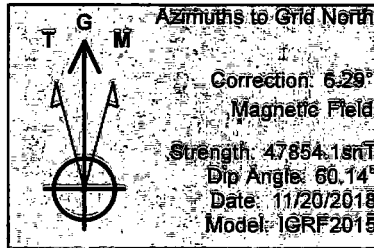
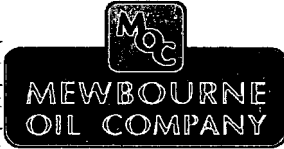
TD @ 16775.0' MD / 11261.0' TVD

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
107.0	107.0	0.7	0.5	First MWD Survey @ 107.0' MD / 107.0' TVD
11,578.7	11,311.5	206.7	243.6	Crossed LL @ 11578.7' MD / 11311.5' TVD
11,687.4	11,338.6	306.9	275.7	Crossed 100' HL @ 11687.4' MD / 11338.6' TVD
16,775.0	11,261.0	5,383.7	347.3	TD @ 16775.0' MD / 11261.0' TVD

Company Name: Mewbourne Oil Company
Ibex 10 B3MD Federal Corn #1H
Lea County, New Mexico (Nad 83)
Rig: Patterson #230
Created By: Shane Robbins
Date: 12/18/2018

Ibex 10 B3MD Federal Corn #1H
Lea County, New Mexico (Nad 83)
Q181626 & WT-181368
Design #1



PROJECT DETAILS: Lea County, New Mexico (Nad 83)

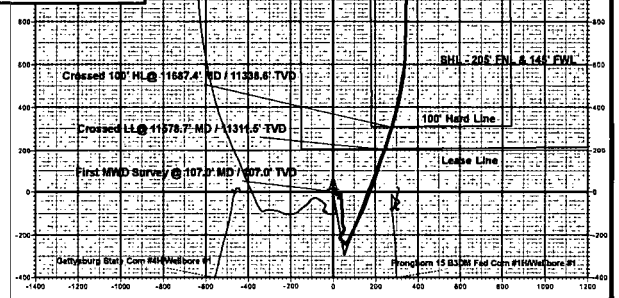
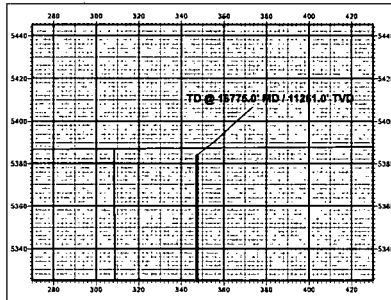
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

WELL DETAILS: Ibex 10 B3MD Federal Corn #1H

+N-S	+E-W	North	East	Latitude	Longitude
0.0	0.0	478076.70	809284.20	32° 18' 40.772 N	103° 27' 57.696 W

DESIGN ANNOTATIONS

MD	Inc	Azi	TVD	+N-S	+E-W	VSecDeparture	Annotation
4975.0	0.00	0.00	4975.0	0.0	0.0	0.0	Build 2°/100'
5123.9	2.98	169.90	5123.9	-3.8	0.7	-3.8	EOB @ 2.98° Inc / 169.9° Azm
10738.5	2.98	169.90	10738.5	-290.8	51.8	-297.3	Drop 2°/100'
10886.3	0.00	0.00	10886.3	-294.6	52.5	-291.1	EOD @ Vert / Build 12°/100'
11642.1	90.82	20.77	11355.0	158.2	224.2	170.8	EOB @ 90.82° Inc / 20.77° Azm / 11355° TVD / Turn 3°/100'
12351.2	90.82	359.50	11344.8	852.2	348.3	870.7	EOT @ 359.5° Azm
16886.5	90.82	359.50	11280.0	5388.8	308.3	5395.6	TD @ 16887° MD / 11280° TVD



ANNOTATIONS

MD	Inc	Azi	TVD	+N-S	+E-W	VSecDeparture	Annotation
107.0	0.00	35.30	107.0	0.7	0.5	0.7	First MWD Survey @ 107.0° MD / 107.0° TVD
11878.7	72.18	18.34	11311.5	208.7	243.6	220.3	Crossed LL @ 11578.7° MD / 11311.5° TVD
11687.4	78.73	16.49	11338.6	308.9	278.7	322.2	Crossed 100' HL @ 11687.4° MD / 11338.6° TVD
16775.0	92.10	0.00	11261.0	5383.7	347.3	5394.7	TD @ 16775.0° MD / 11261.0° TVD

Crossed LL @ 11578.7° MD / 11311.5° TVD

Crossed 100' HL @ 11687.4° MD / 11338.6° TVD

TD @ 16775.0° MD / 11261.0° TVD

Vertical Section at 3.28° (200 uft/in)