



Mewbourne Oil Company

Lea County N. M. Nad (83)

Section 28 21-19S-35E Charolais

Charolais 28 21 B2NC St Com #1H

Original Hole

Design: Original Hole

Standard Survey Report

06 May, 2019





Microsoft
Survey Report



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 28 21-19S-35E Charolais
Well: Charolais 28 21 B2NC St Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Charolais 28 21 B2NC St Com #1H
TVD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
MD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Project	Lea County N. M. 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	Section 28 21-19S-35E Charolais			
Site Position:		Northing:	592,090.70 usft	Latitude: 32° 37' 28.975 N
From:	Map	Easting:	808,209.90 usft	Longitude: 103° 27' 59.424 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.47 °

Well	Charolais 28 21 B2NC St Com #1H			
Well Position	+N/-S	0.0 usft	Northing:	592,090.70 usft
	+E/-W	0.0 usft	Easting:	808,209.90 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	27.0 usft	Ground Level: 3,721.0 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	03/04/19	6.75	60.42	48,007.39295779

Design	Original Hole				
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	3.06	

Survey Program	Date 05/06/19				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
240.0	20,515.0	MWD Survey (Original Hole)	MWD+IGRF	OWSG MWD + IGRF or WMM	

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)	
167.0	0.30	59.00	167.0	0.2	0.5	0.3	0.00	0.00	0.00	
240.0	0.20	179.00	240.0	0.2	0.7	0.2	0.60	-0.14	164.38	
380.0	0.70	346.00	380.0	0.8	0.5	0.8	0.64	0.36	119.29	
450.0	0.10	88.00	450.0	1.2	0.5	1.2	1.04	-0.86	145.71	
564.0	0.70	100.00	564.0	1.1	1.2	1.2	0.53	0.53	10.53	
743.0	0.50	132.00	743.0	0.4	2.9	0.5	0.21	-0.11	17.88	
938.0	0.70	95.00	938.0	-0.3	4.7	0.0	0.22	0.10	-18.97	
1,129.0	0.80	101.00	1,129.0	-0.7	7.2	-0.3	0.07	0.05	3.14	
1,319.0	0.60	97.00	1,318.9	-1.0	9.5	-0.5	0.11	-0.11	-2.11	
1,504.0	0.00	107.00	1,503.9	-1.1	10.4	-0.6	0.32	-0.32	0.00	



Microsoft Survey Report



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 28 21-19S-35E Charolais
Well: Charolais 28 21 B2NC St Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Charolais 28 21 B2NC St Com #1H
TVD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
MD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

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)
1,700.0	0.70	68.00	1,699.9	-0.7	11.6	-0.1	0.36	0.36	0.00
1,845.0	0.40	97.00	1,844.9	-0.4	12.9	0.3	0.28	-0.21	20.00
1,990.0	1.80	101.30	1,989.9	-0.9	15.6	-0.1	0.97	0.97	2.97
2,180.0	5.90	93.70	2,179.4	-2.2	28.3	-0.6	2.17	2.16	-4.00
2,370.0	6.20	105.70	2,368.4	-5.6	47.9	-3.0	0.68	0.16	6.32
2,561.0	6.50	105.40	2,558.2	-11.2	68.3	-7.6	0.16	0.16	-0.16
2,751.0	6.00	101.80	2,747.1	-16.1	88.4	-11.4	0.33	-0.26	-1.89
2,942.0	5.30	101.30	2,937.1	-19.9	106.8	-14.2	0.37	-0.37	-0.26
3,131.0	8.20	103.70	3,124.8	-24.8	128.4	-17.9	1.54	1.53	1.27
3,297.0	7.70	107.10	3,289.2	-30.9	150.6	-22.8	0.41	-0.30	2.05
3,455.0	5.90	105.50	3,446.1	-36.1	168.5	-27.1	1.15	-1.14	-1.01
3,644.0	4.00	100.20	3,634.4	-39.9	184.4	-30.0	1.03	-1.01	-2.80
3,833.0	4.40	101.00	3,822.9	-42.5	198.0	-31.8	0.21	0.21	0.42
4,022.0	5.80	97.80	4,011.1	-45.1	214.5	-33.6	0.76	0.74	-1.69
4,212.0	7.00	107.40	4,199.9	-49.9	235.1	-37.3	0.84	0.63	5.05
4,402.0	5.70	104.00	4,388.8	-55.6	255.3	-41.9	0.71	-0.68	-1.79
4,591.0	4.60	102.50	4,577.0	-59.6	271.8	-45.0	0.59	-0.58	-0.79
4,781.0	3.80	99.40	4,766.5	-62.2	285.5	-46.9	0.44	-0.42	-1.63
4,971.0	6.50	100.30	4,955.7	-65.2	302.3	-49.0	1.42	1.42	0.47
5,161.0	6.60	104.20	5,144.5	-69.8	323.4	-52.4	0.24	0.05	2.05
5,351.0	6.40	106.00	5,333.3	-75.4	344.2	-56.9	0.15	-0.11	0.95
5,540.0	6.20	105.20	5,521.1	-81.0	364.2	-61.4	0.12	-0.11	-0.42
5,730.0	6.00	103.40	5,710.0	-86.0	383.7	-65.4	0.15	-0.11	-0.95
5,920.0	5.70	102.20	5,899.1	-90.2	402.6	-68.6	0.17	-0.16	-0.63
6,110.0	4.60	100.00	6,088.3	-93.6	419.3	-71.1	0.59	-0.58	-1.16
6,301.0	5.00	111.60	6,278.6	-98.0	434.6	-74.6	0.55	0.21	6.07
6,492.0	4.10	105.40	6,469.0	-102.8	448.9	-78.7	0.54	-0.47	-3.25
6,682.0	4.70	98.30	6,658.5	-105.8	463.2	-80.9	0.43	0.32	-3.74
6,873.0	4.40	102.50	6,848.9	-108.5	478.1	-82.8	0.23	-0.16	2.20
7,064.0	3.90	100.30	7,039.4	-111.2	491.6	-84.8	0.27	-0.26	-1.15
7,255.0	5.60	100.60	7,229.7	-114.1	507.2	-86.9	0.89	0.89	0.16
7,445.0	5.50	105.00	7,418.8	-118.2	525.1	-90.0	0.23	-0.05	2.32
7,635.0	5.00	102.80	7,608.0	-122.4	542.0	-93.3	0.28	-0.26	-1.16
7,824.0	4.40	99.00	7,796.4	-125.3	557.2	-95.4	0.36	-0.32	-2.01
8,014.0	3.40	98.80	7,985.9	-127.3	569.9	-96.7	0.53	-0.53	-0.11
8,203.0	4.00	104.50	8,174.5	-129.8	581.8	-98.6	0.37	0.32	3.02
8,393.0	2.70	116.20	8,364.2	-133.5	592.3	-101.7	0.77	-0.68	6.16
8,583.0	2.80	85.40	8,554.0	-135.1	600.9	-102.8	0.77	0.05	-16.21
8,678.0	4.70	91.70	8,648.8	-135.0	607.1	-102.4	2.04	2.00	6.63
8,773.0	4.70	93.30	8,743.5	-135.3	614.9	-102.3	0.14	0.00	1.68
8,868.0	4.90	131.30	8,838.2	-138.2	621.8	-104.9	3.29	0.21	40.00
8,963.0	4.10	147.40	8,932.9	-143.8	626.7	-110.1	1.57	-0.84	16.95
9,059.0	3.20	115.00	9,028.7	-147.8	631.0	-113.9	2.30	-0.94	-33.75
9,155.0	2.90	109.10	9,124.5	-149.7	635.7	-115.6	0.45	-0.31	-6.15



Microsoft Survey Report



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 28 21-19S-35E Charolais
Well: Charolais 28 21 B2NC St Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Charolais 28 21 B2NC St Com #1H
TVD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
MD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

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)
9,250.0	2.20	74.30	9,219.5	-150.0	639.7	-115.7	1.75	-0.74	-36.63
9,344.0	1.90	56.20	9,313.4	-148.7	642.8	-114.2	0.75	-0.32	-19.26
9,439.0	1.50	55.80	9,408.4	-147.1	645.1	-112.5	0.42	-0.42	-0.42
9,534.0	1.10	32.00	9,503.3	-145.6	646.6	-110.9	0.70	-0.42	-25.05
9,629.0	0.90	28.40	9,598.3	-144.2	647.5	-109.4	0.22	-0.21	-3.79
9,630.7	0.90	28.40	9,600.0	-144.2	647.5	-109.4	0.00	0.00	0.00
B.B. Charolais 28 21 B2NC St Com 1H									
9,718.0	0.70	26.60	9,687.3	-143.1	648.0	-108.3	0.23	-0.23	-2.06
9,747.0	0.70	28.70	9,716.3	-142.8	648.2	-108.0	0.09	0.00	7.24
9,843.0	7.60	8.80	9,812.0	-136.0	649.4	-101.1	7.24	7.19	-20.73
9,890.0	16.30	6.70	9,857.9	-126.3	650.7	-91.5	18.53	18.51	-4.47
9,938.0	21.50	4.50	9,903.3	-110.9	652.2	-75.9	10.93	10.83	-4.58
9,984.0	24.20	2.30	9,945.7	-93.0	653.2	-58.1	6.16	5.87	-4.78
10,031.0	29.50	357.00	9,987.6	-71.8	653.0	-36.9	12.36	11.28	-11.28
10,078.0	34.20	354.30	10,027.6	-47.1	651.1	-12.3	10.45	10.00	-5.74
10,126.0	38.70	355.80	10,066.2	-18.7	648.6	15.9	9.56	9.38	3.13
10,173.0	41.40	357.00	10,102.1	11.5	646.7	45.9	5.97	5.74	2.55
10,221.0	47.30	357.80	10,136.4	45.0	645.2	79.3	12.35	12.29	1.67
10,269.0	52.90	359.10	10,167.2	81.8	644.3	116.0	11.85	11.67	2.71
10,317.0	56.70	0.40	10,194.9	121.0	644.1	155.2	8.22	7.92	2.71
10,349.0	59.70	0.70	10,211.7	148.2	644.4	182.3	9.41	9.38	0.94
10,381.0	64.20	0.00	10,226.8	176.4	644.5	210.5	14.19	14.06	-2.19
<u>10,412.0</u>	68.90	359.60	10,239.1	<u>204.8</u>	<u>644.4</u>	238.9	15.21	15.16	-1.29
10,459.0	73.60	358.90	10,254.2	249.3	643.8	283.3	10.10	10.00	-1.49
10,484.2	76.33	358.37	10,260.8	273.7	643.3	307.6	11.02	10.83	-2.11
LP Charolais 28 21 B2NC st Com 1H									
10,507.0	78.80	357.90	10,265.7	295.9	642.5	329.7	11.02	10.84	-2.06
10,555.0	85.40	357.00	10,272.3	343.4	640.4	377.0	13.87	13.75	-1.88
10,627.0	91.90	357.70	10,274.0	415.2	637.1	448.6	9.08	9.03	0.97
10,722.0	89.70	359.10	10,272.6	510.2	634.4	543.3	2.74	-2.32	1.47
10,816.0	89.90	358.30	10,273.0	604.2	632.3	637.0	0.88	0.21	-0.85
10,911.0	90.20	357.60	10,272.9	699.1	628.9	731.6	0.80	0.32	-0.74
11,006.0	89.10	358.30	10,273.5	794.0	625.5	826.3	1.37	-1.16	0.74
11,101.0	87.60	357.20	10,276.2	888.9	621.8	920.8	1.96	-1.58	-1.16
11,196.0	89.50	357.80	10,278.6	983.8	617.6	1,015.3	2.10	2.00	0.63
11,291.0	92.00	0.50	10,277.4	1,078.8	616.2	1,110.1	3.87	2.63	2.84
11,385.0	93.20	359.70	10,273.1	1,172.7	616.4	1,203.9	1.53	1.28	-0.85
11,480.0	94.00	359.30	10,267.1	1,267.5	615.6	1,298.5	0.94	0.84	-0.42
11,574.0	93.10	1.60	10,261.3	1,361.3	616.3	1,392.2	2.62	-0.96	2.45
11,669.0	90.90	2.60	10,258.0	1,456.1	619.8	1,487.1	2.54	-2.32	1.05
11,764.0	90.60	2.10	10,256.7	1,551.1	623.7	1,582.1	0.61	-0.32	-0.53
11,859.0	90.80	1.90	10,255.6	1,646.0	627.0	1,677.1	0.30	0.21	-0.21
11,954.0	90.40	1.50	10,254.6	1,740.9	629.8	1,772.1	0.60	-0.42	-0.42



Microsoft Survey Report



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 28 21-19S-35E Charolais
Well: Charolais 28 21 B2NC St Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Charolais 28 21 B2NC St Com #1H
TVD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
MD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

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)
12,048.0	90.50	1.60	10,253.9	1,834.9	632.4	1,866.0	0.15	0.11	0.11
12,143.0	90.10	1.60	10,253.4	1,929.9	635.0	1,961.0	0.42	-0.42	0.00
12,237.0	89.80	1.80	10,253.4	2,023.8	637.8	2,055.0	0.38	-0.32	0.21
12,333.0	92.00	0.00	10,251.9	2,119.8	639.3	2,150.9	2.96	2.29	-1.88
12,427.0	92.10	359.60	10,248.6	2,213.7	639.0	2,244.7	0.44	0.11	-0.43
12,522.0	92.50	0.00	10,244.8	2,308.7	638.6	2,339.4	0.60	0.42	0.42
12,617.0	92.90	0.00	10,240.3	2,403.5	638.6	2,434.2	0.42	0.42	0.00
12,712.0	92.60	0.10	10,235.7	2,498.4	638.7	2,528.9	0.33	-0.32	0.11
12,807.0	91.60	358.70	10,232.2	2,593.4	637.7	2,623.7	1.81	-1.05	-1.47
12,902.0	91.80	358.20	10,229.4	2,688.3	635.2	2,718.3	0.57	0.21	-0.53
12,998.0	91.80	359.60	10,226.4	2,784.2	633.3	2,814.0	1.46	0.00	1.46
13,093.0	89.50	357.00	10,225.3	2,879.2	630.5	2,908.7	3.65	-2.42	-2.74
13,189.0	89.70	357.20	10,226.0	2,975.0	625.6	3,004.2	0.29	0.21	0.21
13,285.0	90.30	356.70	10,226.0	3,070.9	620.5	3,099.6	0.81	0.63	-0.52
13,379.0	90.50	355.90	10,225.3	3,164.7	614.5	3,193.0	0.88	0.21	-0.85
13,475.0	92.40	357.10	10,222.9	3,260.5	608.6	3,288.3	2.34	1.98	1.25
13,570.0	92.50	356.40	10,218.9	3,355.2	603.2	3,382.6	0.74	0.11	-0.74
13,666.0	93.40	356.80	10,213.9	3,450.9	597.5	3,477.9	1.03	0.94	0.42
13,761.0	93.10	358.00	10,208.5	3,545.7	593.2	3,572.3	1.30	-0.32	1.26
13,856.0	92.60	358.30	10,203.8	3,640.5	590.2	3,666.8	0.61	-0.53	0.32
13,951.0	90.80	0.00	10,201.0	3,735.5	588.8	3,761.5	2.61	-1.89	1.79
14,046.0	91.00	359.70	10,199.5	3,830.4	588.5	3,856.4	0.38	0.21	-0.32
14,142.0	90.30	359.20	10,198.4	3,926.4	587.6	3,952.2	0.90	-0.73	-0.52
14,236.0	91.00	359.00	10,197.3	4,020.4	586.1	4,046.0	0.77	0.74	-0.21
14,331.0	91.40	0.00	10,195.3	4,115.4	585.3	4,140.8	1.13	0.42	1.05
14,426.0	90.50	2.20	10,193.8	4,210.4	587.1	4,235.7	2.50	-0.95	2.32
14,522.0	91.00	2.20	10,192.5	4,306.3	590.8	4,331.7	0.52	0.52	0.00
14,615.0	90.00	2.50	10,191.7	4,399.2	594.6	4,424.6	1.12	-1.08	0.32
14,710.0	91.10	2.60	10,190.8	4,494.1	598.8	4,519.6	1.16	1.16	0.11
14,804.0	92.10	2.20	10,188.2	4,588.0	602.8	4,613.6	1.15	1.06	-0.43
14,899.0	88.90	0.00	10,187.3	4,682.9	604.6	4,708.5	4.09	-3.37	-2.32
14,994.0	90.50	359.90	10,187.8	4,777.9	604.5	4,803.4	1.69	1.68	-0.11
15,089.0	92.20	359.90	10,185.6	4,872.9	604.4	4,898.2	1.79	1.79	0.00
15,183.0	92.50	359.40	10,181.7	4,966.8	603.8	4,992.0	0.62	0.32	-0.53
15,278.0	92.70	359.20	10,177.4	5,061.7	602.6	5,086.6	0.30	0.21	-0.21
15,372.0	93.40	359.20	10,172.4	5,155.6	601.3	5,180.3	0.74	0.74	0.00
15,467.0	91.70	359.00	10,168.2	5,250.5	599.8	5,275.0	1.80	-1.79	-0.21
15,562.0	92.40	359.00	10,164.8	5,345.4	598.2	5,369.7	0.74	0.74	0.00
15,657.0	90.10	0.80	10,162.7	5,440.4	598.0	5,464.5	3.07	-2.42	1.89
15,753.0	89.40	0.40	10,163.2	5,536.3	599.0	5,560.4	0.84	-0.73	-0.42
15,821.1	90.05	0.11	10,163.5	5,604.5	599.3	5,628.5	1.05	0.96	-0.43
Mid Lateral Target									
15,847.0	90.30	0.00	10,163.4	5,630.3	599.3	5,654.3	1.05	0.96	-0.43
15,941.0	90.50	359.60	10,162.7	5,724.3	599.0	5,748.1	0.48	0.21	-0.43



Microsoft Survey Report



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 28 21-19S-35E Charolais
Well: Charolais 28 21 B2NC St Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Charolais 28 21 B2NC St Com #1H
TVD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
MD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

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)
16,035.0	92.00	359.40	10,160.7	5,818.3	598.2	5,841.9	1.61	1.60	-0.21
16,130.0	91.70	0.50	10,157.6	5,913.3	598.1	5,936.7	1.20	-0.32	1.16
16,225.0	92.00	0.20	10,154.6	6,008.2	598.7	6,031.6	0.45	0.32	-0.32
16,320.0	91.20	2.40	10,151.9	6,103.1	600.8	6,126.5	2.46	-0.84	2.32
16,414.0	92.90	2.50	10,148.5	6,197.0	604.9	6,220.4	1.81	1.81	0.11
16,509.0	92.00	3.00	10,144.5	6,291.8	609.4	6,315.3	1.08	-0.95	0.53
16,604.0	89.90	3.10	10,142.9	6,386.6	614.5	6,410.3	2.21	-2.21	0.11
16,698.0	89.90	2.10	10,143.1	6,480.5	618.7	6,504.3	1.06	0.00	-1.06
16,793.0	88.40	0.40	10,144.5	6,575.5	620.8	6,599.3	2.39	-1.58	-1.79
16,888.0	87.70	359.50	10,147.7	6,670.4	620.7	6,694.1	1.20	-0.74	-0.95
16,983.0	88.70	358.10	10,150.7	6,765.4	618.7	6,788.7	1.81	1.05	-1.47
17,078.0	89.50	354.80	10,152.2	6,860.2	612.8	6,883.1	3.57	0.84	-3.47
17,119.0	89.20	354.80	10,152.7	6,901.0	609.1	6,923.7	0.73	-0.73	0.00
17,213.0	91.40	355.60	10,152.2	6,994.7	601.3	7,016.8	2.49	2.34	0.85
17,308.0	91.30	355.60	10,149.9	7,089.4	594.0	7,110.9	0.11	-0.11	0.00
17,403.0	91.20	355.60	10,147.9	7,184.1	586.7	7,205.1	0.11	-0.11	0.00
17,497.0	91.10	355.70	10,146.0	7,277.8	579.6	7,298.3	0.15	-0.11	0.11
17,592.0	91.20	356.70	10,144.1	7,372.5	573.3	7,392.6	1.06	0.11	1.05
17,688.0	90.90	358.10	10,142.3	7,468.4	568.9	7,488.1	1.49	-0.31	1.46
17,782.0	90.80	358.80	10,140.9	7,562.4	566.4	7,581.8	0.75	-0.11	0.74
17,877.0	90.50	359.00	10,139.8	7,657.3	564.5	7,676.6	0.38	-0.32	0.21
17,972.0	90.50	359.20	10,139.0	7,752.3	563.1	7,771.3	0.21	0.00	0.21
18,067.0	90.20	359.20	10,138.4	7,847.3	561.7	7,866.1	0.32	-0.32	0.00
18,163.0	90.80	0.10	10,137.6	7,943.3	561.1	7,961.9	1.13	0.63	0.94
18,258.0	90.60	0.10	10,136.4	8,038.3	561.3	8,056.8	0.21	-0.21	0.00
18,354.0	90.60	0.40	10,135.4	8,134.3	561.7	8,152.7	0.31	0.00	0.31
18,448.0	90.60	0.50	10,134.4	8,228.3	562.5	8,246.6	0.11	0.00	0.11
18,544.0	90.30	0.30	10,133.7	8,324.3	563.1	8,342.5	0.38	-0.31	-0.21
18,638.0	90.20	0.60	10,133.3	8,418.3	563.9	8,436.4	0.34	-0.11	0.32
18,733.0	90.00	0.60	10,133.1	8,513.3	564.9	8,531.3	0.21	-0.21	0.00
18,828.0	89.80	0.60	10,133.3	8,608.3	565.9	8,626.2	0.21	-0.21	0.00
18,925.0	89.40	0.70	10,133.9	8,705.3	567.0	8,723.1	0.43	-0.41	0.10
19,021.0	89.00	0.70	10,135.3	8,801.2	568.1	8,819.0	0.42	-0.42	0.00
19,116.0	88.50	0.50	10,137.4	8,896.2	569.1	8,913.9	0.57	-0.53	-0.21
19,210.0	88.10	359.70	10,140.1	8,990.2	569.3	9,007.7	0.95	-0.43	-0.85
19,305.0	89.70	358.60	10,142.0	9,085.1	567.9	9,102.5	2.04	1.68	-1.16
19,400.0	89.50	358.30	10,142.6	9,180.1	565.3	9,197.2	0.38	-0.21	-0.32
19,495.0	90.70	358.30	10,142.5	9,275.1	562.5	9,291.9	1.26	1.26	0.00
19,590.0	90.00	358.10	10,141.9	9,370.0	559.5	9,386.5	0.77	-0.74	-0.21
19,685.0	90.50	358.30	10,141.5	9,465.0	556.5	9,481.2	0.57	0.53	0.21
19,780.0	90.70	359.90	10,140.5	9,559.9	555.0	9,575.9	1.70	0.21	1.68
19,875.0	90.40	359.60	10,139.6	9,654.9	554.6	9,670.8	0.45	-0.32	-0.32
19,970.0	91.30	359.20	10,138.2	9,749.9	553.6	9,765.6	1.04	0.95	-0.42



Microsoft Survey Report



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 28 21-19S-35E Charolais
Well: Charolais 28 21 B2NC St Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Charolais 28 21 B2NC St Com #1H
TVD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
MD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

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)
20,065.0	91.10	359.40	10,136.2	9,844.9	552.5	9,860.3	0.30	-0.21	0.21
20,160.0	91.10	359.40	10,134.3	9,939.9	551.5	9,955.1	0.00	0.00	0.00
20,256.0	90.90	359.60	10,132.7	10,035.9	550.6	10,050.9	0.29	-0.21	0.21
20,349.0	90.60	359.90	10,131.4	10,128.8	550.2	10,143.8	0.46	-0.32	0.32
20,445.0	90.40	359.90	10,130.6	10,224.8	550.1	10,239.6	0.21	-0.21	0.00
20,467.0	90.50	359.80	10,130.4	10,246.8	550.0	10,261.6	0.64	0.45	-0.45
20,515.0	90.50	359.80	10,130.0	10,294.8	549.8	10,309.5	0.00	0.00	0.00

20515.0' Projected to Bit - PBHL Charolais 28 21 B2NC St Com 1H

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
20,515.0	10,130.0	10,294.8	549.8	20515.0' Projected to Bit

STRYKER

DIRECTIONAL

August 2, 2019

New Mexico Energy, Minerals and Natural Resources Department
Attn: Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

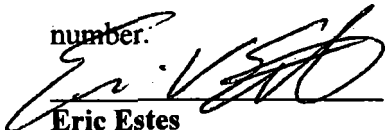
Attn: Jackie Lathan

Re: Mewbourne Oil Company
Charolais 28 21 B2NC State Com #1H
Pearl; Bone Spring
Lea County, New Mexico
API# 30-025-45342

Enclosed please find the original and one (1) copy of the survey performed on the reference well by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C. Other information required by your office is as follows:

<u>Name & Title</u>	<u>Drainhole No.</u>	<u>Survey Depths</u>	<u>Dates Performed</u>	<u>Type Survey</u>
Cody Hash	Original Hole	240ft. to 20,467ft.	04-11-19 to 05-03-19	MWD Survey

A certified plat on which the bottom-hole location is oriented to both surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.


Eric Estes

Enclosures

CC:

Mewbourne Oil Company
Attn: Frosty Lathan
P.O. Box 5720
Hobbs, NM 88241

Mewbourne Oil Company
Attn: Robin Terrell
P.O. Box 5720
Hobbs, NM 88241

NMEMaNRD\Mewbourne Oil Charolais 28 21 B2NC State Com #1HM191075

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.
P.O. Box 1250
Montgomery, TX 77356
Office (936) 582-7296 * Fax (936)-588-4163



August 2, 2019

Survey Certification Report

STATE OF TEXAS
COUNTY OF Montgomery

I, Eric Estes, certify that I am employed by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C., and that I did on the day(s) of April 11, 2019, through May 3, 2019 conduct or supervise the taking of a SEDS Original Hole MWD Survey from a depth of 240feet to a depth of 20,467feet; that I am authorized and qualified to make this report; that this survey was conducted at the request of Mewbourne Oil Company, for the Charolais 28 21 B2NC State Com #1H, well API # 30-025-45342 in Lea County, New Mexico; and that I have reviewed this report and find that it conforms to the principles as set forth by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

A handwritten signature in black ink, appearing to read "Eric Estes", is written over a horizontal line.

Eric Estes

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.
P.O. Box 1250
Montgomery, TX 77356
Office (936) 582-7296 * Fax (936)-588-4163



OCD Permitting

[Home](#) > [Wells](#) > [Well Details](#)

30-025-45342 CHAROLAIS 28 21 B2NC STATE COM #001H [322855]

General Well Information

Operator: [14744] MEWBOURNE OIL CO
 Status: New Direction: Horizontal
 Well Type: Oil Multi-Lateral: No
 Work Type: New Mineral Owner: State
 Surface Owner: State
 Surface Location: C-28-19S-35E 205 FSL 1340 FWL
 Lat/Long: 32.6247153, -103.4665054 NAD83
 GL Elevation: 3785
 KB Elevation:
 DF Elevation: Sing/Mult Compl: Single
 Potash Waiver: False

Proposed Formation and/or Notes

2ND BONE SPRING SAND

Depths

Proposed: 20262 Total Vertical Depth: 0
 Measured Vertical Depth: 0 Plugback Measured: 0

Formation Tops

Formation	Top	Producing	Method Obtained
-----------	-----	-----------	-----------------

Event Dates

Initial APD Approval: 11/08/2018
 Most Recent APD Approval: 11/08/2018 Current APD Expiration: 11/08/2020
 APD Cancellation:
 APD Extension Approval:
 Spud:
 Approved Temporary
 Abandonment:
 Shut In:
 Plug and Abandoned Intent
 Received:
 well Plugged:
 Site Release:
 Last Inspection:
 Gas Capture Plan Received: 11/08/2018
 TA Expiration:
 PNR Expiration:
 Last MIT/BHT:

History

Effective Date	Property	Well Number	Operator	C-101 Work Type	Well Type	Well Status	Apd Cancelled	Plug Date
11/08/2018	[322855] CHAROLAIS 28 21 B2NC STATE COM	#001H	[14744] MEWBOURNE OIL CO	New	Oil	New		

Comments

Operator

General Contact Information

Company: [14744] MEWBOURNE OIL CO Main Phone: 575-393-5905
 Address: P.O. Box 5270 Main Fax: 575-393-7259
 Hobbs, NM 88241
 Country: U.S.A.

Quick Links

- [General Well Information](#)
- [History](#)
- [Comments](#)
- [Operator](#)
- [File](#)
- [Casing](#)
- [Well Completions](#)
- [Financial Assurance](#)
- [Compliance](#)
- [Complaints, Incidents and Safety](#)
- [Orders](#)
- [Production](#)
- [Transparency](#)
- [Points of Disposition](#)

Associated Images

- [Well Files](#)
- [Well Logs](#)
- [Administrative Orders](#)

New Searches

- [New Well Search](#)



Microsoft
MWD Report



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 28 21-19S-35E Charolais
Well: Charolais 28 21 B2NC St Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Charolais 28 21 B2NC St Com #1H
TVD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
MD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Project Lea County N. M. Nad (83)

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

Site Section 28 21-19S-35E Charolais

Site Position:	Northings:	592,090.70 usft	Latitude:	32° 37' 28.975 N
From: Map	Easting:	808,209.90 usft	Longitude:	103° 27' 59.424 W
Position Uncertainty: 0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.47 °

Well Charolais 28 21 B2NC St Com #1H

Well Position	+N/-S	0.0 usft	Northings:	592,090.70 usft	Latitude:	32° 37' 28.975 N
	+E/-W	0.0 usft	Easting:	808,209.90 usft	Longitude:	103° 27' 59.424 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	27.0 usft	Ground Level:	3,721.0 usft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	03/04/19	6.75	60.42	48,007.39295779

Design Original Hole

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	3.06

Survey Program Date 05/06/19

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
240.0	20,515.0	MWD Survey (Original Hole)	MWD+IGRF	OWSG MWD + IGRF or WMM



Microsoft
MWD Report



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 28 21-19S-35E Charolais
Well: Charolais 28 21 B2NC St Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Charolais 28 21 B2NC St Com #1H
TVD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
MD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
167.0	0.30	59.00	167.0	0.2	0.5	0.6	66.93
240.0	0.20	179.00	240.0	0.2	0.7	0.7	74.11
380.0	0.70	346.00	380.0	0.8	0.5	0.9	32.62
450.0	0.10	88.00	450.0	1.2	0.5	1.3	20.96
564.0	0.70	100.00	564.0	1.1	1.2	1.7	48.93
743.0	0.50	132.00	743.0	0.4	2.9	2.9	82.67
938.0	0.70	95.00	938.0	-0.3	4.7	4.7	93.63
1,129.0	0.80	101.00	1,129.0	-0.7	7.2	7.2	95.21
1,319.0	0.60	97.00	1,318.9	-1.0	9.5	9.5	96.20
1,504.0	0.00	107.00	1,503.9	-1.1	10.4	10.5	96.27
1,700.0	0.70	68.00	1,699.9	-0.7	11.6	11.6	93.46
1,845.0	0.40	97.00	1,844.9	-0.4	12.9	12.9	91.91
1,990.0	1.80	101.30	1,989.9	-0.9	15.6	15.6	93.44
2,180.0	5.90	93.70	2,179.4	-2.2	28.3	28.4	94.35
2,370.0	6.20	105.70	2,368.4	-5.6	47.9	48.2	96.62
2,561.0	6.50	105.40	2,558.2	-11.2	68.3	69.2	99.33
2,751.0	6.00	101.80	2,747.1	-16.1	88.4	89.8	100.33
2,942.0	5.30	101.30	2,937.1	-19.9	106.8	108.6	100.55
3,131.0	8.20	103.70	3,124.8	-24.8	128.4	130.8	100.92
3,297.0	7.70	107.10	3,289.2	-30.9	150.6	153.7	101.58
3,455.0	5.90	105.50	3,446.1	-36.1	168.5	172.3	102.10
3,644.0	4.00	100.20	3,634.4	-39.9	184.4	188.6	102.21
3,833.0	4.40	101.00	3,822.9	-42.5	198.0	202.5	102.10
4,022.0	5.80	97.80	4,011.1	-45.1	214.5	219.2	101.88
4,212.0	7.00	107.40	4,199.9	-49.9	235.1	240.3	101.98
4,402.0	5.70	104.00	4,388.8	-55.6	255.3	261.3	102.29
4,591.0	4.60	102.50	4,577.0	-59.6	271.8	278.3	102.36



Microsoft
MWD Report



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 28 21-19S-35E Charolais
Well: Charolais 28 21 B2NC St Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Charolais 28 21 B2NC St Com #1H
TVD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
MD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
4,781.0	3.80	99.40	4,766.5	-62.2	285.5	292.2	102.30
4,971.0	6.50	100.30	4,955.7	-65.2	302.3	309.2	102.17
5,161.0	6.60	104.20	5,144.5	-69.8	323.4	330.9	102.18
5,351.0	6.40	106.00	5,333.3	-75.4	344.2	352.3	102.35
5,540.0	6.20	105.20	5,521.1	-81.0	364.2	373.1	102.53
5,730.0	6.00	103.40	5,710.0	-86.0	383.7	393.2	102.63
5,920.0	5.70	102.20	5,899.1	-90.2	402.6	412.6	102.63
6,110.0	4.60	100.00	6,088.3	-93.6	419.3	429.6	102.58
6,301.0	5.00	111.60	6,278.6	-98.0	434.6	445.5	102.70
6,492.0	4.10	105.40	6,469.0	-102.8	448.9	460.6	102.90
6,682.0	4.70	98.30	6,658.5	-105.8	463.2	475.1	102.86
6,873.0	4.40	102.50	6,848.9	-108.5	478.1	490.2	102.78
7,064.0	3.90	100.30	7,039.4	-111.2	491.6	504.1	102.75
7,255.0	5.60	100.60	7,229.7	-114.1	507.2	519.9	102.68
7,445.0	5.50	105.00	7,418.8	-118.2	525.1	538.2	102.68
7,635.0	5.00	102.80	7,608.0	-122.4	542.0	555.6	102.72
7,824.0	4.40	99.00	7,796.4	-125.3	557.2	571.1	102.68
8,014.0	3.40	98.80	7,985.9	-127.3	569.9	584.0	102.59
8,203.0	4.00	104.50	8,174.5	-129.8	581.8	596.1	102.58
8,393.0	2.70	116.20	8,364.2	-133.5	592.3	607.1	102.70
8,583.0	2.80	85.40	8,554.0	-135.1	600.9	615.9	102.67
8,678.0	4.70	91.70	8,648.8	-135.0	607.1	621.9	102.54
8,773.0	4.70	93.30	8,743.5	-135.3	614.9	629.6	102.41
8,868.0	4.90	131.30	8,838.2	-138.2	621.8	637.0	102.53
8,963.0	4.10	147.40	8,932.9	-143.8	626.7	643.0	102.92
9,059.0	3.20	115.00	9,028.7	-147.8	631.0	648.1	103.18
9,155.0	2.90	109.10	9,124.5	-149.7	635.7	653.1	103.25



Microsoft
MWD Report



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 28 21-19S-35E Charolais
Well: Charolais 28 21 B2NC St Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Charolais 28 21 B2NC St Com #1H
TVD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
MD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
9,250.0	2.20	74.30	9,219.5	-150.0	639.7	657.1	103.20
9,344.0	1.90	56.20	9,313.4	-148.7	642.8	659.7	103.02
9,439.0	1.50	55.80	9,408.4	-147.1	645.1	661.7	102.84
9,534.0	1.10	32.00	9,503.3	-145.6	646.6	662.8	102.69
9,629.0	0.90	28.40	9,598.3	-144.2	647.5	663.3	102.55
9,630.7	0.90	28.40	9,600.0	-144.2	647.5	663.3	102.55
B.B. Charolais 28 21 B2NC St Com 1H							
9,718.0	0.70	26.60	9,687.3	-143.1	648.0	663.6	102.45
9,747.0	0.70	28.70	9,716.3	-142.8	648.2	663.7	102.42
9,843.0	7.60	8.80	9,812.0	-136.0	649.4	663.5	101.83
9,890.0	16.30	6.70	9,857.9	-126.3	650.7	662.8	100.99
9,938.0	21.50	4.50	9,903.3	-110.9	652.2	661.5	99.65
9,984.0	24.20	2.30	9,945.7	-93.0	653.2	659.8	98.11
10,031.0	29.50	357.00	9,987.6	-71.8	653.0	656.9	96.28
10,078.0	34.20	354.30	10,027.6	-47.1	651.1	652.8	94.14
10,126.0	38.70	355.80	10,066.2	-18.7	648.6	648.9	91.65
10,173.0	41.40	357.00	10,102.1	11.5	646.7	646.8	88.98
10,221.0	47.30	357.80	10,136.4	45.0	645.2	646.8	86.01
10,269.0	52.90	359.10	10,167.2	81.8	644.3	649.4	82.77
10,317.0	56.70	0.40	10,194.9	121.0	644.1	655.4	79.36
10,349.0	59.70	0.70	10,211.7	148.2	644.4	661.2	77.05
10,381.0	64.20	0.00	10,226.8	176.4	644.5	668.2	74.69
10,412.0	68.90	359.60	10,239.1	204.8	644.4	676.2	72.37
10,459.0	73.60	358.90	10,254.2	249.3	643.8	690.4	68.83
10,484.2	76.33	358.37	10,260.8	273.7	643.3	699.0	66.95
LP Charolais 28 21 B2NC St Com 1H							
10,507.0	78.80	357.90	10,265.7	295.9	642.5	707.4	65.27



Microsoft
MWD Report



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 28 21-19S-35E Charolais
Well: Charolais 28 21 B2NC St Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Charolais 28 21 B2NC St Com #1H
TVD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
MD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
10,555.0	85.40	357.00	10,272.3	343.4	640.4	726.7	61.80
10,627.0	91.90	357.70	10,274.0	415.2	637.1	760.5	56.91
10,722.0	89.70	359.10	10,272.6	510.2	634.4	814.1	51.20
10,816.0	89.90	358.30	10,273.0	604.2	632.3	874.5	46.30
10,911.0	90.20	357.60	10,272.9	699.1	628.9	940.3	41.97
11,006.0	89.10	358.30	10,273.5	794.0	625.5	1,010.8	38.23
11,101.0	87.60	357.20	10,276.2	888.9	621.8	1,084.8	34.97
11,196.0	89.50	357.80	10,278.6	983.8	617.6	1,161.6	32.12
11,291.0	92.00	0.50	10,277.4	1,078.8	616.2	1,242.4	29.74
11,385.0	93.20	359.70	10,273.1	1,172.7	616.4	1,324.8	27.73
11,480.0	94.00	359.30	10,267.1	1,267.5	615.6	1,409.0	25.90
11,574.0	93.10	1.60	10,261.3	1,361.3	616.3	1,494.3	24.36
11,669.0	90.90	2.60	10,258.0	1,456.1	619.8	1,582.6	23.06
11,764.0	90.60	2.10	10,256.7	1,551.1	623.7	1,671.7	21.91
11,859.0	90.80	1.90	10,255.6	1,646.0	627.0	1,761.4	20.85
11,954.0	90.40	1.50	10,254.6	1,740.9	629.8	1,851.4	19.89
12,048.0	90.50	1.60	10,253.9	1,834.9	632.4	1,940.8	19.02
12,143.0	90.10	1.60	10,253.4	1,929.9	635.0	2,031.7	18.21
12,237.0	89.80	1.80	10,253.4	2,023.8	637.8	2,121.9	17.49
12,333.0	92.00	0.00	10,251.9	2,119.8	639.3	2,214.1	16.78
12,427.0	92.10	359.60	10,248.6	2,213.7	639.0	2,304.1	16.10
12,522.0	92.50	0.00	10,244.8	2,308.7	638.6	2,395.4	15.46
12,617.0	92.90	0.00	10,240.3	2,403.5	638.6	2,486.9	14.88
12,712.0	92.60	0.10	10,235.7	2,498.4	638.7	2,578.8	14.34
12,807.0	91.60	358.70	10,232.2	2,593.4	637.7	2,670.6	13.82
12,902.0	91.80	358.20	10,229.4	2,688.3	635.2	2,762.3	13.29
12,998.0	91.80	359.60	10,226.4	2,784.2	633.3	2,855.3	12.81



Microsoft
MWD Report



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 28 21-19S-35E Charolais
Well: Charolais 28 21 B2NC St Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Charolais 28 21 B2NC St Com #1H
TVD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
MD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
13,093.0	89.50	357.00	10,225.3	2,879.2	630.5	2,947.4	12.35
13,189.0	89.70	357.20	10,226.0	2,975.0	625.6	3,040.1	11.88
13,285.0	90.30	356.70	10,226.0	3,070.9	620.5	3,133.0	11.42
13,379.0	90.50	355.90	10,225.3	3,164.7	614.5	3,223.8	10.99
13,475.0	92.40	357.10	10,222.9	3,260.5	608.6	3,316.8	10.57
13,570.0	92.50	356.40	10,218.9	3,355.2	603.2	3,409.0	10.19
13,666.0	93.40	356.80	10,213.9	3,450.9	597.5	3,502.3	9.82
13,761.0	93.10	358.00	10,208.5	3,545.7	593.2	3,595.0	9.50
13,856.0	92.60	358.30	10,203.8	3,640.5	590.2	3,688.1	9.21
13,951.0	90.80	0.00	10,201.0	3,735.5	588.8	3,781.6	8.96
14,046.0	91.00	359.70	10,199.5	3,830.4	588.5	3,875.4	8.73
14,142.0	90.30	359.20	10,198.4	3,926.4	587.6	3,970.2	8.51
14,236.0	91.00	359.00	10,197.3	4,020.4	586.1	4,062.9	8.29
14,331.0	91.40	0.00	10,195.3	4,115.4	585.3	4,156.6	8.09
14,426.0	90.50	2.20	10,193.8	4,210.4	587.1	4,251.1	7.94
14,522.0	91.00	2.20	10,192.5	4,306.3	590.8	4,346.6	7.81
14,615.0	90.00	2.50	10,191.7	4,399.2	594.6	4,439.2	7.70
14,710.0	91.10	2.60	10,190.8	4,494.1	598.8	4,533.8	7.59
14,804.0	92.10	2.20	10,188.2	4,588.0	602.8	4,627.4	7.48
14,899.0	88.90	0.00	10,187.3	4,682.9	604.6	4,721.8	7.36
14,994.0	90.50	359.90	10,187.8	4,777.9	604.5	4,816.0	7.21
15,089.0	92.20	359.90	10,185.6	4,872.9	604.4	4,910.2	7.07
15,183.0	92.50	359.40	10,181.7	4,966.8	603.8	5,003.4	6.93
15,278.0	92.70	359.20	10,177.4	5,061.7	602.6	5,097.5	6.79
15,372.0	93.40	359.20	10,172.4	5,155.6	601.3	5,190.5	6.65
15,467.0	91.70	359.00	10,168.2	5,250.5	599.8	5,284.6	6.52
15,562.0	92.40	359.00	10,164.8	5,345.4	598.2	5,378.8	6.39



Microsoft
MWD Report



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 28 21-19S-35E Charolais
Well: Charolais 28 21 B2NC St Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Charolais 28 21 B2NC St Com #1H
TVD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
MD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
15,657.0	90.10	0.80	10,162.7	5,440.4	598.0	5,473.1	6.27
15,753.0	89.40	0.40	10,163.2	5,536.3	599.0	5,568.7	6.18
15,821.1	90.05	0.11	10,163.5	5,604.5	599.3	5,636.4	6.10
Mid Lateral Target							
15,847.0	90.30	0.00	10,163.4	5,630.3	599.3	5,662.2	6.08
15,941.0	90.50	359.60	10,162.7	5,724.3	599.0	5,755.6	5.97
16,035.0	92.00	359.40	10,160.7	5,818.3	598.2	5,849.0	5.87
16,130.0	91.70	0.50	10,157.6	5,913.3	598.1	5,943.4	5.78
16,225.0	92.00	0.20	10,154.6	6,008.2	598.7	6,038.0	5.69
16,320.0	91.20	2.40	10,151.9	6,103.1	600.8	6,132.6	5.62
16,414.0	92.90	2.50	10,148.5	6,197.0	604.9	6,228.4	5.57
16,509.0	92.00	3.00	10,144.5	6,291.8	609.4	6,321.2	5.53
16,604.0	89.90	3.10	10,142.9	6,386.6	614.5	6,416.1	5.50
16,698.0	89.90	2.10	10,143.1	6,480.5	618.7	6,510.0	5.45
16,793.0	88.40	0.40	10,144.5	6,575.5	620.8	6,604.7	5.39
16,888.0	87.70	359.50	10,147.7	6,670.4	620.7	6,699.3	5.32
16,983.0	88.70	358.10	10,150.7	6,765.4	618.7	6,793.6	5.23
17,078.0	89.50	354.80	10,152.2	6,860.2	612.8	6,887.5	5.10
17,119.0	89.20	354.80	10,152.7	6,901.0	609.1	6,927.8	5.04
17,213.0	91.40	355.60	10,152.2	6,994.7	601.3	7,020.5	4.91
17,308.0	91.30	355.60	10,149.9	7,089.4	594.0	7,114.2	4.79
17,403.0	91.20	355.60	10,147.9	7,184.1	586.7	7,208.0	4.67
17,497.0	91.10	355.70	10,146.0	7,277.8	579.6	7,300.8	4.55
17,592.0	91.20	356.70	10,144.1	7,372.5	573.3	7,394.8	4.45
17,688.0	90.90	358.10	10,142.3	7,468.4	568.9	7,490.1	4.36
17,782.0	90.80	358.80	10,140.9	7,562.4	566.4	7,583.5	4.28
17,877.0	90.50	359.00	10,139.8	7,657.3	564.5	7,678.1	4.22



Microsoft
MWD Report



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 28 21-19S-35E Charolais
Well: Charolais 28 21 B2NC St Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Charolais 28 21 B2NC St Com #1H
TVD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
MD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
17,972.0	90.50	359.20	10,139.0	7,752.3	563.1	7,772.8	4.15
18,067.0	90.20	359.20	10,138.4	7,847.3	561.7	7,867.4	4.09
18,163.0	90.80	0.10	10,137.6	7,943.3	561.1	7,963.1	4.04
18,258.0	90.60	0.10	10,136.4	8,038.3	561.3	8,057.9	3.99
18,354.0	90.60	0.40	10,135.4	8,134.3	561.7	8,153.7	3.95
18,448.0	90.60	0.50	10,134.4	8,228.3	562.5	8,247.5	3.91
18,544.0	90.30	0.30	10,133.7	8,324.3	563.1	8,343.3	3.87
18,638.0	90.20	0.60	10,133.3	8,418.3	563.9	8,437.1	3.83
18,733.0	90.00	0.60	10,133.1	8,513.3	564.9	8,532.0	3.80
18,828.0	89.80	0.60	10,133.3	8,608.3	565.9	8,626.8	3.76
18,925.0	89.40	0.70	10,133.9	8,705.3	567.0	8,723.7	3.73
19,021.0	89.00	0.70	10,135.3	8,801.2	568.1	8,819.6	3.69
19,116.0	88.50	0.50	10,137.4	8,896.2	569.1	8,914.4	3.66
19,210.0	88.10	359.70	10,140.1	8,990.2	569.3	9,008.2	3.62
19,305.0	89.70	358.60	10,142.0	9,085.1	567.9	9,102.9	3.58
19,400.0	89.50	358.30	10,142.6	9,180.1	565.3	9,197.5	3.52
19,495.0	90.70	358.30	10,142.5	9,275.1	562.5	9,292.1	3.47
19,590.0	90.00	358.10	10,141.9	9,370.0	559.5	9,386.7	3.42
19,685.0	90.50	358.30	10,141.5	9,465.0	556.5	9,481.3	3.37
19,780.0	90.70	359.90	10,140.5	9,559.9	555.0	9,576.0	3.32
19,875.0	90.40	359.60	10,139.6	9,654.9	554.6	9,670.9	3.29
19,970.0	91.30	359.20	10,138.2	9,749.9	553.6	9,765.6	3.25
20,065.0	91.10	359.40	10,136.2	9,844.9	552.5	9,860.4	3.21
20,160.0	91.10	359.40	10,134.3	9,939.9	551.5	9,955.2	3.18
20,256.0	90.90	359.60	10,132.7	10,035.9	550.6	10,050.9	3.14
20,349.0	90.60	359.90	10,131.4	10,128.8	550.2	10,143.8	3.11
20,445.0	90.40	359.90	10,130.6	10,224.8	550.1	10,239.6	3.08



Microsoft
MWD Report



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 28 21-19S-35E Charolais
Well: Charolais 28 21 B2NC St Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Charolais 28 21 B2NC St Com #1H
TVD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
MD Reference: 3721 + 27 @ 3748.0usft (Patterson 564)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
20,467.0	90.50	359.80	10,130.4	10,246.8	550.0	10,261.6	3.07
20,515.0	90.50	359.80	10,130.0	10,294.8	549.8	10,309.5	3.06

20515.0' Projected to Bit - PBHL Charolais 28 21 B2NC St Com 1H

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
20,515.0	10,130.0	10,294.8	549.8	20515.0' Projected to Bit



COMPANY: Mewbourne Oil Company
WELL: Charolais 28 21 B2NC St Com #1H
COUNTY: Lea County N. M. Nad (83)
DATUM: North American Datum 1983
RIG: Patterson 564

STRYKER
DIRECTIONAL

OFFICE: 936.582.7296

GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.28°

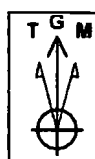
GEODETTIC ZONE: New Mexico Eastern Zone
3721 + 27 @ 3748.0ush (Patterson 564)
GROUND ELEVATION: 3721.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	592090.70	808209.90	32° 37' 28.975 N	103° 27' 59.424 W	

PLAN SECTIONS

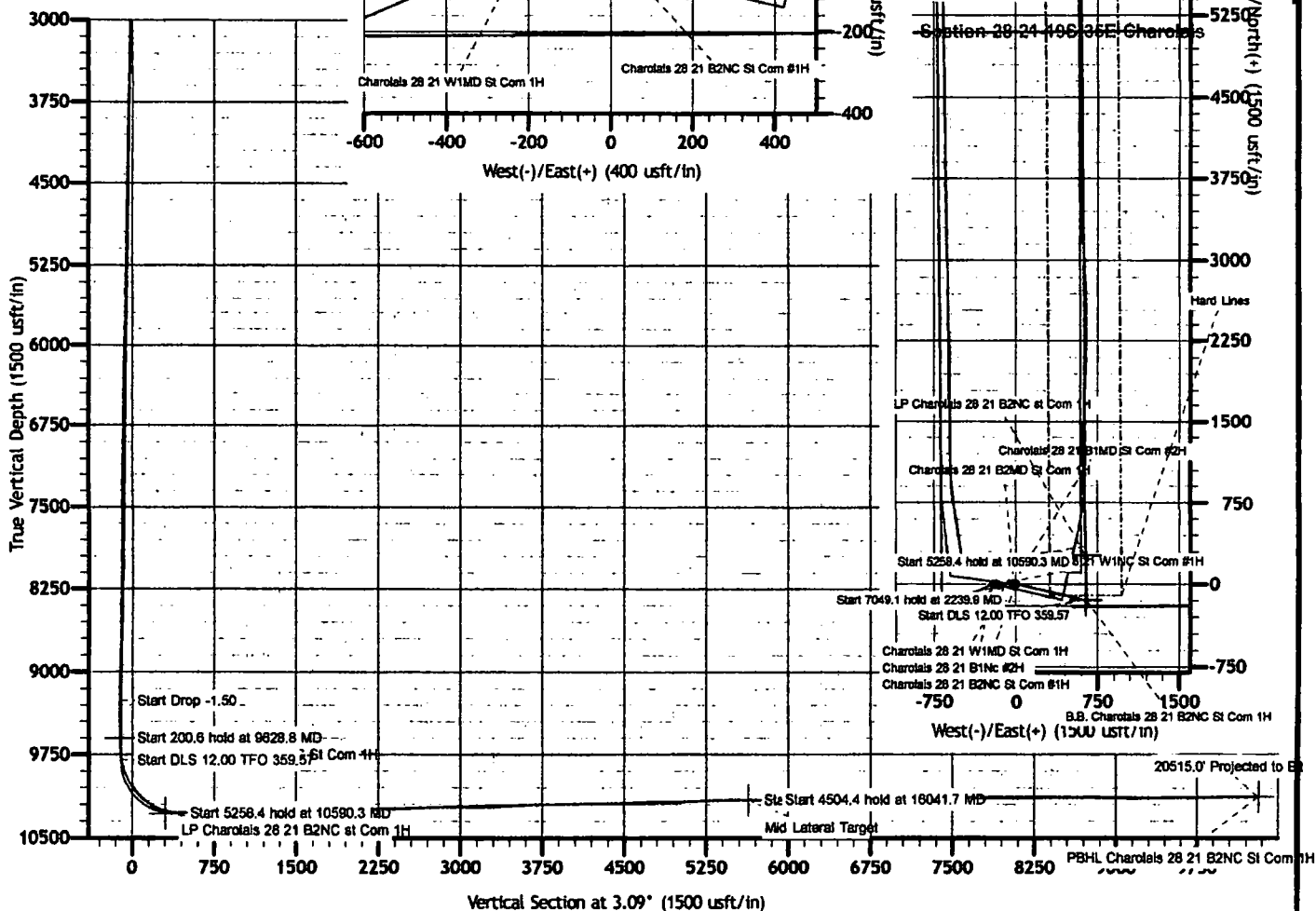
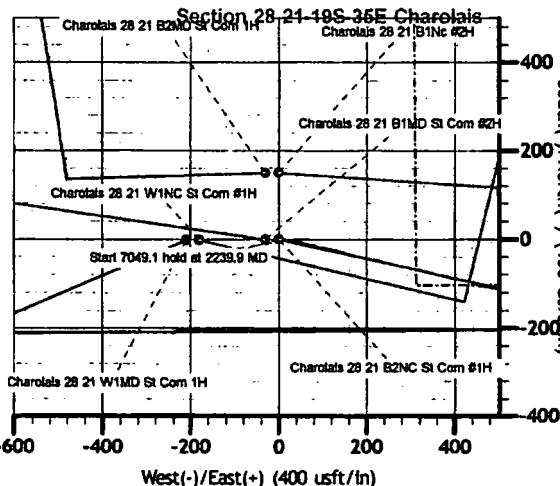
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1900.0	0.00	0.00	1900.0	0.0	0.0	0.00	0.00	0.0	
3	2239.9	5.10	102.37	2239.4	-3.2	14.8	1.50	102.37	-2.4	
4	9288.9	5.10	102.37	9289.6	-137.5	826.6	0.00	0.00	-103.5	
5	9628.8	0.00	0.00	9600.0	-140.7	841.3	1.50	180.00	-105.9	B.B. Charolais 28 21 B2NC St Com 1H
6	9829.4	0.00	0.00	9800.0	-140.7	841.3	0.00	0.00	-105.9	
7	10590.3	91.31	359.57	10278.0	347.6	837.7	12.00	359.57	381.5	Mid Lateral Target
8	15848.7	91.31	359.57	10158.0	5604.5	598.6	0.00	0.00	5828.6	
9	16041.7	90.35	359.49	10155.2	5797.5	597.0	0.50	-174.80	5821.3	
10	20546.1	90.35	359.49	10128.0	10301.6	558.7	0.00	0.00	10316.6	PBHL Charolais 28 21 B2NC St Com 1H

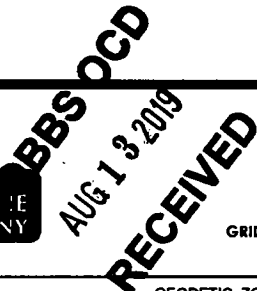
SHL: 205' FSL: 1340' FWL
Section 28-19S-35E
PBHL: 100' FNL: 1980' FWL
Section 21-19S-35E



Azimuths to Grid North
True North: -0.47°
Magnetic North: 6.28°

Magnetic Field
Strength: 48007.4nT
Dip Angle: 60.42°
Date: 03/04/2019
Model: IGRF2015





STRYKER
DIRECTIONAL

OFFICE: 936.582.7296

GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.28°

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	592090.70	808209.90	32° 37' 28.975 N	103° 27' 59.424 W

PLAN SECTIONS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1800.0	0.00	0.00	1900.0	0.0	0.0	0.00	0.00	0.0	
3	2239.9	5.10	102.37	2239.4	-3.2	14.8	1.50	102.37	-2.4	
4	9288.9	5.10	102.37	9286.6	-137.5	626.6	0.00	0.00	-103.5	
5	9828.8	0.00	0.00	9800.0	-140.7	841.3	1.50	180.00	-105.9	B.B. Charotais 28 21 B2NC St Com 1H
6	9829.4	0.00	0.00	9800.6	-140.7	841.3	0.00	0.00	-105.9	
7	10590.3	91.31	359.57	10278.0	347.8	637.7	12.00	359.57	381.5	
8	15848.7	91.31	359.57	10158.0	5604.5	598.6	0.00	0.00	5628.6	Mid Lateral Target
9	18041.7	90.35	359.49	10155.2	5787.5	597.0	0.50	-174.80	5821.3	
10	20546.1	90.35	359.49	10128.0	10301.6	556.7	0.00	0.00	10316.6	PBHL Charotais 28 21 B2NC St Com 1H

SHL: 205' FSL; 1340' FWL
Section 28-19S-35E
PBHL: 100' FNL; 1980' FWL
Section 21-19S-35E

