



Mewbourne Oil Co.

**Lea County, NM (NAD 83)
(El Mar 21) Sec-21_T-26-S_R-33-E
El Mar 21 B2NC Federal Com #1H**

OWB

Design: AWB

Standard Survey Report

18 July, 2018

The logo for Intrepid, featuring a stylized graphic of three vertical bars of increasing height to the left of the word "INTREPID" in a bold, uppercase, sans-serif font.



Intrepid Survey Report



Company:	Mewbourne Oil Co.	Local Co-ordinate Reference:	Well El Mar 21 B2NC Federal Com #1H
Project:	Lea County, NM (NAD 83)	TVD Reference:	KB @ 3273.0usft (Patterson 231)
Site:	(El Mar 21) Sec-21_T-26-S_R-33-E	MD Reference:	KB @ 3273.0usft (Patterson 231)
Well:	El Mar 21 B2NC Federal Com #1H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Project	Lea County, NM (NAD 83)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	(El Mar 21) Sec-21_T-26-S_R-33-E				
Site Position:		Northing:	372,679.00 usft	Latitude:	32° 1' 17.377 N
From:	Map	Easting:	775,487.30 usft	Longitude:	103° 26' 40.048 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.47 °

Well	El Mar 21 B2NC Federal Com #1H				
Well Position	+N/-S	0.0 usft	Northing:	372,679.00 usft	Latitude: 32° 1' 17.377 N
	+E/-W	0.0 usft	Easting:	775,487.30 usft	Longitude: 103° 26' 40.048 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft	Ground Level: 3,246.0 usft

Wellbore	OWB				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	05/10/18	6.78	59.88	47,740.33074077

Design	AWB				
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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	356.43

Survey Program	Date 07/18/18			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	831.0	Gyro Svys (OWB)	GYRO-NS	OWSG Gyrocompass Gyro
953.0	15,905.0	Intrepid MWD (OWB)	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
	100.0	0.83	292.79	100.0	0.3	-0.7	0.3	0.83	0.83	0.00
	200.0	0.88	296.39	200.0	0.9	-2.0	1.0	0.07	0.05	3.60
	300.0	0.70	291.05	300.0	1.5	-3.3	1.7	0.19	-0.18	-5.34
	400.0	0.81	325.17	400.0	2.3	-4.3	2.5	0.46	0.11	34.12
	500.0	0.88	321.02	500.0	3.4	-5.1	3.8	0.09	0.07	-4.15
	600.0	1.03	305.47	599.9	4.6	-6.4	4.9	0.30	0.15	-15.55
	700.0	1.11	298.86	699.9	5.5	-7.9	6.0	0.15	0.08	-6.61
	800.0	0.90	293.78	799.9	6.3	-9.5	6.9	0.23	-0.21	-5.08
	831.0	0.87	287.57	830.9	6.5	-10.0	7.1	0.32	-0.10	-20.03



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Well:	El Mar 21 B2NC Federal Com #1H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 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)
TIE ON									
953.0	0.90	259.30	952.9	6.6	-11.8	7.3	0.36	0.02	-23.17
1,048.0	1.10	242.70	1,047.9	6.0	-13.3	6.9	0.37	0.21	-17.47
1,143.0	1.10	238.90	1,142.9	5.2	-14.9	6.1	0.08	0.00	-4.00
1,237.0	1.10	241.10	1,236.8	4.3	-16.5	5.3	0.04	0.00	2.34
1,332.0	1.00	259.60	1,331.8	3.7	-18.1	4.8	0.37	-0.11	19.47
1,427.0	1.10	261.70	1,426.8	3.4	-19.8	4.6	0.11	0.11	2.21
1,520.0	1.10	251.30	1,519.8	3.0	-21.5	4.3	0.21	0.00	-11.18
1,615.0	1.10	245.50	1,614.8	2.3	-23.2	3.7	0.12	0.00	-6.11
1,709.0	1.30	250.20	1,708.8	1.6	-25.1	3.1	0.24	0.21	5.00
1,804.0	2.20	222.50	1,803.7	-0.1	-27.3	1.6	1.27	0.95	-29.16
1,900.0	1.20	239.00	1,899.7	-2.0	-29.4	-0.2	1.15	-1.04	17.19
1,995.0	1.00	226.50	1,994.7	-3.1	-30.9	-1.2	0.33	-0.21	-13.16
2,090.0	1.10	201.30	2,089.6	-4.5	-31.8	-2.5	0.49	0.11	-26.53
2,185.0	1.20	177.20	2,184.6	-6.4	-32.1	-4.4	0.52	0.11	-25.37
2,280.0	1.30	178.40	2,279.6	-8.4	-32.0	-6.4	0.11	0.11	1.26
2,375.0	1.40	182.60	2,374.6	-10.7	-32.0	-8.7	0.15	0.11	4.42
2,473.0	1.00	175.30	2,472.5	-12.7	-32.0	-10.7	0.44	-0.41	-7.45
2,568.0	1.10	186.20	2,567.5	-14.5	-32.0	-12.4	0.23	0.11	11.47
2,664.0	0.90	183.40	2,663.5	-16.1	-32.2	-14.1	0.21	-0.21	-2.92
2,759.0	1.10	196.80	2,758.5	-17.7	-32.5	-15.7	0.32	0.21	14.11
2,854.0	1.20	189.40	2,853.5	-19.6	-32.9	-17.5	0.19	0.11	-7.79
2,949.0	1.20	178.90	2,948.5	-21.6	-33.1	-19.5	0.23	0.00	-11.05
3,044.0	1.30	177.20	3,043.4	-23.6	-33.0	-21.5	0.11	0.11	-1.79
3,139.0	1.30	177.80	3,138.4	-25.8	-32.9	-23.7	0.01	0.00	0.63
3,233.0	1.10	165.70	3,232.4	-27.7	-32.6	-25.7	0.34	-0.21	-12.87
3,328.0	1.20	165.00	3,327.4	-29.6	-32.1	-27.5	0.11	0.11	-0.74
3,423.0	1.50	167.10	3,422.3	-31.8	-31.6	-29.7	0.32	0.32	2.21
3,518.0	2.20	144.10	3,517.3	-34.4	-30.3	-32.5	1.06	0.74	-24.21
3,613.0	3.30	117.10	3,612.2	-37.2	-26.8	-35.4	1.76	1.16	-28.42
3,707.0	3.60	103.60	3,706.0	-39.1	-21.5	-37.7	0.92	0.32	-14.36
3,802.0	3.10	104.00	3,800.9	-40.4	-16.1	-39.3	0.53	-0.53	0.42
3,898.0	3.20	99.30	3,896.7	-41.5	-10.9	-40.7	0.29	0.10	-4.90
3,993.0	0.70	202.00	3,991.7	-42.4	-8.5	-41.8	3.60	-2.63	108.11
4,087.0	1.10	243.10	4,085.7	-43.4	-9.5	-42.7	0.78	0.43	43.72
4,183.0	0.40	211.40	4,181.6	-44.1	-10.5	-43.3	0.82	-0.73	-33.02
4,278.0	0.60	115.30	4,276.6	-44.6	-10.3	-43.9	0.80	0.21	-101.16
4,373.0	1.20	104.00	4,371.6	-45.0	-8.8	-44.4	0.66	0.63	-11.89
4,467.0	1.10	109.80	4,465.6	-45.6	-7.0	-45.1	0.16	-0.11	6.17
4,561.0	1.90	121.40	4,559.6	-46.7	-4.9	-46.3	0.91	0.85	12.34
4,657.0	2.10	168.30	4,655.5	-49.3	-3.2	-49.0	1.67	0.21	48.85
4,751.0	2.00	182.70	4,749.5	-52.6	-2.9	-52.3	0.56	-0.11	15.32
4,773.0	1.90	177.90	4,771.5	-53.3	-2.9	-53.0	0.87	-0.45	-21.82



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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)
4,847.0	1.10	164.60	4,845.4	-55.2	-2.6	-55.0	1.17	-1.08	-17.97
4,942.0	2.30	221.60	4,940.4	-57.5	-3.7	-57.2	2.04	1.26	60.00
5,037.0	2.00	234.40	5,035.3	-59.9	-6.3	-59.4	0.59	-0.32	13.47
5,131.0	3.20	247.40	5,129.2	-61.9	-10.0	-61.1	1.41	1.28	13.83
5,226.0	3.90	252.70	5,224.0	-63.9	-15.6	-62.8	0.81	0.74	5.58
5,320.0	3.90	255.20	5,317.8	-65.6	-21.7	-64.2	0.18	0.00	2.66
5,415.0	3.70	256.50	5,412.6	-67.2	-27.8	-65.3	0.23	-0.21	1.37
5,511.0	3.40	250.70	5,508.4	-68.8	-33.5	-66.6	0.49	-0.31	-6.04
5,606.0	3.50	248.70	5,603.3	-70.8	-38.9	-68.3	0.16	0.11	-2.11
5,701.0	3.30	248.90	5,698.1	-72.9	-44.1	-70.0	0.21	-0.21	0.21
5,796.0	3.30	247.90	5,792.9	-74.9	-49.2	-71.7	0.06	0.00	-1.05
5,891.0	3.40	255.20	5,887.8	-76.6	-54.5	-73.1	0.46	0.11	7.68
5,985.0	3.20	255.70	5,981.6	-78.0	-59.7	-74.1	0.21	-0.21	0.53
6,080.0	3.30	256.30	6,076.5	-79.3	-64.9	-75.1	0.11	0.11	0.63
6,175.0	3.40	253.30	6,171.3	-80.7	-70.3	-76.2	0.21	0.11	-3.16
6,270.0	3.10	254.20	6,266.2	-82.3	-75.5	-77.4	0.32	-0.32	0.95
6,365.0	3.10	252.10	6,361.0	-83.7	-80.4	-78.6	0.12	0.00	-2.21
6,461.0	3.10	250.10	6,456.9	-85.4	-85.3	-79.9	0.11	0.00	-2.08
6,556.0	3.30	252.40	6,551.7	-87.1	-90.3	-81.3	0.25	0.21	2.42
6,650.0	3.00	249.50	6,645.6	-88.8	-95.2	-82.7	0.36	-0.32	-3.09
6,743.0	3.30	252.80	6,738.4	-90.5	-100.0	-84.0	0.38	0.32	3.55
6,838.0	2.90	254.90	6,833.3	-91.9	-105.0	-85.2	0.44	-0.42	2.21
6,933.0	3.00	259.30	6,928.2	-93.0	-109.7	-86.0	0.26	0.11	4.63
7,028.0	2.80	259.40	7,023.1	-93.9	-114.4	-86.5	0.21	-0.21	0.11
7,122.0	3.20	267.60	7,116.9	-94.4	-119.3	-86.8	0.62	0.43	8.72
7,217.0	4.20	251.00	7,211.7	-95.6	-125.3	-87.6	1.53	1.05	-17.47
7,311.0	4.10	250.00	7,305.5	-97.9	-131.7	-89.5	0.13	-0.11	-1.06
7,406.0	4.00	252.30	7,400.2	-100.1	-138.0	-91.3	0.20	-0.11	2.42
7,501.0	4.40	246.20	7,495.0	-102.6	-144.5	-93.4	0.63	0.42	-6.42
7,595.0	4.40	244.80	7,588.7	-105.5	-151.1	-95.9	0.11	0.00	-1.49
7,689.0	4.00	243.40	7,682.5	-108.5	-157.3	-98.5	0.44	-0.43	-1.49
7,784.0	3.70	245.00	7,777.2	-111.3	-163.0	-101.0	0.34	-0.32	1.68
7,880.0	3.30	240.60	7,873.1	-114.0	-168.2	-103.3	0.50	-0.42	-4.58
7,975.0	4.40	225.70	7,967.9	-117.9	-173.2	-106.9	1.56	1.16	-15.68
8,069.0	4.50	227.30	8,061.6	-122.9	-178.5	-111.5	0.17	0.11	1.70
8,164.0	4.10	227.90	8,156.3	-127.7	-183.8	-116.0	0.42	-0.42	0.63
8,259.0	4.00	223.90	8,251.1	-132.4	-188.6	-120.4	0.32	-0.11	-4.21
8,354.0	4.00	222.40	8,345.8	-137.2	-193.1	-124.9	0.11	0.00	-1.58
8,450.0	3.70	218.80	8,441.6	-142.1	-197.3	-129.5	0.40	-0.31	-3.75
8,545.0	3.70	222.10	8,536.4	-146.8	-201.3	-133.9	0.22	0.00	3.47
8,639.0	3.60	220.40	8,630.2	-151.3	-205.2	-138.2	0.16	-0.11	-1.81
8,734.0	3.50	228.10	8,725.1	-155.5	-209.3	-142.1	0.51	-0.11	8.11
8,829.0	3.40	225.20	8,819.9	-159.4	-213.5	-145.8	0.21	-0.11	-3.05



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8,924.0	3.30	224.10	8,914.7	-163.3	-217.4	-149.5	0.13	-0.11	-1.16
9,018.0	2.70	225.30	9,008.6	-166.8	-220.8	-152.7	0.64	-0.64	1.28
9,114.0	2.30	237.40	9,104.5	-169.5	-224.1	-155.2	0.69	-0.42	12.60
9,208.0	1.80	238.00	9,198.4	-171.3	-226.9	-156.8	0.53	-0.53	0.64
9,303.0	1.60	255.00	9,293.4	-172.4	-229.5	-157.8	0.57	-0.21	17.89
9,398.0	1.30	226.70	9,388.4	-173.5	-231.5	-158.7	0.81	-0.32	-29.79
9,493.0	2.80	217.40	9,483.3	-176.1	-233.7	-161.2	1.61	1.58	-9.79
9,588.0	2.60	229.60	9,578.2	-179.3	-236.8	-164.2	0.64	-0.21	12.84
9,682.0	2.50	200.00	9,672.1	-182.6	-239.1	-167.4	1.39	-0.11	-31.49
9,778.0	2.90	189.30	9,768.0	-187.0	-240.2	-171.6	0.67	0.42	-11.15
9,873.0	3.10	195.20	9,862.9	-191.8	-241.3	-176.4	0.39	0.21	6.21
9,967.0	3.10	202.10	9,956.7	-196.6	-242.9	-181.1	0.40	0.00	7.34
10,063.0	2.40	195.10	10,052.6	-201.0	-244.4	-185.4	0.81	-0.73	-7.29
10,157.0	2.50	205.60	10,146.5	-204.7	-245.8	-189.0	0.49	0.11	11.17
10,252.0	2.40	197.50	10,241.5	-208.5	-247.3	-192.7	0.38	-0.11	-8.53
10,347.0	2.10	214.30	10,336.4	-211.8	-248.9	-195.9	0.76	-0.32	17.68
10,410.0	1.60	224.80	10,399.3	-213.4	-250.1	-197.4	0.96	-0.79	16.67
10,470.0	1.80	274.50	10,459.3	-213.9	-251.7	-197.8	2.40	0.33	82.83
10,501.0	5.40	328.80	10,490.3	-212.6	-252.9	-196.5	14.80	11.61	175.16
10,533.0	9.50	340.30	10,522.0	-208.9	-254.6	-192.6	13.57	12.81	35.94
10,565.0	13.10	345.30	10,553.4	-202.9	-256.4	-186.5	11.65	11.25	15.63
10,596.0	17.50	346.70	10,583.3	-194.9	-258.4	-178.4	14.24	14.19	4.52
10,628.0	21.70	347.10	10,613.4	-184.5	-260.8	-167.9	13.13	13.13	1.25
10,660.0	25.30	349.60	10,642.7	-172.0	-263.3	-155.2	11.67	11.25	7.81
10,692.0	29.40	352.20	10,671.2	-157.5	-265.6	-140.6	13.34	12.81	8.13
10,724.0	33.70	354.40	10,698.4	-140.8	-267.6	-123.9	13.91	13.44	6.88
10,755.0	38.20	355.30	10,723.5	-122.7	-269.2	-105.7	14.62	14.52	2.90
10,787.0	43.50	357.10	10,747.7	-101.8	-270.6	-84.8	16.96	16.56	5.63
10,819.0	48.50	357.40	10,769.9	-78.9	-271.7	-61.8	15.64	15.63	0.94
10,850.0	50.90	357.10	10,790.0	-55.2	-272.8	-38.1	7.78	7.74	-0.97
10,882.0	52.90	356.70	10,809.7	-30.1	-274.2	-13.0	6.33	6.25	-1.25
10,914.0	55.70	357.00	10,828.4	-4.1	-275.6	13.0	8.78	8.75	0.94
10,946.0	58.60	358.50	10,845.8	22.7	-276.6	39.9	9.88	9.06	4.69
10,977.0	61.20	0.10	10,861.3	49.5	-277.0	66.7	9.50	8.39	5.16
11,009.0	64.70	1.50	10,875.8	78.0	-276.6	95.1	11.61	10.94	4.38
11,041.0	66.90	2.90	10,889.0	107.2	-275.4	124.1	7.95	6.88	4.38
11,048.7	67.92	2.82	10,891.9	114.3	-275.1	131.2	13.26	13.23	-0.99
Cross 330' south hard line @ 11048.7'MD, 330'FSL & 2185'FWL									
11,072.0	71.00	2.60	10,900.1	136.1	-274.0	152.9	13.26	13.23	-0.96
11,104.0	75.10	1.80	10,909.4	166.7	-272.9	183.3	13.03	12.81	-2.50
11,136.0	80.20	0.70	10,916.3	197.9	-272.2	214.5	16.29	15.94	-3.44
11,171.0	86.70	359.90	10,920.3	232.6	-272.0	249.1	18.71	18.57	-2.29
11,274.0	89.80	356.70	10,923.4	335.5	-275.1	352.0	4.32	3.01	-3.11
11,370.0	92.70	357.50	10,921.3	431.4	-279.9	448.0	3.13	3.02	0.83



Intrepid Survey Report



Company:	Mewbourne Oil Co.	Local Co-ordinate Reference:	Well El Mar 21 B2NC Federal Com #1H
Project:	Lea County, NM (NAD 83)	TVD Reference:	KB @ 3273.0usft (Patterson 231)
Site:	(El Mar 21) Sec-21_T-26-S_R-33-E	MD Reference:	KB @ 3273.0usft (Patterson 231)
Well:	El Mar 21 B2NC Federal Com #1H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 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)
11,464.0	93.80	358.70	10,916.0	525.2	-283.0	541.8	1.73	1.17	1.28
11,559.0	94.20	358.70	10,909.4	619.9	-285.2	636.5	0.42	0.42	0.00
11,654.0	93.10	359.90	10,903.3	714.7	-286.3	731.2	1.71	-1.16	1.26
11,748.0	90.90	359.50	10,900.0	808.6	-286.8	824.9	2.38	-2.34	-0.43
11,844.0	90.50	359.80	10,898.9	904.6	-287.4	920.8	0.52	-0.42	0.31
11,938.0	91.20	359.50	10,897.5	998.6	-288.0	1,014.6	0.81	0.74	-0.32
12,032.0	92.40	359.50	10,894.5	1,092.6	-288.8	1,108.4	1.28	1.28	0.00
12,128.0	89.40	359.20	10,893.0	1,188.5	-289.9	1,204.3	3.14	-3.13	-0.31
12,222.0	91.40	0.70	10,892.3	1,282.5	-290.0	1,298.1	2.66	2.13	1.60
12,317.0	93.90	2.30	10,887.9	1,377.4	-287.5	1,392.6	3.12	2.63	1.68
12,411.0	91.60	1.50	10,883.4	1,471.2	-284.4	1,486.1	2.59	-2.45	-0.85
12,505.0	91.50	1.40	10,880.9	1,565.2	-282.0	1,579.7	0.15	-0.11	-0.11
12,599.0	91.70	359.70	10,878.3	1,659.1	-281.1	1,673.4	1.82	0.21	-1.81
12,694.0	91.70	359.50	10,875.5	1,754.1	-281.8	1,768.2	0.21	0.00	-0.21
12,789.0	92.50	358.40	10,872.0	1,849.0	-283.5	1,863.1	1.43	0.84	-1.16
12,883.0	90.20	0.30	10,869.8	1,942.9	-284.6	1,956.9	3.17	-2.45	2.02
12,977.0	90.10	0.90	10,869.5	2,036.9	-283.6	2,050.6	0.65	-0.11	0.64
13,071.0	91.20	1.10	10,868.4	2,130.9	-282.0	2,144.3	1.19	1.17	0.21
13,167.0	90.80	0.60	10,866.8	2,226.9	-280.5	2,240.0	0.67	-0.42	-0.52
13,263.0	91.70	0.20	10,864.7	2,322.9	-279.9	2,335.8	1.03	0.94	-0.42
13,358.0	92.00	359.60	10,861.6	2,417.8	-280.0	2,430.6	0.71	0.32	-0.63
13,454.0	92.70	0.00	10,857.7	2,513.7	-280.4	2,526.3	0.84	0.73	0.42
13,549.0	89.50	359.30	10,855.8	2,608.7	-280.9	2,621.1	3.45	-3.37	-0.74
13,644.0	90.90	0.30	10,855.5	2,703.7	-281.3	2,716.0	1.81	1.47	1.05
13,740.0	91.30	0.60	10,853.7	2,799.7	-280.5	2,811.7	0.52	0.42	0.31
13,835.0	92.70	0.90	10,850.4	2,894.6	-279.3	2,906.4	1.51	1.47	0.32
13,930.0	90.20	0.20	10,848.0	2,989.6	-278.4	3,001.1	2.73	-2.63	-0.74
14,025.0	91.00	0.40	10,847.0	3,084.5	-277.9	3,095.9	0.87	0.84	0.21
14,119.0	88.90	359.50	10,847.0	3,178.5	-278.0	3,189.7	2.43	-2.23	-0.96
14,214.0	90.60	359.30	10,847.5	3,273.5	-279.0	3,284.6	1.80	1.79	-0.21
14,308.0	89.80	357.10	10,847.1	3,367.5	-281.9	3,378.5	2.49	-0.85	-2.34
14,402.0	90.30	357.60	10,847.0	3,461.4	-286.2	3,472.5	0.75	0.53	0.53
14,497.0	91.80	357.10	10,845.3	3,556.3	-290.6	3,567.5	1.66	1.58	-0.53
14,591.0	93.20	0.10	10,841.2	3,650.1	-292.9	3,661.3	3.52	1.49	3.19
14,686.0	93.50	0.20	10,835.7	3,745.0	-292.7	3,755.9	0.33	0.32	0.11
14,781.0	94.70	0.20	10,828.9	3,839.7	-292.4	3,850.5	1.26	1.26	0.00
14,875.0	94.60	1.50	10,821.2	3,933.4	-291.0	3,943.9	1.38	-0.11	1.38
14,970.0	90.80	1.90	10,816.8	4,028.2	-288.2	4,038.4	4.02	-4.00	0.42
15,064.0	91.00	1.90	10,815.3	4,122.2	-285.0	4,131.9	0.21	0.21	0.00
15,160.0	90.90	1.50	10,813.7	4,218.1	-282.2	4,227.5	0.43	-0.10	-0.42
15,254.0	91.50	1.40	10,811.7	4,312.1	-279.8	4,321.1	0.65	0.64	-0.11
15,349.0	89.80	359.90	10,810.7	4,407.0	-278.7	4,415.8	2.39	-1.79	-1.58
15,444.0	89.80	359.90	10,811.0	4,502.0	-278.9	4,510.7	0.00	0.00	0.00



Intrepid Survey Report



Company: Mewbourne Oil Co.	Local Co-ordinate Reference: Well El Mar 21 B2NC Federal Com #1H
Project: Lea County, NM (NAD 83)	TVD Reference: KB @ 3273.0usft (Patterson 231)
Site: (El Mar 21) Sec-21_T-26-S_R-33-E	MD Reference: KB @ 3273.0usft (Patterson 231)
Well: El Mar 21 B2NC Federal Com #1H	North Reference: Grid
Wellbore: OWB	Survey Calculation Method: Minimum Curvature
Design: AWB	Database: EDM 5000.15 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)
15,538.0	89.60	359.90	10,811.5	4,596.0	-279.1	4,604.5	0.21	-0.21	0.00
15,633.0	91.30	0.70	10,810.7	4,691.0	-278.6	4,699.3	1.98	1.79	0.84
15,676.9	91.21	0.38	10,809.8	4,734.9	-278.2	4,743.1	0.77	-0.21	-0.74
Cross 330' north hard line @ 15676.9'MD, 330'FNL & 2217'FWL									
15,728.0	91.10	0.00	10,808.7	4,786.0	-278.0	4,794.0	0.77	-0.21	-0.74
15,823.0	91.00	359.70	10,807.0	4,881.0	-278.2	4,888.8	0.33	-0.11	-0.32
15,839.0	90.80	359.50	10,806.7	4,897.0	-278.3	4,904.8	1.77	-1.25	-1.25
LAST SVY									
15,905.0	90.80	359.50	10,805.8	4,963.0	-278.9	4,970.7	0.00	0.00	0.00
Projection to TD @ 15905'MD, 102'FNL & 2218'FWL									

Design Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- Shape									
GEO TRGT 1 (El Mar	1.42	179.57	10,924.3	-16.2	-259.5	372,662.80	775,227.80	32° 1' 17.238 N	103° 26' 43.063 W
- actual wellpath misses target center by 89.1usft at 10951.6usft MD (10848.6 TVD, 27.5 N, -276.8 E)									
- Rectangle (sides W60.0 H4,399.1 D20.0)									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
4,816.6	4,815.0	9 5/8"	9-5/8	12-1/4
11,224.5	10,922.6	8 3/4"	8-3/4	9-5/8
15,905.0	10,805.8	6 1/8"	6-1/8	7-1/2

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
831.0	830.9	6.5	-10.0	TIE ON
11,048.7	10,891.9	114.3	-275.1	Cross 330' south hard line @ 11048.7'MD, 330'FSL & 2185'FWL
15,676.9	10,809.8	4,734.9	-278.2	Cross 330' north hard line @ 15676.9'MD, 330'FNL & 2217'FWL
15,839.0	10,806.7	4,897.0	-278.3	LAST SVY
15,905.0	10,805.8	4,963.0	-278.9	Projection to TD @ 15905'MD, 102'FNL & 2218'FWL

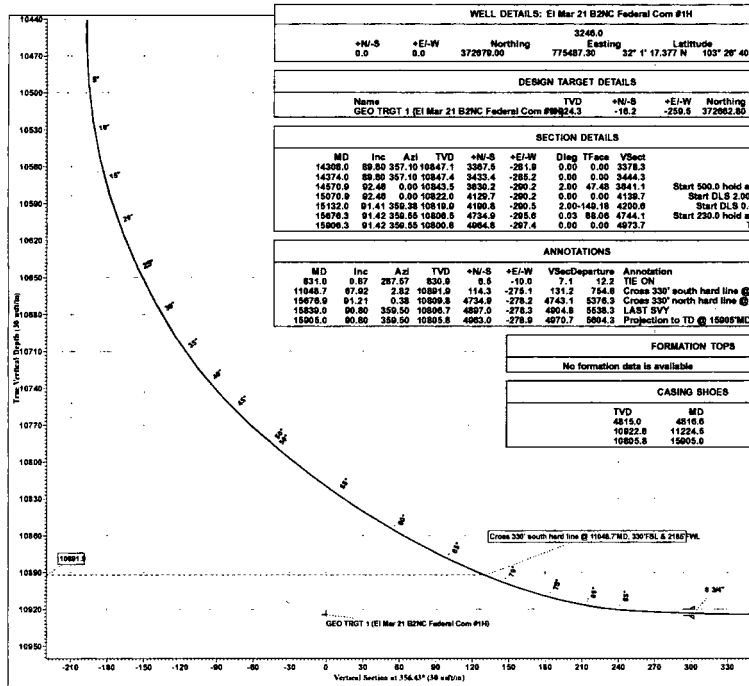
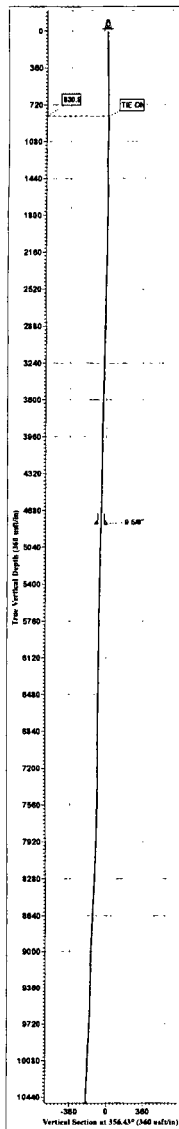
Checked By: _____ Approved By: _____ Date: _____



Mewbourne Oil Co.
Project: Lea County, NM (NAD 83)
Site: (E) Mar 21 Sec-21, T-26-S, R-33-E
Well: (E) Mar 21 B2NC Federal Com #1H
Wellbore: OWB
Design: AWB
Lat: 32° 1' 17.377 N
Long: 103° 28' 40.048 W
Pad GL: 3246.0
KB: KB @ 3273.0uoft (Patterson 231)

HOBBS OCD
NOV 21 2018
RECEIVED

INTREPID



WELL DETAILS: E1 Mar 21 B2NC Federal Com #1H									
+N-S		+E-W		North	East	Latitude	Longitude		
0.0		0.0		372879.00	775487.30	32° 1' 17.377 N	103° 28' 40.048 W		
DESIGN TARGET DETAILS									
Name	TVD	+N-S	+E-W	North	East				
GEO TRGT 1 (E1 Mar 21 B2NC Federal Com #1H)	10950.0	-10.2	-259.8	372882.50	775227.80				
SECTION DETAILS									
MD	Inc	Asl	TVD	+N-S	+E-W	Diag TFace	VSet	Annotation	
14308.0	89.80	357.10	10847.1	3367.5	-281.8	0.00	0.00	3378.3	LAST SVY
14374.0	89.80	357.10	10847.4	3432.4	-385.2	0.00	0.00	3444.3	PTB
14570.9	92.46	0.00	10843.5	3830.2	-290.2	2.90	47.48	3841.1	Start 500.0 hold at 14570.9 MD
15070.9	92.46	0.00	10822.0	4126.7	-290.2	0.00	0.00	4138.7	Start DLS 2.00 TFO -148.18
15132.0	91.41	356.38	10819.0	4180.8	-290.5	2.00	148.18	4200.9	Start DLS 0.05 TFO 68.29
15678.3	91.42	356.55	10808.5	4734.9	-285.6	0.03	88.08	4744.1	Start 230.0 hold at 15678.3 MD
15906.3	91.42	356.55	10800.6	4964.8	-287.4	0.00	0.00	4973.7	TD at 15906.3
ANNOTATIONS									
MD	Inc	Asl	TVD	+N-S	+E-W	VSet	Departure	Annotation	
831.0	0.87	287.57	830.9	8.6	-10.0	7.1	12.2	TIE ON	
11048.7	87.82	2.82	10881.9	114.3	-275.1	131.2	754.8	Cross 330° south hard line @ 11048.7MD, 330°TNL & 2185°TNL	
11978.9	91.21	0.38	10809.9	4734.9	-278.2	4743.1	5376.3	Cross 330° north hard line @ 11978.9MD, 330°TNL & 2217°TNL	
15830.0	90.80	359.50	10806.7	4897.0	-278.3	4904.8	5638.3	LAST SVY	
15906.0	90.80	359.50	10805.8	4993.0	-278.9	4973.7	5904.3	Projection to TD @ 15906MD, 102°TNL & 2218°TNL	
FORMATION TOPS									
No formation data is available									
CASING SHOES									
TVD	MD	Size							
4815.0	4816.5	8-5/8							
10822.8	11224.5	8-3/4							
10855.8	15905.0	6-1/8							

