

Marathon Oil Permian LLC

Blue Steel Fed Com WXY #12H

Eddy County, New Mexico (NAD27)

Sperry Drilling Services

End Of Well Report

16 April, 2020

HALLIBURTON

End Of Well Report

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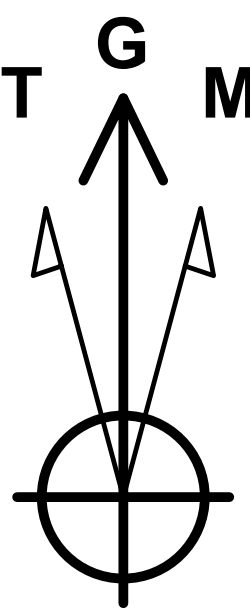


Marathon Oil Permian LLC

RKB (PD 582) 27' + GL @ 3025.00usft
2998.00

Project: Eddy County, New Mexico (NAD27)
Site: Blue Steel Pad (Grid)
Well: Blue Steel Fed Com WXY #12H
Wellbore: Wellbore #1
Design: Actual Drilled
Rig:

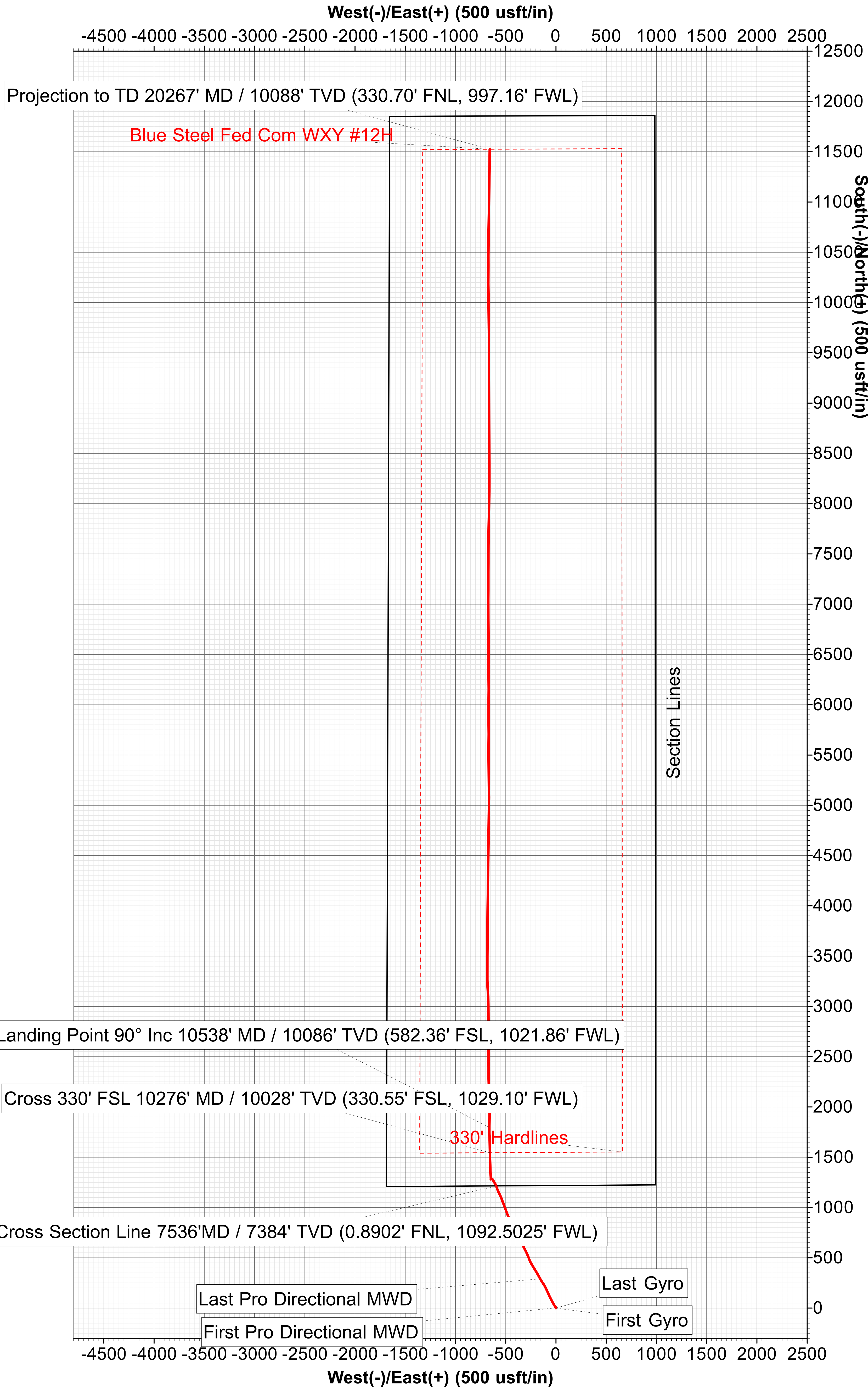
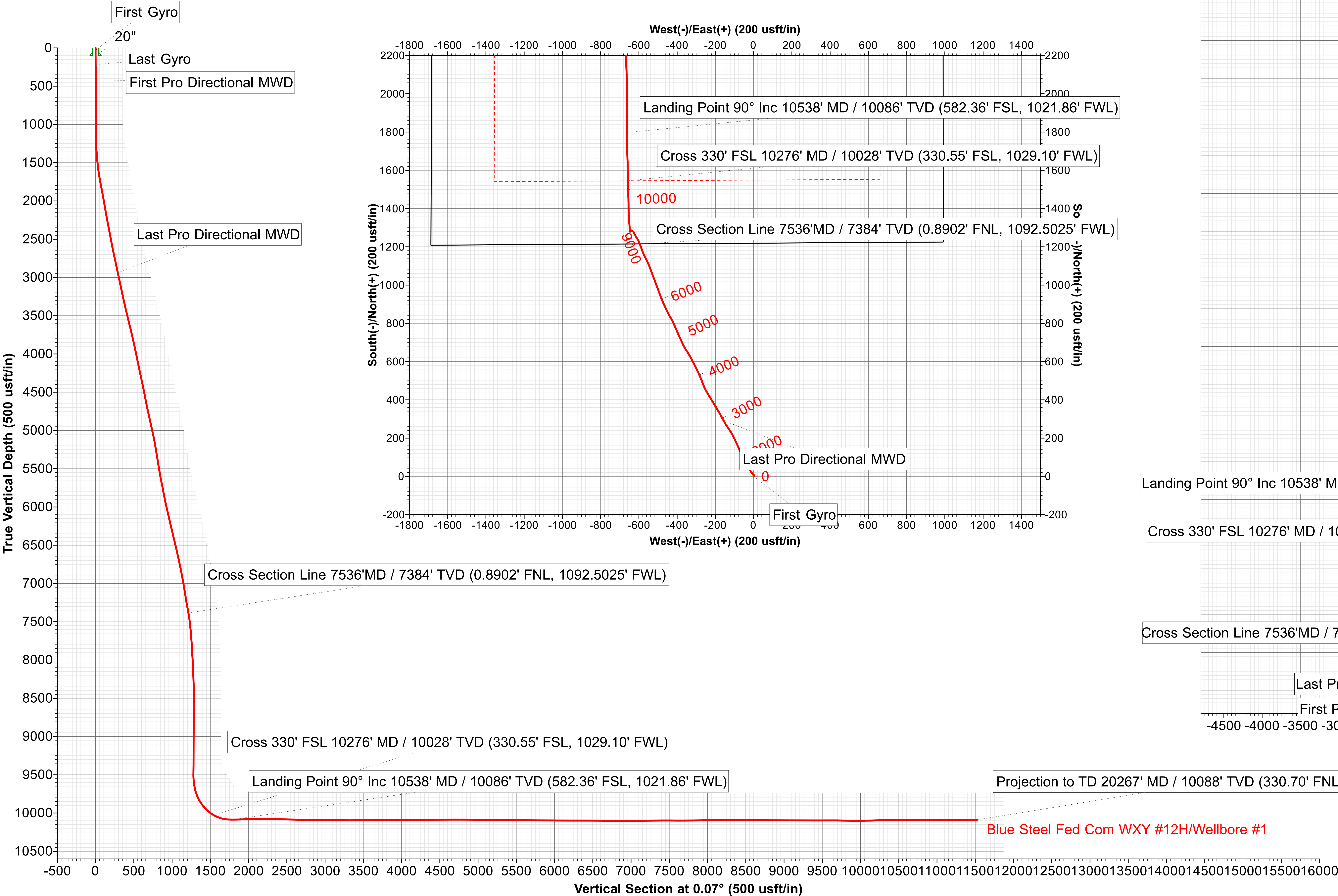
Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001



Azimuths to Grid North
True North: -0.19°
Magnetic North: 6.76°

Magnetic Field
Strength: 47856.9nT
Dip Angle: 60.00°
Date: 12/31/2019
Model: HDGM_2019

WELL DETAILS								
2998.00								
		+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
		0.00	0.00	465666.71	607979.00	32.27975118	-103.98394399	
SECTION DETAILS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
30.00	0.20	168.84	30.00	-0.05	0.01	-0.05	0.05	First Gyro
219.00	0.40	29.24	219.00	0.37	0.47	0.37	1.00	Last Gyro
417.00	0.66	356.02	416.99	2.11	0.73	2.11	2.83	First Pro Directional MWD
2971.00	13.93	332.99	2937.85	290.98	-156.69	290.79	335.21	Last Pro Directional MWD
7536.00	10.69	339.02	7384.82	1214.43	-594.72	1213.70	1359.55	Cross Section Line 7536'MD / 7384' TVD (0.8902' FNL, 1092.5025' FWL)
10276.00	60.27	359.00	10028.07	1545.49	-657.12	1544.69	1726.70	Cross 330' FSL 10276' MD / 10028' TVD (330.55' FSL, 1029.10' FWL)
10538.00	90.01	0.64	10086.42	1797.27	-663.60	1796.46	1978.22	Landing Point 90° Inc 10538' MD / 10086' TVD (582.36' FSL, 1021.86' FWL)
20267.00	89.66	0.55	10088.96	11524.56	-658.85	11523.74	11706.33	Projection to TD 20267' MD / 10088' TVD (330.70' FNL, 997.16' FWL)



Marathon Oil Permian LLC

Eddy County, New Mexico (NAD27) Blue Steel Pad (Grid)

API#

Blue Steel Fed Com WXY #12H

Wellbore #1

Design: Actual Drilled

Sperry Drilling Services

Combo Report

16 April, 2020

Well Coordinates: 32.27975118
-103.98394399

NAD 1927 (NADCON CONUS)
New Mexico East 3001
465,666.71 N
607,979.00 E

Ground Level: 2,998.00 usft

Local Coordinate Origin:

Centered on Well Blue Steel Fed Com WXY #12H

Viewing Datum:

RKB (PD 582) 27' + GL @ 3025.00usft

TVDs to System:

N

North Reference:

Grid

Unit System:

Midcon (2 decimal)

Version: 5000.15 Build: 91E

Report Version: Midcon Combo v1.15

HALLIBURTON

Design Report for Blue Steel Fed Com WXY #12H - Actual Drilled

Measured Depth	Inclination	Grid Azimuth	Vertical Depth	Local Coordinates		Map Coordinates		Dogleg Rate	Vertical Section	Toolface Angle	Comments
(usft)	(°)	(°)	(usft)	Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)	(°/100usft)	(usft)	(°)	
0.00	0.00	0.00	0.00	0.00 N	0.00 E	465,666.71	607,979.00	0.00	0.00	0.00	Blue Steel WXY #12 (FTP) - Blue Steel WXY #12 (KOP)
30.00	0.20	168.84	30.00	0.05 S	0.01 E	465,666.66	607,979.01	0.67	-0.05	168.84	First Gyro
76.00	0.20	64.94	76.00	0.10 S	0.10 E	465,666.61	607,979.10	0.68	-0.10	-141.95	
100.00	0.28	64.94	100.00	0.05 S	0.19 E	465,666.66	607,979.19	0.34	-0.05	0.00	20"
105.00	0.30	64.94	105.00	0.04 S	0.21 E	465,666.67	607,979.21	0.34	-0.04	0.00	
135.00	0.40	73.34	135.00	0.02 N	0.38 E	465,666.73	607,979.38	0.37	0.02	31.41	
163.00	0.40	7.73	163.00	0.15 N	0.49 E	465,666.86	607,979.49	1.55	0.15	-122.80	
192.00	0.18	299.24	192.00	0.27 N	0.47 E	465,666.98	607,979.47	1.29	0.27	-153.37	
219.00	0.40	29.24	219.00	0.37 N	0.47 E	465,667.08	607,979.47	1.62	0.37	114.23	Last Gyro
417.00	0.66	356.02	416.99	2.11 N	0.73 E	465,668.82	607,979.73	0.20	2.11	-67.18	First Pro Directional MWD
510.00	0.66	19.04	509.98	3.15 N	0.87 E	465,669.86	607,979.87	0.28	3.15	101.51	
604.00	0.70	21.07	603.98	4.20 N	1.25 E	465,670.91	607,980.25	0.05	4.20	32.08	
698.00	0.57	10.17	697.97	5.20 N	1.54 E	465,671.91	607,980.54	0.19	5.20	-142.46	
790.00	0.26	18.34	789.97	5.84 N	1.69 E	465,672.55	607,980.69	0.34	5.85	173.26	
883.00	0.09	58.86	882.97	6.08 N	1.82 E	465,672.79	607,980.82	0.22	6.08	163.03	
973.00	0.31	282.80	972.97	6.17 N	1.64 E	465,672.88	607,980.64	0.42	6.18	-145.52	
1,062.00	0.22	266.81	1,061.97	6.22 N	1.24 E	465,672.93	607,980.24	0.13	6.22	-148.40	
1,152.00	0.53	239.30	1,151.96	5.99 N	0.70 E	465,672.70	607,979.70	0.39	6.00	-44.39	
1,241.00	1.89	311.98	1,240.95	6.77 N	0.74 W	465,673.48	607,978.26	2.03	6.77	88.96	
1,331.00	5.01	322.44	1,330.77	10.88 N	4.24 W	465,677.59	607,974.76	3.52	10.87	16.66	
1,421.00	6.15	323.85	1,420.34	17.88 N	9.48 W	465,684.59	607,969.52	1.28	17.87	7.56	
1,510.00	6.77	326.57	1,508.78	26.11 N	15.18 W	465,692.82	607,963.82	0.78	26.09	27.63	
1,600.00	8.88	329.39	1,597.94	36.52 N	21.64 W	465,703.23	607,957.36	2.38	36.49	11.71	
1,690.00	10.77	331.23	1,686.61	49.87 N	29.23 W	465,716.58	607,949.77	2.13	49.83	10.34	
1,780.00	12.35	332.55	1,774.78	65.78 N	37.71 W	465,732.49	607,941.29	1.78	65.74	10.15	
1,870.00	11.87	333.96	1,862.78	82.64 N	46.21 W	465,749.35	607,932.79	0.63	82.58	149.04	
1,959.00	11.52	333.52	1,949.93	98.82 N	54.19 W	465,765.53	607,924.81	0.41	98.75	-165.92	
2,048.00	10.59	333.69	2,037.28	114.10 N	61.78 W	465,780.81	607,917.22	1.05	114.03	178.08	
2,138.00	11.30	333.87	2,125.64	129.43 N	69.33 W	465,796.14	607,909.67	0.79	129.35	2.84	
2,228.00	11.34	335.63	2,213.89	145.41 N	76.86 W	465,812.12	607,902.14	0.39	145.32	84.26	
2,318.00	11.52	335.89	2,302.11	161.67 N	84.19 W	465,828.38	607,894.81	0.21	161.57	16.10	
2,407.00	12.62	335.19	2,389.14	178.61 N	91.90 W	465,845.32	607,887.10	1.25	178.50	-7.92	
2,497.00	11.78	334.84	2,477.11	195.85 N	99.93 W	465,862.56	607,879.07	0.94	195.73	-175.14	
2,586.00	11.82	333.61	2,564.23	212.24 N	107.84 W	465,878.95	607,871.16	0.29	212.11	-81.57	
2,676.00	13.67	327.54	2,652.01	229.47 N	117.65 W	465,896.18	607,861.35	2.53	229.33	-38.89	
2,765.00	14.86	325.52	2,738.26	247.75 N	129.75 W	465,914.46	607,849.25	1.45	247.60	-23.68	

Design Report for Blue Steel Fed Com WXY #12H - Actual Drilled

Measured		Grid	Vertical	Local Coordinates		Map Coordinates		Dogleg	Vertical	Toolface	
Depth	Inclination	Azimuth	Depth	Northing	Easting	Northing	Easting	Rate	Section	Angle	Comments
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(usft)	(°)	
2,855.00	14.29	326.75	2,825.37	266.56 N	142.38 W	465,933.27	607,836.62	0.72	266.38	152.09	
2,945.00	14.07	331.14	2,912.63	285.43 N	153.75 W	465,952.14	607,825.25	1.22	285.24	103.68	
2,971.00	13.93	332.99	2,937.85	290.98 N	156.69 W	465,957.69	607,822.31	1.80	290.79	108.27	Last Pro Directional MWD
3,114.00	13.17	330.26	3,076.87	320.46 N	172.59 W	465,987.17	607,806.41	0.69	320.25	-141.24	
3,203.00	13.91	329.78	3,163.40	338.51 N	183.01 W	466,005.22	607,795.99	0.84	338.29	-8.87	
3,293.00	14.43	328.81	3,250.66	357.45 N	194.26 W	466,024.16	607,784.74	0.64	357.22	-25.01	
3,382.00	14.58	329.38	3,336.83	376.58 N	205.71 W	466,043.29	607,773.29	0.23	376.33	43.86	
3,472.00	15.63	328.43	3,423.71	396.66 N	217.83 W	466,063.37	607,761.17	1.20	396.39	-13.73	
3,562.00	15.98	327.75	3,510.31	417.47 N	230.78 W	466,084.18	607,748.22	0.44	417.18	-28.21	
3,651.00	15.72	329.47	3,595.93	438.21 N	243.45 W	466,104.92	607,735.55	0.60	437.91	119.79	
3,830.00	14.32	339.45	3,768.84	479.84 N	263.54 W	466,146.55	607,715.46	1.64	479.51	123.19	
3,921.00	13.28	338.53	3,857.21	500.10 N	271.32 W	466,166.81	607,707.68	1.17	499.77	-168.53	
4,011.00	12.71	337.29	3,944.91	518.85 N	278.92 W	466,185.56	607,700.08	0.71	518.51	-154.54	
4,100.00	12.55	335.80	4,031.75	536.71 N	286.67 W	466,203.42	607,692.33	0.41	536.35	-116.88	
4,190.00	13.02	334.65	4,119.52	554.79 N	295.01 W	466,221.50	607,683.99	0.59	554.43	-29.00	
4,279.00	13.57	333.93	4,206.13	573.23 N	303.89 W	466,239.94	607,675.11	0.65	572.85	-17.10	
4,458.00	13.57	331.39	4,380.14	610.52 N	323.18 W	466,277.23	607,655.82	0.33	610.13	-91.23	
4,548.00	13.46	329.96	4,467.65	628.86 N	333.48 W	466,295.57	607,645.52	0.39	628.45	-108.91	
4,637.00	12.96	328.03	4,554.29	646.29 N	343.95 W	466,313.00	607,635.05	0.75	645.87	-139.52	
4,727.00	12.91	326.76	4,642.01	663.26 N	354.80 W	466,329.97	607,624.20	0.32	662.83	-100.59	
4,817.00	13.06	331.84	4,729.71	680.64 N	365.11 W	466,347.35	607,613.89	1.28	680.19	84.99	
4,907.00	13.71	336.79	4,817.27	699.41 N	374.12 W	466,366.12	607,604.88	1.46	698.95	62.86	
4,996.00	14.08	335.89	4,903.66	718.98 N	382.69 W	466,385.69	607,596.31	0.48	718.51	-30.73	
5,086.00	14.09	334.49	4,990.96	738.86 N	391.88 W	466,405.57	607,587.12	0.38	738.38	-89.00	
5,176.00	12.29	336.71	5,078.58	757.55 N	400.39 W	466,424.26	607,578.61	2.08	757.06	165.36	
5,265.00	10.90	337.24	5,165.76	774.01 N	407.39 W	466,440.72	607,571.61	1.57	773.51	175.88	
5,355.00	10.89	336.44	5,254.14	789.65 N	414.08 W	466,456.36	607,564.92	0.17	789.14	-94.18	
5,444.00	10.07	334.48	5,341.66	804.38 N	420.79 W	466,471.09	607,558.21	1.00	803.86	-157.46	
5,533.00	10.04	331.58	5,429.29	818.22 N	427.84 W	466,484.93	607,551.16	0.57	817.70	-94.82	
5,623.00	11.59	329.36	5,517.69	832.90 N	436.18 W	466,499.61	607,542.82	1.78	832.37	-16.14	
5,712.00	11.45	331.41	5,604.90	848.35 N	444.96 W	466,515.06	607,534.04	0.49	847.81	109.88	
5,802.00	13.05	336.66	5,692.85	865.53 N	453.27 W	466,532.24	607,525.73	2.16	864.97	37.43	
5,892.00	11.64	334.34	5,780.76	883.04 N	461.22 W	466,549.75	607,517.78	1.66	882.48	-161.75	
5,981.00	11.91	334.28	5,867.89	899.41 N	469.10 W	466,566.12	607,509.90	0.30	898.83	-2.63	
6,071.00	13.55	336.64	5,955.68	917.45 N	477.31 W	466,584.16	607,501.69	1.91	916.87	18.75	
6,160.00	14.16	339.79	6,042.09	937.24 N	485.20 W	466,603.95	607,493.80	1.09	936.65	52.57	
6,250.00	13.63	340.45	6,129.45	957.57 N	492.56 W	466,624.28	607,486.44	0.61	956.96	163.67	

Design Report for Blue Steel Fed Com WXY #12H - Actual Drilled

Measured		Grid	Vertical	Local Coordinates		Map Coordinates		Dogleg	Vertical	Toolface	Comments
Depth	Inclination	Azimuth	Depth	Northing	Easting	Northing	Easting	Rate	Section	Angle	
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(usft)	(°)	
6,340.00	13.52	339.37	6,216.94	977.40 N	499.81 W	466,644.11	607,479.19	0.31	976.79	-113.98	
6,430.00	14.53	339.69	6,304.26	997.84 N	507.44 W	466,664.55	607,471.56	1.13	997.22	4.55	
6,519.00	14.82	339.73	6,390.35	1,018.99 N	515.25 W	466,685.70	607,463.75	0.33	1,018.36	2.02	
6,609.00	13.59	337.72	6,477.60	1,039.57 N	523.25 W	466,706.28	607,455.75	1.47	1,038.93	-159.12	
6,698.00	13.34	340.69	6,564.15	1,058.93 N	530.61 W	466,725.64	607,448.39	0.83	1,058.29	111.31	
6,787.00	14.22	339.95	6,650.59	1,078.89 N	537.75 W	466,745.60	607,441.25	1.01	1,078.24	-11.69	
6,877.00	12.89	337.58	6,738.08	1,098.56 N	545.37 W	466,765.27	607,433.63	1.60	1,097.89	-158.48	
6,967.00	12.19	336.09	6,825.94	1,116.52 N	553.05 W	466,783.23	607,425.95	0.86	1,115.85	-155.92	
7,056.00	11.33	333.88	6,913.07	1,132.96 N	560.71 W	466,799.67	607,418.29	1.09	1,132.28	-153.44	
7,146.00	11.33	332.16	7,001.31	1,148.72 N	568.73 W	466,815.43	607,410.27	0.38	1,148.02	-90.84	
7,235.00	10.35	337.29	7,088.73	1,163.83 N	575.90 W	466,830.54	607,403.10	1.54	1,163.12	137.95	
7,325.00	9.22	337.92	7,177.42	1,177.97 N	581.73 W	466,844.68	607,397.27	1.26	1,177.25	174.90	
7,415.00	10.62	342.22	7,266.07	1,192.55 N	586.98 W	466,859.26	607,392.02	1.76	1,191.83	30.01	
7,505.00	11.49	339.67	7,354.40	1,208.85 N	592.62 W	466,875.56	607,386.38	1.11	1,208.12	-30.59	
7,536.00	10.69	339.02	7,384.82	1,214.43 N	594.72 W	466,881.14	607,384.28	2.60	1,213.70	-171.40	Cross Section Line 7536'MD / 7384' TVD (0.8902' FNL, 1092.5025' FWL)
7,594.00	9.21	337.51	7,441.95	1,223.74 N	598.43 W	466,890.45	607,380.57	2.60	1,223.01	-170.76	
7,683.00	7.33	328.75	7,530.02	1,235.18 N	604.10 W	466,901.89	607,374.90	2.54	1,234.44	-150.45	
7,773.00	5.99	326.61	7,619.41	1,244.01 N	609.66 W	466,910.72	607,369.34	1.51	1,243.26	-170.57	
7,862.00	5.15	330.00	7,707.99	1,251.35 N	614.21 W	466,918.06	607,364.79	1.01	1,250.59	160.29	
7,952.00	4.43	329.41	7,797.67	1,257.84 N	618.00 W	466,924.55	607,361.00	0.80	1,257.08	-176.38	
8,041.00	3.20	330.58	7,886.48	1,262.96 N	620.97 W	466,929.67	607,358.03	1.38	1,262.20	176.96	
8,131.00	3.83	329.20	7,976.31	1,267.73 N	623.74 W	466,934.44	607,355.26	0.71	1,266.97	-8.34	
8,220.00	3.48	338.56	8,065.13	1,272.80 N	626.25 W	466,939.51	607,352.75	0.78	1,272.03	125.01	
8,310.00	2.28	334.65	8,155.01	1,276.96 N	628.02 W	466,943.67	607,350.98	1.35	1,276.19	-172.65	
8,400.00	3.05	312.55	8,244.91	1,280.19 N	630.55 W	466,946.90	607,348.45	1.41	1,279.42	-64.54	
8,490.00	2.44	311.39	8,334.81	1,283.08 N	633.75 W	466,949.79	607,345.25	0.68	1,282.30	-175.38	
8,579.00	1.54	311.47	8,423.76	1,285.12 N	636.07 W	466,951.83	607,342.93	1.01	1,284.35	179.86	
8,669.00	1.20	245.67	8,513.74	1,285.54 N	637.83 W	466,952.25	607,341.17	1.68	1,284.76	-133.75	
8,758.00	0.84	231.56	8,602.72	1,284.75 N	639.19 W	466,951.46	607,339.81	0.49	1,283.97	-152.01	
8,848.00	0.34	227.24	8,692.72	1,284.16 N	639.91 W	466,950.87	607,339.09	0.56	1,283.37	-177.07	
8,937.00	0.72	245.84	8,781.71	1,283.75 N	640.61 W	466,950.46	607,338.39	0.46	1,282.96	33.85	
9,027.00	0.84	249.69	8,871.70	1,283.29 N	641.74 W	466,950.00	607,337.26	0.15	1,282.50	25.53	
9,117.00	1.42	245.47	8,961.69	1,282.60 N	643.38 W	466,949.31	607,335.62	0.65	1,281.81	-10.28	
9,206.00	1.38	253.20	9,050.66	1,281.83 N	645.41 W	466,948.54	607,333.59	0.22	1,281.04	105.80	
9,296.00	0.90	278.79	9,140.64	1,281.62 N	647.14 W	466,948.33	607,331.86	0.76	1,280.83	145.63	
9,385.00	0.56	292.35	9,229.63	1,281.89 N	648.24 W	466,948.60	607,330.76	0.43	1,281.10	159.73	

Design Report for Blue Steel Fed Com WXY #12H - Actual Drilled

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
				Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)				
9,475.00	0.38	170.32	9,319.63	1,281.77 N	648.59 W	466,948.48	607,330.41	0.92	1,280.97	-157.07	
9,565.00	1.05	184.65	9,409.63	1,280.65 N	648.61 W	466,947.36	607,330.39	0.76	1,279.86	22.18	
9,655.00	0.69	115.48	9,499.62	1,279.60 N	648.19 W	466,946.31	607,330.81	1.15	1,278.80	-141.29	
9,745.00	6.46	0.85	9,589.43	1,284.43 N	647.62 W	466,951.14	607,331.38	7.53	1,283.64	-119.92	
9,834.00	11.74	356.82	9,677.28	1,298.49 N	648.05 W	466,965.20	607,330.95	5.97	1,297.70	-8.88	
9,924.00	21.12	355.18	9,763.51	1,323.84 N	649.93 W	466,990.55	607,329.07	10.43	1,323.05	-3.62	
10,014.00	30.21	356.92	9,844.55	1,362.69 N	652.51 W	467,029.40	607,326.49	10.13	1,361.90	5.53	
10,104.00	40.28	359.65	9,917.96	1,414.53 N	653.91 W	467,081.24	607,325.09	11.32	1,413.73	10.02	
10,194.00	50.10	357.91	9,981.31	1,478.28 N	655.35 W	467,144.99	607,323.65	11.00	1,477.48	-7.79	
10,276.00	60.27	359.00	10,028.07	1,545.49 N	657.12 W	467,212.20	607,321.88	12.45	1,544.69	5.33	Cross 330' FSL 10276' MD / 10028' TVD (330.55' FSL, 1029.10' FWL)
10,284.00	61.26	359.09	10,031.98	1,552.47 N	657.24 W	467,219.18	607,321.76	12.45	1,551.67	4.71	
10,373.00	72.66	358.70	10,066.75	1,634.22 N	658.83 W	467,300.93	607,320.17	12.82	1,633.42	-1.88	
10,462.00	85.59	357.06	10,083.51	1,721.37 N	662.08 W	467,388.08	607,316.92	14.64	1,720.56	-7.27	
10,538.00	90.01	0.64	10,086.42	1,797.27 N	663.60 W	467,463.98	607,315.40	7.49	1,796.46	39.05	Landing Point 90° Inc 10538' MD / 10086' TVD (582.36' FSL, 1021.86' FWL)
10,552.00	90.83	1.30	10,086.32	1,811.27 N	663.36 W	467,477.98	607,315.64	7.49	1,810.46	38.92	
10,642.00	92.74	1.20	10,083.52	1,901.20 N	661.40 W	467,567.91	607,317.60	2.13	1,900.39	-2.99	
10,774.00	91.05	358.43	10,079.15	2,033.11 N	661.83 W	467,699.82	607,317.17	2.46	2,032.30	-121.35	
10,866.00	90.92	357.84	10,077.57	2,125.05 N	664.82 W	467,791.76	607,314.18	0.66	2,124.23	-102.42	
10,959.00	89.02	357.94	10,077.62	2,217.98 N	668.25 W	467,884.69	607,310.75	2.05	2,217.16	176.99	
11,049.00	88.69	0.05	10,079.42	2,307.94 N	669.82 W	467,974.65	607,309.18	2.37	2,307.12	98.91	
11,138.00	88.54	359.84	10,081.57	2,396.92 N	669.91 W	468,063.63	607,309.09	0.29	2,396.10	-125.55	
11,227.00	89.21	359.81	10,083.32	2,485.90 N	670.18 W	468,152.61	607,308.82	0.75	2,485.08	-2.56	
11,317.00	87.50	359.14	10,085.90	2,575.85 N	671.01 W	468,242.56	607,307.99	2.04	2,575.03	-158.62	
11,406.00	88.77	0.34	10,088.80	2,664.80 N	671.41 W	468,331.51	607,307.59	1.96	2,663.98	43.38	
11,496.00	89.24	359.48	10,090.36	2,754.79 N	671.55 W	468,421.50	607,307.45	1.09	2,753.96	-61.35	
11,586.00	89.65	359.92	10,091.23	2,844.78 N	672.02 W	468,511.49	607,306.98	0.67	2,843.96	47.02	
11,675.00	89.83	359.84	10,091.64	2,933.78 N	672.21 W	468,600.49	607,306.79	0.22	2,932.96	-23.96	
11,765.00	90.05	359.94	10,091.73	3,023.78 N	672.38 W	468,690.49	607,306.62	0.27	3,022.96	24.44	
11,854.00	89.97	356.05	10,091.71	3,112.71 N	675.49 W	468,779.42	607,303.51	4.37	3,111.88	-91.18	
11,944.00	87.71	357.38	10,093.54	3,202.53 N	680.65 W	468,869.24	607,298.35	2.91	3,201.70	149.54	
12,034.00	89.54	359.90	10,095.70	3,292.47 N	682.78 W	468,959.18	607,296.22	3.46	3,291.64	54.04	
12,123.00	90.74	359.65	10,095.48	3,381.47 N	683.13 W	469,048.18	607,295.87	1.38	3,380.63	-11.77	
12,213.00	89.55	0.39	10,095.25	3,471.47 N	683.10 W	469,138.18	607,295.90	1.56	3,470.63	148.12	
12,302.00	90.59	0.41	10,095.14	3,560.46 N	682.48 W	469,227.17	607,296.52	1.17	3,559.63	1.10	
12,392.00	90.90	0.47	10,093.97	3,650.45 N	681.79 W	469,317.16	607,297.21	0.35	3,649.62	10.95	

Design Report for Blue Steel Fed Com WXY #12H - Actual Drilled

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
12,481.00	90.99	0.56	10,092.50	3,739.44 N	680.99 W	469,406.15	607,298.01	0.14	3,738.60	45.00	
12,571.00	89.82	0.29	10,091.87	3,829.43 N	680.32 W	469,496.14	607,298.68	1.33	3,828.60	-167.00	
12,661.00	90.23	0.20	10,091.83	3,919.43 N	679.94 W	469,586.14	607,299.06	0.47	3,918.60	-12.38	
12,750.00	90.87	0.47	10,090.97	4,008.42 N	679.42 W	469,675.13	607,299.58	0.78	4,007.59	22.87	
12,839.00	90.73	0.78	10,089.73	4,097.41 N	678.45 W	469,764.12	607,300.55	0.38	4,096.58	114.30	
12,929.00	90.42	0.55	10,088.83	4,187.40 N	677.40 W	469,854.11	607,301.60	0.43	4,186.57	-143.43	
13,018.00	89.81	0.75	10,088.65	4,276.39 N	676.39 W	469,943.10	607,302.61	0.72	4,275.56	161.85	
13,108.00	90.29	0.77	10,088.57	4,366.38 N	675.20 W	470,033.09	607,303.80	0.53	4,365.56	2.39	
13,197.00	90.38	0.74	10,088.05	4,455.37 N	674.03 W	470,122.08	607,304.97	0.11	4,454.55	-18.43	
13,287.00	90.34	0.76	10,087.49	4,545.37 N	672.85 W	470,212.08	607,306.15	0.05	4,544.54	153.44	
13,376.00	90.39	0.87	10,086.92	4,634.35 N	671.58 W	470,301.06	607,307.42	0.14	4,633.53	65.56	
13,466.00	90.17	0.55	10,086.48	4,724.35 N	670.47 W	470,391.06	607,308.53	0.43	4,723.52	-124.51	
13,562.00	89.66	1.02	10,086.62	4,820.34 N	669.15 W	470,487.05	607,309.85	0.72	4,819.52	137.34	
13,644.00	89.07	0.75	10,087.53	4,902.32 N	667.89 W	470,569.03	607,311.11	0.79	4,901.50	-155.41	
13,733.00	89.54	1.28	10,088.61	4,991.30 N	666.31 W	470,658.01	607,312.69	0.80	4,990.48	48.44	
13,823.00	90.03	359.45	10,088.95	5,081.29 N	665.74 W	470,748.00	607,313.26	2.10	5,080.48	-75.01	
13,912.00	88.85	358.90	10,089.82	5,170.28 N	667.02 W	470,836.99	607,311.98	1.46	5,169.46	-155.01	
14,002.00	88.33	359.48	10,092.03	5,260.24 N	668.29 W	470,926.95	607,310.71	0.87	5,259.42	131.89	
14,091.00	89.37	359.57	10,093.82	5,349.22 N	669.03 W	471,015.93	607,309.97	1.17	5,348.40	4.95	
14,181.00	89.91	359.43	10,094.38	5,439.21 N	669.81 W	471,105.92	607,309.19	0.62	5,438.39	-14.53	
14,270.00	89.56	359.83	10,094.79	5,528.21 N	670.39 W	471,194.92	607,308.61	0.60	5,527.39	131.19	
14,360.00	89.83	0.73	10,095.27	5,618.21 N	669.95 W	471,284.92	607,309.05	1.04	5,617.38	73.30	
14,449.00	89.67	359.85	10,095.66	5,707.20 N	669.50 W	471,373.91	607,309.50	1.00	5,706.38	-100.31	
14,539.00	89.70	359.88	10,096.16	5,797.20 N	669.71 W	471,463.91	607,309.29	0.05	5,796.38	45.00	
14,629.00	89.57	0.03	10,096.73	5,887.20 N	669.78 W	471,553.91	607,309.22	0.22	5,886.38	130.92	
14,718.00	89.61	0.20	10,097.37	5,976.20 N	669.60 W	471,642.91	607,309.40	0.20	5,975.38	76.76	
14,808.00	89.22	359.91	10,098.29	6,066.19 N	669.51 W	471,732.90	607,309.49	0.54	6,065.37	-143.37	
14,897.00	89.96	0.18	10,098.92	6,155.19 N	669.44 W	471,821.90	607,309.56	0.89	6,154.37	20.05	
14,986.00	90.07	359.73	10,098.90	6,244.19 N	669.51 W	471,910.90	607,309.49	0.52	6,243.37	-76.26	
15,078.00	89.90	359.58	10,098.92	6,336.19 N	670.07 W	472,002.90	607,308.93	0.25	6,335.36	-138.58	
15,167.00	89.80	359.85	10,099.16	6,425.19 N	670.51 W	472,091.90	607,308.49	0.32	6,424.36	110.32	
15,256.00	89.61	359.80	10,099.61	6,514.19 N	670.78 W	472,180.90	607,308.22	0.22	6,513.36	-165.26	
15,346.00	88.94	0.04	10,100.75	6,604.18 N	670.91 W	472,270.89	607,308.09	0.79	6,603.35	160.29	
15,436.00	88.59	359.35	10,102.69	6,694.15 N	671.39 W	472,360.86	607,307.61	0.86	6,693.33	-116.91	
15,525.00	89.67	359.47	10,104.04	6,783.14 N	672.30 W	472,449.85	607,306.70	1.22	6,782.31	6.34	
15,615.00	90.35	359.30	10,104.03	6,873.13 N	673.27 W	472,539.84	607,305.73	0.78	6,872.30	-14.04	

Design Report for Blue Steel Fed Com WXY #12H - Actual Drilled

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
15,705.00	89.83	0.31	10,103.89	6,963.13 N	673.58 W	472,629.84	607,305.42	1.26	6,962.30	117.24	
15,794.00	91.02	0.21	10,103.23	7,052.13 N	673.17 W	472,718.84	607,305.83	1.34	7,051.30	-4.80	
15,884.00	91.03	0.15	10,101.62	7,142.11 N	672.89 W	472,808.82	607,306.11	0.07	7,141.28	-80.54	
15,974.00	90.62	359.84	10,100.32	7,232.10 N	672.90 W	472,898.81	607,306.10	0.57	7,231.27	-142.91	
16,063.00	90.85	0.44	10,099.18	7,321.09 N	672.68 W	472,987.80	607,306.32	0.72	7,320.27	69.02	
16,153.00	91.04	0.28	10,097.70	7,411.08 N	672.11 W	473,077.79	607,306.89	0.28	7,410.25	-40.10	
16,242.00	89.07	359.58	10,097.61	7,500.07 N	672.22 W	473,166.78	607,306.78	2.35	7,499.25	-160.44	
16,332.00	89.64	0.52	10,098.62	7,590.07 N	672.14 W	473,256.78	607,306.86	1.22	7,589.24	58.77	
16,421.00	90.22	1.13	10,098.73	7,679.06 N	670.86 W	473,345.77	607,308.14	0.95	7,678.23	46.44	
16,511.00	90.64	0.77	10,098.06	7,769.04 N	669.37 W	473,435.75	607,309.63	0.61	7,768.22	-40.60	
16,600.00	91.02	1.40	10,096.77	7,858.02 N	667.69 W	473,524.73	607,311.31	0.83	7,857.19	58.90	
16,690.00	90.85	1.21	10,095.30	7,947.98 N	665.64 W	473,614.69	607,313.36	0.28	7,947.16	-131.82	
16,780.00	90.62	0.44	10,094.14	8,037.96 N	664.34 W	473,704.67	607,314.66	0.89	8,037.14	-106.63	
16,869.00	90.29	0.47	10,093.44	8,126.96 N	663.63 W	473,793.67	607,315.37	0.37	8,126.14	174.81	
16,959.00	89.92	0.51	10,093.27	8,216.95 N	662.86 W	473,883.66	607,316.14	0.41	8,216.14	173.83	
17,048.00	89.90	359.90	10,093.41	8,305.95 N	662.55 W	473,972.66	607,316.45	0.69	8,305.14	-91.88	
17,138.00	89.48	359.73	10,093.90	8,395.95 N	662.84 W	474,062.66	607,316.16	0.50	8,395.13	-157.96	
17,227.00	89.61	359.62	10,094.61	8,484.95 N	663.34 W	474,151.66	607,315.66	0.19	8,484.13	-40.24	
17,317.00	89.81	359.93	10,095.06	8,574.94 N	663.69 W	474,241.65	607,315.31	0.41	8,574.13	57.17	
17,406.00	90.03	359.30	10,095.19	8,663.94 N	664.29 W	474,330.65	607,314.71	0.75	8,663.12	-70.75	
17,495.00	89.88	0.01	10,095.26	8,752.94 N	664.83 W	474,419.65	607,314.17	0.82	8,752.12	101.93	
17,584.00	89.84	359.89	10,095.47	8,841.94 N	664.91 W	474,508.65	607,314.09	0.14	8,841.12	-108.44	
17,674.00	89.74	359.98	10,095.80	8,931.94 N	665.01 W	474,598.65	607,313.99	0.15	8,931.12	138.01	
17,763.00	89.83	359.74	10,096.14	9,020.94 N	665.23 W	474,687.65	607,313.77	0.29	9,020.12	-69.44	
17,853.00	89.74	359.76	10,096.47	9,110.94 N	665.62 W	474,777.65	607,313.38	0.10	9,110.12	167.47	
17,942.00	90.22	359.68	10,096.51	9,199.93 N	666.05 W	474,866.64	607,312.95	0.55	9,199.11	-9.46	
18,032.00	89.88	359.48	10,096.43	9,289.93 N	666.71 W	474,956.64	607,312.29	0.44	9,289.11	-149.53	
18,122.00	89.71	0.30	10,096.75	9,379.93 N	666.89 W	475,046.64	607,312.11	0.93	9,379.11	101.71	
18,211.00	89.83	359.93	10,097.11	9,468.93 N	666.71 W	475,135.64	607,312.29	0.44	9,468.11	-72.03	
18,301.00	90.38	359.78	10,096.94	9,558.93 N	666.94 W	475,225.64	607,312.06	0.63	9,558.11	-15.26	
18,390.00	90.15	0.13	10,096.53	9,647.93 N	667.01 W	475,314.64	607,311.99	0.47	9,647.10	123.31	
18,480.00	88.06	359.05	10,097.94	9,737.91 N	667.65 W	475,404.62	607,311.35	2.61	9,737.08	-152.68	
18,569.00	88.61	359.68	10,100.52	9,826.86 N	668.63 W	475,493.57	607,310.37	0.94	9,826.04	48.88	
18,659.00	89.64	359.22	10,101.90	9,916.85 N	669.50 W	475,583.56	607,309.50	1.25	9,916.02	-24.07	
18,748.00	90.40	358.98	10,101.87	10,005.84 N	670.90 W	475,672.55	607,308.10	0.90	10,005.01	-17.53	
18,838.00	92.13	359.36	10,099.88	10,095.80 N	672.20 W	475,762.51	607,306.80	1.97	10,094.97	12.38	
18,928.00	91.71	359.62	10,096.86	10,185.75 N	673.00 W	475,852.46	607,306.00	0.55	10,184.92	148.25	

Design Report for Blue Steel Fed Com WXY #12H - Actual Drilled

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
				Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)				
19,017.00	91.93	0.92	10,094.04	10,274.70 N	672.58 W	475,941.41	607,306.42	1.48	10,273.87	80.37	
19,106.00	89.26	359.59	10,093.11	10,363.68 N	672.19 W	476,030.39	607,306.81	3.35	10,362.85	-153.51	
19,196.00	90.43	359.75	10,093.36	10,453.68 N	672.70 W	476,120.39	607,306.30	1.31	10,452.85	7.79	
19,285.00	90.12	0.59	10,092.93	10,542.68 N	672.44 W	476,209.39	607,306.56	1.01	10,541.85	110.25	
19,376.00	91.03	1.07	10,092.02	10,633.66 N	671.12 W	476,300.37	607,307.88	1.13	10,632.83	27.81	
19,466.00	90.05	0.66	10,091.17	10,723.65 N	669.76 W	476,390.36	607,309.24	1.18	10,722.82	-157.30	
19,555.00	90.40	0.73	10,090.82	10,812.64 N	668.68 W	476,479.35	607,310.32	0.40	10,811.81	11.31	
19,645.00	90.33	1.01	10,090.24	10,902.63 N	667.32 W	476,569.34	607,311.68	0.32	10,901.80	104.04	
19,734.00	90.36	1.02	10,089.71	10,991.61 N	665.74 W	476,658.32	607,313.26	0.04	10,990.79	18.43	
19,824.00	89.68	0.36	10,089.68	11,081.60 N	664.66 W	476,748.31	607,314.34	1.05	11,080.78	-135.85	
19,913.00	89.83	0.65	10,090.06	11,170.60 N	663.87 W	476,837.31	607,315.13	0.37	11,169.78	62.65	
20,003.00	90.59	0.99	10,089.73	11,260.59 N	662.58 W	476,927.30	607,316.42	0.93	11,259.77	24.10	
20,092.00	90.24	0.91	10,089.08	11,349.57 N	661.11 W	477,016.28	607,317.89	0.40	11,348.76	-167.13	
20,183.00	90.17	0.76	10,088.76	11,440.56 N	659.78 W	477,107.27	607,319.22	0.18	11,439.75	-115.02	
20,250.00	89.66	0.55	10,088.86	11,507.56 N	659.02 W	477,174.27	607,319.98	0.82	11,506.74	-157.62	Blue Steel WXY #12 (PBHL)
20,267.00	89.66	0.55	10,088.96	11,524.56 N	658.85 W	477,191.27	607,320.15	0.00	11,523.74	0.00	Projection to TD 20267' MD / 10088' TVD (330.70' FNL, 997.16' FWL)

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
30.00	30.00	-0.05	0.01	First Gyro
219.00	219.00	0.37	0.47	Last Gyro
417.00	416.99	2.11	0.73	First Pro Directional MWD
2,971.00	2,937.85	290.98	-156.69	Last Pro Directional MWD
7,536.00	7,384.82	1,214.43	-594.72	Cross Section Line 7536'MD / 7384' TVD (0.8902' FNL, 1092.5025' FWL)
10,276.00	10,028.07	1,545.49	-657.12	Cross 330' FSL 10276' MD / 10028' TVD (330.55' FSL, 1029.10' FWL)
10,538.00	10,086.42	1,797.27	-663.60	Landing Point 90° Inc 10538' MD / 10086' TVD (582.36' FSL, 1021.86' FWL)
20,267.00	10,088.96	11,524.56	-658.85	Projection to TD 20267' MD / 10088' TVD (330.70' FNL, 997.16' FWL)

Design Report for Blue Steel Fed Com WXY #12H - Actual Drilled

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (usft)	Origin +E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	0.07	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
30.00	219.00	Gyro	3_Gyro-NS_OWSG
417.00	2,971.00	MWD	3_MWD+HRGM
3,114.00	20,250.00	HAL MWD	3_MWD+HRGM+AX
20,267.00	20,267.00	Projection to TD	3_Blind

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
100.00	100.00	20"	20	26

Design Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	()	()	()	()	()	()	()		
- Shape									
()									

Directional Difficulty Index

Average Dogleg over Survey:	1.35 °/100usft	Maximum Dogleg over Survey:	14.64 °/100usft at 10,462.00 usft
Net Tortousity applicable to Plans:	0.70 °/100usft	Directional Difficulty Index:	6.807

Audit Info

North Reference Sheet for Blue Steel Pad (Grid) - Blue Steel Fed Com WXY #12H - Wellbore #1

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to RKB (PD 582) 27' + GL @ 3025.00usft. Northing and Easting are relative to Blue Steel Fed Com WXY #12H

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 3001 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is -104.33333333°, Longitude Origin:0.00000000°, Latitude Origin:0.00000000°

False Easting: 500,000.00usft, False Northing: 0.00usft, Scale Reduction: 0.99992244

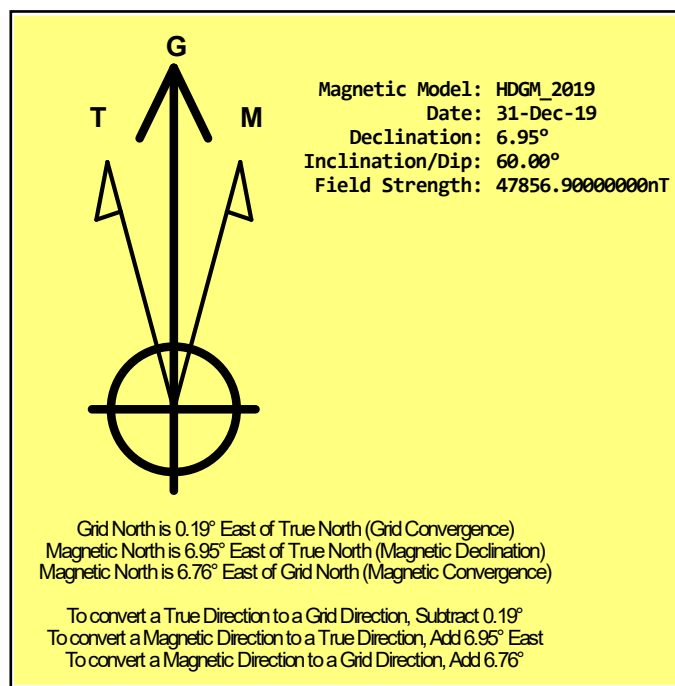
Grid Coordinates of Well: 465,666.71 usft N, 607,979.00 usft E

Geographical Coordinates of Well: 32.27975118, -103.98394399

Grid Convergence at Surface is: 0.19°

Based upon Minimum Curvature type calculations, at a Measured Depth of 20,267.00usft
the Bottom Hole Displacement is 11,543.38usft in the Direction of 356.73° (Grid).

Magnetic Convergence at surface is: -6.76° (31 December 2019, , HDGM_2019)



WELL INFORMATION

Created On : Apr 16 2020

End of Well Report

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

DIRECTIONAL DRILLERS

Driller 1 : Jason Yow
Driller 2 : Dusty Prochazka

Driller 3 :
Driller 4 :

JOB OBJECTIVES

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
2971.00	13.93	332.99	2937.85	290.98	-156.69	0.00	0.00	290.79	Tie In
3030.00	13.93	332.99	2995.12	303.64	-163.15	0.00	0.00	303.44	Projection to Bit
3080.03	12.93	333.02	3043.78	313.99	-168.42	2.00	179.63	313.79	EOD 12.93° Inc
7774.63	12.93	333.02	7619.35	1250.08	-644.99	0.00	0.00	1249.29	EOH 12.93° Inc
8421.10	0.00	0.00	8260.35	1314.81	-677.94	2.00	180.00	1313.98	Vertical Point
9679.75	0.00	00.00	9519.00	1314.81	-677.94	0.00	0.00	1313.98	KOP
10579.74	90.00	0.07	10091.96	1887.76	-677.28	10.00	0.07	1886.94	Landing Point
20217.23	90.00	0.07	10092.00	11525.24	-666.20	0.00	0.00	11524.42	TD at 20217.23

JOB SUMMARY
BHA SUMMARY
BHA Run 100

1: 8 3/4" Reed Hycalog DSC616M PDC A266049
 2: 7" NitroForce Lobe 6:7 -6.5 stg w/8.25" NBS 13234581
 3: 6 3/4" NMDC 12979228
 4: 6 3/4" Hang-off Sub 11633609
 5: 6 3/4" NMDC SD49128
 6: 6 3/4" Filter Sub SD116646
 7: 5" X 3" HWDP (24 Jnts)

BHA Run 200

1: 8 3/4" Baker DD406TX 5308838
 2: 6 3/4" StrataForce 6:7 - 6.0 @ 1.95 12983493
 3: 6 3/4" NMDC 12979228
 4: 6 3/4" Hang-off Sub 11633609
 5: 6 3/4" NM Pony Flex SD56403
 6: 6 3/4" Filter Sub SD116646
 7: 5" X 3" HWDP (24 Jnts)

BHA Run 300

1: 8½" GTI65DO 13308217
 2: 6 3/4" iCruise No Flex 12977650
 3: 6 3/4" TM HOC 13077898
 4: 6 3/4" Filter Sub SD116646
 5: 6 3/4" NM Pony Flex SD56403
 6: 7" NitroForce Lobe 6:7 -6.5 stg 13243478
 7: 1 STD 5" HWDP
 8: 9 STD 5" Drill Pipe
 9: 8 5/8" Drill-N-Ream DTI-DNR-340
 10: 104 STD 5" Drill pipe
 11: 7 STD 5" HWDP

BHA CHART

Run #	Bit #	Motor #	Hole Size (in)	MD In (ft)	MD Out (ft)	TVD In (ft)	TVD Out (ft)	Inc In (deg)	Inc Out (deg)	Azi In (deg)	Azi Out (deg)	Time Drilling (hr)	Time Circ (hr)
0100				3028.00	9622.00	2928.33	6702.10	25.59	81.31	358.43	358.43	60.07	7.06
0200				9622.00	10696.00	6702.10	6779.69	81.31	90.39	358.43	358.43	21.00	2.06
0300	3	3	0.000	10696.00	20267.00	6779.69	6788.96	90.39	89.55	358.43	0.75	91.79	12.46

MOTOR / ROTARY STEERABLE RUN SUMMARY

Motor 6.75" NitroForce 6/7 - 6.5 Stg
 8 1/4" NBS - 1.5° FBH
 Bit to Bend: 5.1 ft
 Max. WOB: 50,000 lbf
 Rev/Gal - 0.23
 Max. Diff. Pressure: 1463 psi
 Max. Torque: 15,976 lbf-ft
 Max. Rotatry: 80 RPM
 Motor Flow Rate: 300-600 GPM

MOTOR / ROTARY STEERABLE CHART

Motor #	Manufacturer	Model	Lobe	OD (in)	Gauge (in)	Bend (deg)	DLS (Ori) (°/100')	DLS (Rot) (°/100')	ROP (Ori) (fph)	ROP (Rot) (fph)
3	Sperry Drilling	NitroForce	6:7	7.000			0.00	0.00	0.00	104.27

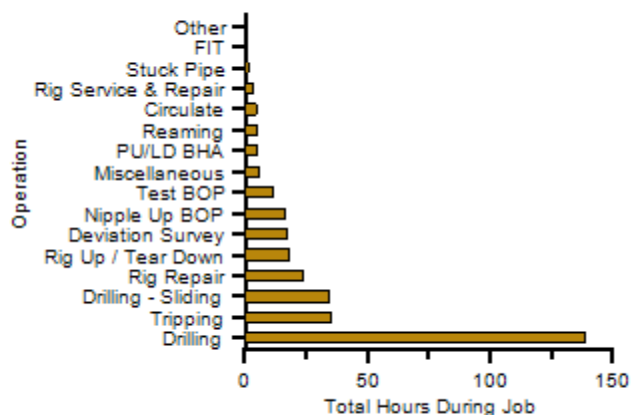
BIT RUN SUMMARY

Bit Number : 1
 Manufacturer : NOV / ReedHycalog
 Nozzles : 6x16
 Bit Size (in) : 8.750
 TFA (in2) : 1.1781
 Dull Grade In : NEW
 Dull Grade Out :
 Model : DSC616M
 Serial Number : A266049

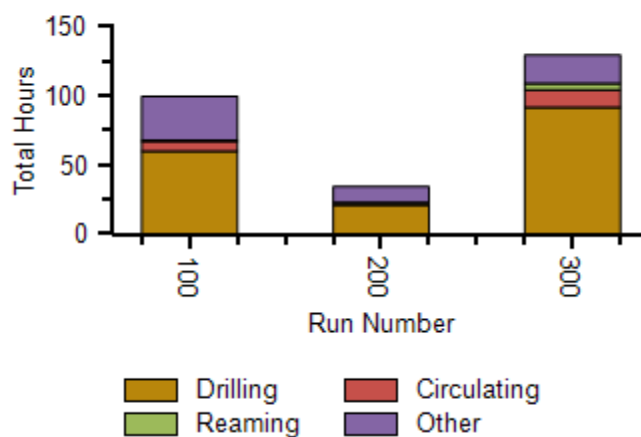
BIT CHART

Bit #	Manufacturer	Style	Gauge (in)	Gauge Length (in)	Nozzles	TFA (in2)	Dull Grades I O D L B G O R	Footage (ft)	Time Drilling (hr)	ROP (fph)
								6594.00	60.07	109.77
								1074.00	21.00	51.14
3	HDBS	GTi65DO	8.500	4.500	6x12	0.663		9571.00	91.79	104.27

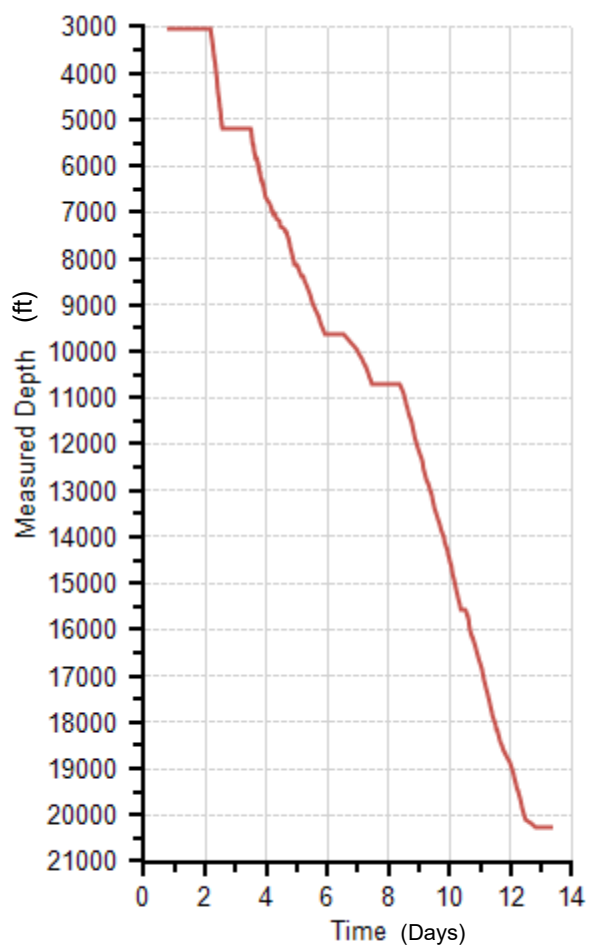
HOURS BY OPERATION



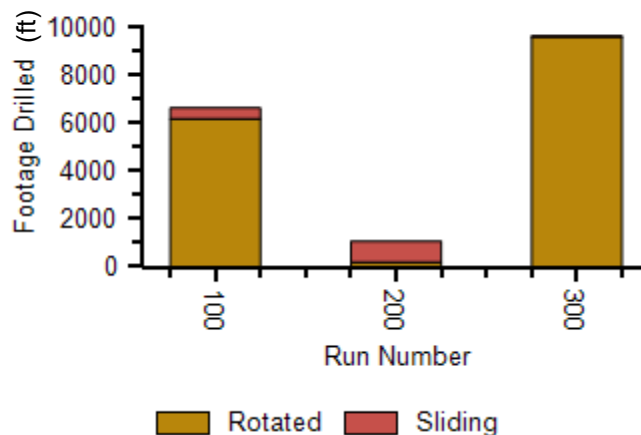
HOURS PER RUN



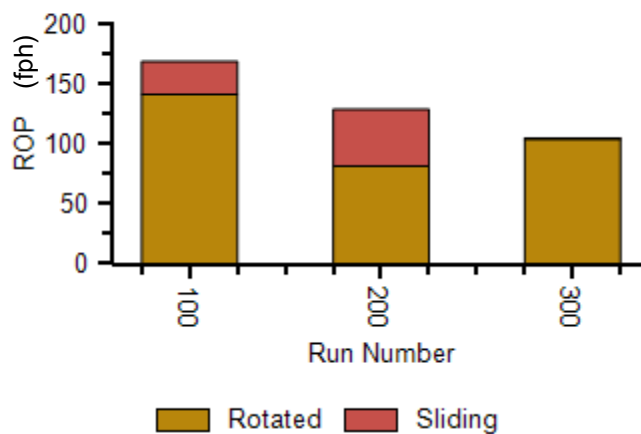
DAY vs DEPTH



FOOTAGE PER RUN



AVERAGE ROP PER RUN



SURFACE HOLE SECTION**INTERMEDIATE HOLE SECTION 1****INTERMEDIATE HOLE SECTION 2****PRODUCTION HOLE SECTION**

MO-XX-0906381966

MD (ft)	Formation Name MD/TVD (ft)	Inclination (deg) ——— DLS (°/100') - - - - - Inc	Bit Data	Drilling Parameters	Motor	BHA Stabilizers	Comments	Run # @ MD (ft)
3028.00	Lamar 3046.0/2944.6		109.77 fph 60.07 hr	WOB 38.57 klb RPM 48 FLO 598.26 gpm SPP 3036.09 psig				#100 @ 3028.0
4028.00	Bell Canyon 3075.0/2970.7							
5028.00	Cherry Canyon 3907.0/3694.3							
6028.00	Brushy Canyon 5105.0/4636.1		51.14 fph 21 hr	WOB 36.43 klb RPM 25 FLO 566.07 gpm SPP 3546.43 psig				#200 @ 9622.0
7028.00								
8028.00	1 Bone Springs 7729.0/6160.4		GTI65DO 6x12 104.27 fph 91.79 hr	WOB 31.64 klb RPM 99 FLO 567.57 gpm SPP 4483.33 psig	7.000" NitroForce 6/7	8.250 in@ 2.1 ft 7.500 in@ 5.0 ft 8.375 in@ 14.0 ft 8.625 in@ 997.4 ft		#300 @ 10696.0
9028.00	2 Bone Springs 8007.0/6271.3							
10028.00	Lower Bone Springs 9933.0/6742.0							
11028.00	WolfCamp X 9994.0/6748.2							
12028.00	WC XY 10019.0/6750.5							
13028.00								
14028.00								
15028.00								
16028.00								
17028.00								
18028.00								
19028.00								
20028.00								
21028.00								

WELL INFORMATION

Created On : Apr 16 2020

Drilling Activity

Customer	: Marathon Oil	North Ref	: Grid
Well Name	: Blue Steel 12H	Declination (deg)	: 6.76
Job Number	: MO-XX-0906381966	Vert Sec Dir (deg)	: 0.07
Rig Name	: Precesion 582		
Field Name	: Permian		
Country	: USA		

SURVEY										STEERING				DRILLING PARAMETERS						
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment	
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run	
										3028	3082	ROT	25	90.00	10	550	2300	324	100	
										3082	3171	ROT	25	90.00	10	550	2300	297	100	
										3171	3260	ROT	25	90.00	10	550	2300	198	100	
										3260	3350	ROT	25	90.00	10	550	2300	270	100	
										3350	3439	ROT	70	90.00	40	600	2850	267	100	
										3439	3529	ROT	70	90.00	40	600	2850	450	100	
										3529	3619	ROT	70	90.00	40	600	2850	300	100	
										3619	3640	ROT	70	104.00	40	600	2850	158	100	
										3640	3660	135G		104.00	40	600	2850	120	100	
										3660	3708	ROT	70	104.00	40	600	2850	360	100	
										3708	3750	ROT	70	104.00	40	600	2850	280	100	
										3750	3775	110G		104.00	40	600	2850	100	100	
										3775	3798	ROT	70	104.00	40	600	2850	173	100	
										3798	3887	ROT	70	104.00	40	600	2850	356	100	
										3887	3978	ROT	70	112.00	40	600	2850	364	100	
										3978	4068	ROT	70	112.00	40	600	2850	270	100	
										4068	4157	ROT	70	112.00	40	600	2850	534	100	
										4157	4247	ROT	70	112.00	40	600	2850	540	100	
										4247	4336	ROT	70	112.00	40	600	2850	445	100	
										4336	4426	ROT	70	112.00	40	600	2850	415	100	
										4426	4515	ROT	70	112.00	40	600	2850	243	100	

SURVEY										STEERING				DRILLING PARAMETERS						
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment	
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run	
										4515	4605	ROT	70	112.00	40	600	2850	337	100	
										4605	4694	ROT	70	112.00	40	600	2850	445	100	
										4694	4784	ROT	70	112.00	40	600	2850	360	100	
										4784	4805	ROT	70	112.00	40	600	2850	105	100	
										4805	4825	100G		112.00	40	600	2850	109	100	
										4825	4874	ROT	70	112.00	40	600	2850	420	100	
										4874	4964	ROT	70	112.00	40	600	2850	415	100	
										4964	5053	ROT	70	112.00	40	600	2850	356	100	
										5053	5143	ROT	70	112.00	40	600	2850	284	100	
										5143	5160	ROT	70	112.00	40	600	2850	85	100	
										5160	5180	145G		112.00	40	600	2850	92	100	
										5180	5182	ROT	70	112.00	40	600	2850	40	100	
										5182	5233	ROT	70	112.00	40	600	2850	146	100	
										5233	5322	ROT	70	112.00	40	600	2850	445	100	
										5322	5412	ROT	70	112.00	40	600	2850	284	100	
										5412	5501	ROT	70	116.00	40	600	2850	334	100	
										5501	5536	ROT	70	116.00	40	600	2850	111	100	
										5536	5561	20G		116.00	40	600	2850	107	100	
										5561	5590	ROT	45	116.00	40	600	3150	145	100	
										5590	5680	ROT	45	116.00	40	600	3150	300	100	
										5680	5700	ROT	45	116.00	40	600	3150	120	100	
										5700	5735	45G		116.00	40	600	2850	95	100	
										5735	5769	ROT	45	116.00	40	600	3150	255	100	
										5769	5859	ROT	45	116.00	40	600	3150	318	100	
										5859	5949	ROT	45	116.00	40	600	3150	270	100	
										5949	5965	ROT	45	116.00	40	600	3150	192	100	
										5965	5990	30G		116.00	40	600	2850	50	100	
										5990	6038	ROT	45	116.00	40	600	3150	360	100	
										6038	6055	ROT	45	116.00	40	600	3150	128	100	
										6055	6070	45G		116.00	40	600	2850	64	100	
										6070	6128	ROT	45	116.00	40	600	3150	290	100	
										6128	6134	ROT	45	116.00	40	600	3150	72	100	

SURVEY										STEERING				DRILLING PARAMETERS						
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment	
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run	
										6134	6144	1G		120.00	40	600	2800	26	100	
										6144	6217	ROT	45	120.00	40	600	3150	258	100	
										6217	6307	ROT	45	120.00	40	600	3150	208	100	
										6307	6316	ROT	45	120.00	40	600	3150	180	100	
										6316	6328	1G		120.00	40	600	2800	18	100	
										6328	6397	ROT	45	120.00	40	600	3150	180	100	
										6397	6399	ROT	45	120.00	40	600	3150	60	100	
										6399	6412	1G		120.00	40	600	2800	26	100	
										6412	6487	ROT	45	120.00	40	600	3150	225	100	
										6487	6576	ROT	25	120.00	40	600	3150	178	100	
										6576	6666	ROT	25	120.00	40	600	3150	180	100	
										6666	6675	ROT	25	120.00	40	600	3150	108	100	
										6675	6688	1G		120.00	40	600	2800	20	100	
										6688	6755	ROT	25	120.00	40	600	3150	80	100	
										6755	6758	ROT	25	120.00	35	600	3150	18	100	
										6758	6774	-20G		129.00	35	600	2800	16	100	
										6774	6844	ROT	25	129.00	40	600	3150	93	100	
										6844	6934	ROT	25	129.00	40	600	3150	98	100	
										6934	6943	ROT	25	129.00	40	600	3150	77	100	
										6943	6953	-20G		129.00	35	600	2800	18	100	
										6953	7024	ROT	25	129.00	40	600	3150	106	100	
										7024	7029	ROT	25	129.00	40	600	3150	100	100	
										7029	7054			135.00	35	600	2800	15	100	
										7054	7113	ROT	25	137.00	40	600	3150	88	100	
										7113	7129	ROT	25	137.00	40	600	3150	137	100	
										7129	7169	0G		137.00	35	600	2800	19	100	
										7169	7203	ROT	25	137.00	40	600	3150	102	100	
										7203	7292	ROT	25	137.00	40	600	3150	178	100	
										7292	7295	ROT	25	137.00	40	600	3150	18	100	
										7295	7355	0G		137.00	35	600	2800	21	100	
										7355	7382	ROT	25	137.00	40	600	3150	65	100	
										7382	7433	ROT	25	137.00	40	600	3150	68	100	

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										7433	7453	0G		137.00	35	600	2800	28	100		
										7453	7472	ROT	25	137.00	40	600	3150	95	100		
										7472	7562	ROT	25	137.00	40	600	3150	108	100		
										7562	7651	ROT	25	145.00	40	600	3150	178	100		
										7651	7740	ROT	45	145.00	40	600	3300	162	100		
										7740	7830	ROT	45	145.00	40	600	3300	123	100		
										7830	7919	ROT	45	145.00	40	600	3300	124	100		
										7919	8009	ROT	45	145.00	40	600	3400	135	100		
										8009	8098	ROT	45	145.00	40	600	3400	141	100		
										8098	8108	ROT	45	145.00	40	600	3400	86	100		
										8108	8128	310M		145.00	35	600	2900	12	100		
										8128	8164	ROT	45	145.00	40	600	3400	72	100		
										8164	8188	ROT	45	145.00	40	600	3400	41	100		
										8188	8277	ROT	45	145.00	40	600	3400	56	100		
										8277	8375	ROT	45	145.00	40	600	3400	81	100		
										8375	8400	300M		145.00	35	600	2900	17	100		
										8400	8457	ROT	45	145.00	40	600	3400	71	100		
										8457	8547	ROT	45	145.00	40	600	3400	72	100		
										8547	8636	ROT	45	145.00	40	600	3400	76	100		
										8636	8726	ROT	45	145.00	40	600	3400	81	100		
										8726	8815	ROT	45	154.00	40	600	3400	92	100		
										8815	8905	ROT	45	154.00	40	600	3400	120	100		
										8905	8994	ROT	45	154.00	40	600	3400	89	100		
										8994	9084	ROT	45	154.00	40	600	3400	68	100		
										9084	9174	ROT	45	154.00	40	600	3400	68	100		
										9174	9263	ROT	45	154.00	40	600	3400	71	100		
										9263	9353	ROT	45	154.00	40	600	3400	77	100		
										9353	9442	ROT	45	154.00	40	600	3400	82	100		
										9442	9532	ROT	45	154.00	40	600	3400	72	100		
										9532	9622	ROT	45	154.00	40	600	3400	77	100		
										9622	9709	0M		125.00	30	550	3500	32	200		
										9709	9799	0M		125.00	30	550	3500	36	200		

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										9799	9888	0M		125.00	30	525	3000	32	200		
										9888	9978	0G		125.00	30	525	3000	39	200		
										9978	10005	0G		125.00	30	525	3000	46	200		
										10005	10068	0G		125.00	30	525	3000	74	200		
										10068	10158	0G		125.00	30	525	3000	50	200		
										10158	10248	0G		125.00	30	600	3950	68	200		
										10248	10338	0G		125.00	50	600	3950	56	200		
										10338	10427	0G		125.00	50	600	3950	89	200		
										10427	10500	0G		125.00	50	600	3950	67	200		
										10500	10516	ROT	25	125.00	40	600	3950	48	200		
										10516	10606	ROT	25	125.00	40	600	3950	77	200		
										10606	10696	ROT	25	125.00	40	600	3950	98	200		
										10696	10791	-1	75	154.00	35	580	4200	71	300	Cruise Inc @ 90.5 Crusie Azi 359 D.C F/100% - T/85%	
10774.0	91.05	358.43	6778.71	6901.25	6901.49	-189.17	0.85	0.85	0.00										300		
										10791	10883	-1	75	154.00	35	580	4200	74	300	Cruise Inc @ 90.5 Crusie Azi 359 D.C F/100% - T/85%	
10866.0	90.92	357.84	6777.12	6993.19	6993.43	-192.16	0.66	-0.14	-0.64										300		
										10883	10976	-1	85	154.00	35	580	4200	112	300	Cruise Inc @ 90.5 Crusie Azi 359 D.C F/100% - T/85%	
10959.0	89.02	357.94	6777.17	7086.12	7086.36	-195.58	2.05	-2.04	0.11										300		
										10976	11066	-1	85	154.00	35	580	4200	135	300	Cruise Inc @ 90.5 Crusie Azi 359 D.C F/100% - T/85%	
11049.0	88.69	0.05	6778.97	7176.08	7176.32	-197.16	2.37	-0.37	2.34										300		

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										11066	11155	-1	90	165.00	35	580	4200	153	300	Cruise Inc @ 88.8 Crusie Azi 359.5 D.C F/100% - T/35%	
11138.0	88.54	359.84	6781.12	7265.05	7265.30	-197.25	0.29	-0.17	-0.24										300		
										11155	11244	-1	90	165.00	35	580	4200	97	300	Cruise Inc @ 88.8 Crusie Azi 359.5 D.C F/100% - T/35%	
11227.0	89.21	359.81	6782.87	7354.03	7354.28	-197.52	0.75	0.75	-0.03										300		
										11244	11334	-1	90	165.00	35	580	4200	90	300	Cruise Inc @ 88.8 Crusie Azi 359.5 D.C F/100% - T/35%	
11317.0	87.50	359.14	6785.45	7443.99	7444.23	-198.34	2.04	-1.90	-0.74										300		
										11334	11423	-1	90	165.00	35	580	4200	89	300	Cruise Inc @ 89.5 Crusie Azi 359.5 D.C F/100% - T/35%	
11406.0	88.77	0.34	6788.35	7532.94	7533.18	-198.75	1.96	1.43	1.35										300		
										11423	11513	-1	90	165.00	35	580	4200	108	300	Cruise Inc @ 89.5 Crusie Azi 359.5 D.C F/100% - T/35%	
11496.0	89.24	359.48	6789.91	7622.92	7623.17	-198.89	1.09	0.52	-0.96										300		
										11513	11603	-1	90	165.00	35	580	4200	154	300	Cruise Inc @ 89.7 Crusie Azi .11 D.C F/100% - T/35%	
11586.0	89.65	359.92	6790.78	7712.91	7713.16	-199.36	0.67	0.46	0.49										300		
										11603	11692	-1	90	165.00	35	580	4200	153	300	Cruise Inc @ 89.7 Crusie Azi .11 D.C F/100% - T/35%	
11675.0	89.83	359.84	6791.19	7801.91	7802.16	-199.55	0.22	0.20	-0.09										300		

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										11692	11782	-1	90	165.00	35	580	4300	154	300	Cruise Inc @ 89.7 Crusie Azi .11 D.C F/100% - T/35%	
11765.0	90.05	359.94	6791.28	7891.91	7892.16	-199.72	0.27	0.24	0.11										300		
										11782	11871	-1	100	165.00	30	580	4300	162	300	Cruise Inc @ 89.7 Crusie Azi .11 D.C F/100% - T/35%	
11854.0	89.97	356.05	6791.27	7980.84	7981.09	-202.83	4.37	-0.09	-4.37										300		
										11871	11961	-1	100	165.00	30	580	4300	104	300	Cruise Inc @ 89.7 Crusie Azi .11 D.C F/100% - T/35%	
11944.0	87.71	357.38	6793.09	8070.66	8070.92	-207.99	2.91	-2.51	1.48										300		
										11961	12051	-1	100	165.00	25	580	4300	108	300	Cruise Inc @ 90.58 Crusie Azi 6.1 D.C F/100% - T/35%	
12034.0	89.54	359.90	6795.25	8160.59	8160.85	-210.12	3.46	2.03	2.80										300		
										12051	12140	-1	100	165.00	25	580	4300	97	300	Cruise Inc @ 90.58 Crusie Azi 6.1 D.C F/100% - T/35%	
12123.0	90.74	359.65	6795.03	8249.59	8249.85	-210.47	1.38	1.35	-0.28										300		
										12140	12187	-1	100	165.00	25	580	4300	94	300	Cruise Inc @ 90.58 Crusie Azi 6.1 D.C F/100% - T/35%	
										12187	12230	-1	100	165.00	25	580	4300	86	300	Cruise Inc @ 90.58 Crusie Azi 6.1 D.C F/100% - T/35%	
12213.0	89.55	0.39	6794.80	8339.58	8339.85	-210.44	1.56	-1.32	0.82										300		

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										12230	12319	-1	100	165.00	25	580	4300	82	300	Cruise Inc @ 90.93 Crusie Azi 6.1 D.C F/100% - T/35%	
12302.0	90.59	0.41	6794.70	8428.58	8428.84	-209.82	1.17	1.17	0.02										300		
										12319	12409	-1	100	165.00	25	580	4300	120	300	Cruise Inc @ 90.93 Crusie Azi 6.1 D.C F/100% - T/35%	
12392.0	90.90	0.47	6793.53	8518.57	8518.83	-209.13	0.35	0.34	0.07										300		
										12409	12498	-1	100	165.00	30	580	4300	153	300	Cruise Inc @ 90.93 Crusie Azi 6.1 D.C F/100% - T/35%	
12481.0	90.99	0.56	6792.06	8607.56	8607.82	-208.33	0.14	0.10	0.10										300		
										12498	12588	-1	100	180.00	30	580	4300	120	300	Cruise Inc @ 90.93 Crusie Azi 6.1 D.C F/100% - T/35%	
12571.0	89.82	0.29	6791.42	8697.55	8697.81	-207.66	1.33	-1.30	-0.30										300		
										12588	12678	-1	100	180.00	30	580	4300	135	300	Cruise Inc @ 90.93 Crusie Azi 6.1 D.C F/100% - T/35%	
12661.0	90.23	0.20	6791.38	8787.55	8787.81	-207.28	0.47	0.46	-0.10										300		
										12678	12767	-1	100	180.00	30	580	4300	107	300	Cruise Inc @ 90.93 Crusie Azi 6.1 D.C F/100% - T/35%	
12750.0	90.87	0.47	6790.53	8876.55	8876.80	-206.76	0.78	0.72	0.30										300		
										12767	12856	-1	100	180.00	30	580	4300	67	300	Cruise Inc @ 90.93 Crusie Azi 6.1 D.C F/100% - T/35%	
12839.0	90.73	0.78	6789.29	8965.53	8965.79	-205.79	0.38	-0.16	0.35										300		

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										12856	12946	-1	100	180.00	30	580	4300	98	300	Cruise Inc @ 90.93 Crusie Azi 6.1 D.C F/100% - T/35%	
12929.0	90.42	0.55	6788.38	9055.52	9055.78	-204.74	0.43	-0.34	-0.26										300		
										12946	13035	-1	100	180.00	30	580	4300	119	300	Cruise Inc @ 90.93 Crusie Azi 6.1 D.C F/100% - T/35%	
13018.0	89.81	0.75	6788.20	9144.52	9144.77	-203.73	0.72	-0.69	0.22										300		
										13035	13125	-1	100	180.00	30	580	4300	135	300	Cruise Inc @ 90.93 Crusie Azi 6.1 D.C F/100% - T/35%	
13108.0	90.29	0.77	6788.13	9234.51	9234.77	-202.54	0.53	0.53	0.02										300		
										13125	13214	-1	100	180.00	30	580	4300	167	300	Cruise Inc @ 90.93 Crusie Azi 6.1 D.C F/100% - T/35%	
13197.0	90.38	0.74	6787.60	9323.50	9323.76	-201.37	0.11	0.10	-0.03										300		
										13214	13304	-1	100	180.00	30	580	4300	154	300	Cruise Inc @ 90.93 Crusie Azi 6.1 D.C F/100% - T/35%	
13287.0	90.34	0.76	6787.04	9413.50	9413.75	-200.19	0.05	-0.04	0.02										300		
										13304	13393	-1	100	180.00	30	580	4300	162	300	Cruise Inc @ 90.2 Crusie Azi 6.1 D.C F/100% - T/35%	
13376.0	90.39	0.87	6786.47	9502.49	9502.74	-198.92	0.14	0.06	0.12										300		
										13393	13483	-1	100	180.00	30	580	4300	98	300	Cruise Inc @ 90.2 Crusie Azi 6.1 D.C F/100% - T/35%	
13466.0	90.17	0.55	6786.03	9592.48	9592.73	-197.81	0.43	-0.24	-0.36										300		

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										13483	13572	-1	100	180.00	30	580	4300	67	300	Cruise Inc @ 88.7 Crusie Azi 6.1 D.C F/100% - T/35%	
13562.0	89.66	1.02	6786.17	9688.47	9688.72	-196.49	0.72	-0.53	0.49										300		
										13572	13661	-1	100	180.00	30	580	4300	91	300	Cruise Inc @ 88.7 Crusie Azi 6.1 D.C F/100% - T/35%	
13644.0	89.07	0.75	6787.08	9770.46	9770.70	-195.22	0.79	-0.72	-0.33										300		
										13661	13750	-1	100	180.00	30	580	4300	105	300	Cruise Inc @ 89.5 Crusie Azi 5.3 D.C F/100% - T/35%	
13733.0	89.54	1.28	6788.16	9859.44	9859.68	-193.65	0.80	0.53	0.60										300		
										13750	13840	-1	100	180.00	30	580	4300	120	300	Cruise Inc @ 89.4 Crusie Azi 5.3 D.C F/100% - T/35%	
13823.0	90.03	359.45	6788.50	9949.43	9949.68	-193.08	2.10	0.54	-2.03										300		
										13840	13929	-1	100	180.00	30	580	4300	82	300	Cruise Inc @ 89.4 Crusie Azi 5.3 D.C F/100% - T/35%	
13912.0	88.85	358.90	6789.37	10038.42	10038.6	-194.36	1.46	-1.33	-0.62										300		
										13929	14019	-1	100	180.00	30	580	4300	95	300	Cruise Inc @ 89.4 Crusie Azi 5.3 D.C F/100% - T/35%	
14002.0	88.33	359.48	6791.59	10128.38	10128.6	-195.63	0.87	-0.58	0.64										300		
										14019	14108	-1	100	185.00	30	580	4300	214	300	Cruise Inc @ 89.4 Crusie Azi 5.3 D.C F/100% - T/35%	
14091.0	89.37	359.57	6793.37	10217.35	10217.6	-196.37	1.17	1.17	0.10										300		

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										14108	14198	-1	100	185.00	30	580	4300	98	300	Cruise Inc @ 90.14 Crusie Azi 5.3 D.C F/100% - T/35%	
14181.0	89.91	359.43	6793.94	10307.35	10307.6 n	-197.15	0.62	0.60	-0.16										300		
										14198	14287	-1	100	185.00	27	580	4500	85	300	Cruise Inc @ 90.14 Crusie Azi 5.3 D.C F/100% - T/35%	
14270.0	89.56	359.83	6794.35	10396.34	10396.5 n	-197.73	0.60	-0.39	0.45										300		
										14287	14377	-1	100	185.00	27	580	4500	216	300	Cruise Inc @ 90.14 Crusie Azi 5.3 D.C F/100% - T/35%	
14360.0	89.83	0.73	6794.83	10486.34	10486.5 n	-197.29	1.04	0.30	1.00										300		
										14377	14466	-1	100	185.00	27	580	4500	109	300	Cruise Inc @ 89..7 Crusie Azi 5.3 D.C F/100% - T/35%	
14449.0	89.67	359.85	6795.22	10575.34	10575.5 n	-196.84	1.01	-0.18	-0.99										300		
										14466	14520	-1	100	185.00	27	580	4500	105	300	Cruise Inc @ 89..7 Crusie Azi 5.3 D.C F/100% - T/35%	
										14520	14556	-1	100	185.00	27	580	4500	144	300	Cruise Inc @ 89..7 Crusie Azi 5.3 D.C F/100% - T/35%	
14539.0	89.70	359.88	6795.71	10665.33	10665.5 o	-197.05	0.05	0.03	0.03										300		
										14556	14646	-1	100	185.00	35	580	4500	120	300	Cruise Inc @ 89..7 Crusie Azi 5.3 D.C F/100% - T/35%	
14629.0	89.57	0.03	6796.28	10755.33	10755.5 o	-197.12	0.22	-0.14	0.17										300		

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										14646	14735	-1	100	185.00	35	580	4500	133	300	Cruise Inc @ 89..7 Crusie Azi 5.3 D.C F/100% - T/35%	
14718.0	89.61	0.20	6796.92	10844.33	10844.5 ₀	-196.94	0.20	0.04	0.19										300		
										14735	14825	-1	100	185.00	35	580	4500	154	300	Cruise Inc @ 89..96 Crusie Azi 5.3 D.C F/100% - T/35%	
14808.0	89.22	359.91	6797.84	10934.33	10934.5 ₇	-196.85	0.54	-0.43	-0.32										300		
										14825	14914	-1	100	185.00	32	580	4500	119	300	Cruise Inc @ 89..96 Crusie Azi 5.3 D.C F/100% - T/35%	
14897.0	89.96	0.18	6798.48	11023.32	11023.5 ₇	-196.78	0.89	0.83	0.30										300		
										14914	15003	-1	100	190.00	32	580	4500	153	300	Cruise Inc @ 89..96 Crusie Azi 5.3 D.C F/100% - T/35%	
14986.0	90.07	359.73	6798.45	11112.32	11112.5 ₇	-196.85	0.52	0.12	-0.51										300		
										15003	15095	-1	100	190.00	32	580	4500	158	300	Cruise Inc @ 89..96 Crusie Azi 5.3 D.C F/100% - T/35%	
15078.0	89.90	359.58	6798.48	11204.32	11204.5 ₇	-197.41	0.25	-0.18	-0.16										300		
										15095	15184	-1	100	190.00	35	580	4500	153	300	Cruise Inc @ 89..96 Crusie Azi 5.3 D.C F/100% - T/35%	
15167.0	89.80	359.85	6798.71	11293.32	11293.5 ₇	-197.85	0.32	-0.11	0.30										300		
										15184	15273	-1	100	190.00	35	580	4500	133	300	Cruise Inc @ 89..96 Crusie Azi 5.3 D.C F/100% - T/35%	
15256.0	89.61	359.80	6799.17	11382.32	11382.5 ₇	-198.12	0.22	-0.21	-0.06										300		

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										15273	15363	-1	100	190.00	35	580	4500	135	300	Cruise Inc @ 89..96 Crusie Azi 5.3 D.C F/100% - T/35%	
15346.0	88.94	0.04	6800.31	11472.31	11472.5 ₆	-198.25	0.79	-0.74	0.27										300		
										15363	15453	-1	100	190.00	35	580	4500	126	300	Cruise Inc @ 89..96 Crusie Azi 5.3 D.C F/100% - T/35%	
15436.0	88.59	359.35	6802.25	11562.28	11562.5 ₄	-198.73	0.86	-0.39	-0.77										300		
										15453	15542	-1	100	190.00	35	580	4500	167	300	Cruise Inc @ 89..96 Crusie Azi 5.3 D.C F/100% - T/35%	
15525.0	89.67	359.47	6803.60	11651.27	11651.5 ₂	-199.64	1.22	1.21	0.13										300		
										15542	15582	-1	100	190.00	35	580	4500	96	300	Cruise Inc @ 89..96 Crusie Azi 5.3 D.C F/100% - T/35%	
										15582	15632	ROT	100	190.00	35	580	4500	62	300	Cruise Inc @ 89..96 Crusie Azi 5.3 D.C F/100% - T/35%	
15615.0	90.35	359.30	6803.58	11741.26	11741.5 ₄	-200.61	0.78	0.76	-0.19										300		
										15632	15722	-1	100	190.00	35	580	4500	129	300	Cruise Inc @ 90.8 Crusie Azi 5.22 D.C F/100% - T/35%	
15705.0	89.83	0.31	6803.44	11831.26	11831.5 ₄	-200.92	1.26	-0.58	1.12										300		
										15722	15811	-1	100	190.00	35	580	4500	153	300	Cruise Inc @ 90.8 Crusie Azi 5.22 D.C F/100% - T/35%	
15794.0	91.02	0.21	6802.78	11920.25	11920.5 ₄	-200.51	1.34	1.34	-0.11										300		

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										15811	15901	-1	100	190.00	35	580	4500	216	300	Cruise Inc @ 90.8 Crusie Azi 5.22 D.C F/100% - T/35%	
15884.0	91.03	0.15	6801.17	12010.24	12010.4 0	-200.23	0.07	0.01	-0.07										300		
										15901	15991	-1	100	190.00	35	580	4500	154	300	Cruise Inc @ 90.8 Crusie Azi 5.22 D.C F/100% - T/35%	
15974.0	90.62	359.84	6799.88	12100.23	12100.4 0	-200.24	0.57	-0.46	-0.34										300		
										15991	16080	-1	100	190.00	35	580	4500	178	300	Cruise Inc @ 90.8 Crusie Azi 5.22 D.C F/100% - T/35%	
16063.0	90.85	0.44	6798.73	12189.22	12189.4 7	-200.02	0.72	0.26	0.67										300		
										16080	16170	-1	100	190.00	27	580	4500	108	300	Cruise Inc @ 90.8 Crusie Azi 5.22 D.C F/100% - T/35%	
16153.0	91.04	0.28	6797.25	12279.21	12279.4 6	-199.46	0.28	0.21	-0.18										300		
										16170	16259	-1	100	190.00	27	580	4500	107	300	Cruise Inc @ 90.8 Crusie Azi 5.22 D.C F/100% - T/35%	
16242.0	89.07	359.58	6797.17	12368.20	12368.4 6	-199.56	2.35	-2.21	-0.79										300		
										16259	16349	-1	100	190.00	32	550	4550	98	300	Cruise Inc @ 90.05 Crusie Azi 5.22 D.C F/100% - T/35%	
16332.0	89.64	0.52	6798.18	12458.20	12458.4 5	-199.49	1.22	0.63	1.04										300		
										16349	16438	-1	100	190.00	32	550	4550	119	300	Cruise Inc @ 90.05 Crusie Azi 5.22 D.C F/100% - T/35%	
16421.0	90.22	1.13	6798.29	12547.19	12547.4 4	-198.20	0.95	0.65	0.69										300		

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										16438	16528	-1	100	190.00	32	550	4550	120	300	Cruise Inc @ 90.40 Crusie Azi 5.22 D.C F/100% - T/35%	
16511.0	90.64	0.77	6797.61	12637.17	12637.4 n	-196.71	0.61	0.47	-0.40										300		
										16528	16617	-1	100	197.00	32	550	4550	119	300	Cruise Inc @ 89.87 Crusie Azi 5.22 D.C F/100% - T/35%	
16600.0	91.02	1.40	6796.32	12726.15	12726.4 n	-195.03	0.83	0.43	0.71										300		
										16617	16707	-1	100	197.00	32	550	4550	98	300	Cruise Inc @ 89.87 Crusie Azi 5.22 D.C F/100% - T/35%	
16690.0	90.85	1.21	6794.85	12816.12	12816.3 e	-192.98	0.28	-0.19	-0.21										300		
										16707	16745	-1	100	197.00	32	550	4550	65	300	Cruise Inc @ 89.87 Crusie Azi 5.22 D.C F/100% - T/35%	
										16745	16797	-1	100	197.00	32	550	4550	156	300	Cruise Inc @ 89.87 Crusie Azi 5.22 D.C F/100% - T/35%	
16780.0	90.62	0.44	6793.70	12906.10	12906.3 4	-191.68	0.89	-0.26	-0.86										300		
										16797	16886	-1	100	197.00	32	550	4550	107	300	Cruise Inc @ 89.87 Crusie Azi 5.22 D.C F/100% - T/35%	
16869.0	90.29	0.47	6792.99	12995.09	12995.3 4	-190.97	0.37	-0.37	0.03										300		
										16886	16976	-1	100	197.00	32	550	4550	120	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
16959.0	89.92	0.51	6792.83	13085.09	13085.3 n	-190.21	0.41	-0.41	0.04										300		

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										16976	17065	-1	100	197.00	32	550	4550	153	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
17048.0	89.90	359.90	6792.97	13174.09	13174.3 2	-189.89	0.69	-0.02	-0.69										300		
										17065	17155	-1	100	197.00	32	550	4550	120	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
17138.0	89.48	359.73	6793.45	13264.09	13264.3 2	-190.18	0.50	-0.47	-0.19										300		
										17155	17244	-1	100	197.00	32	550	4550	153	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
17227.0	89.61	359.62	6794.16	13353.08	13353.3 2	-190.68	0.19	0.15	-0.12										300		
										17244	17334	-1	100	197.00	32	550	4550	108	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
17317.0	89.81	359.93	6794.62	13443.08	13443.3 2	-191.04	0.41	0.22	0.34										300		
										17334	17423	-1	100	197.00	32	550	4700	133	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
17406.0	90.03	359.30	6794.74	13532.08	13532.3 2	-191.63	0.75	0.25	-0.71										300		
										17423	17512	-1	100	197.00	32	550	4700	133	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
17495.0	89.88	0.01	6794.81	13621.08	13621.3 2	-192.17	0.82	-0.17	0.80										300		
										17512	17601	-1	100	197.00	32	550	4700	133	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
17584.0	89.84	359.89	6795.03	13710.08	13710.3 2	-192.25	0.14	-0.04	-0.13										300		

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										17601	17691	-1	100	197.00	32	550	4700	154	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
17674.0	89.74	359.98	6795.36	13800.07	13800.3 2	-192.35	0.15	-0.11	0.10										300		
										17691	17780	-1	100	197.00	32	550	4700	153	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
17763.0	89.83	359.74	6795.69	13889.07	13889.3 2	-192.57	0.29	0.10	-0.27										300		
										17780	17870	-1	100	197.00	32	550	4700	154	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
17853.0	89.74	359.76	6796.03	13979.07	13979.3 2	-192.96	0.10	-0.10	0.02										300		
										17870	17959	-1	100	197.00	32	550	4700	97	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
17942.0	90.22	359.68	6796.06	14068.07	14068.3 2	-193.40	0.55	0.54	-0.09										300		
										17959	18049	-1	100	197.00	32	550	4700	90	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
18032.0	89.88	359.48	6795.98	14158.07	14158.3 4	-194.05	0.44	-0.38	-0.22										300		
										18049	18139	-1	100	197.00	32	550	4700	120	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
18122.0	89.71	0.30	6796.30	14248.06	14248.3 4	-194.23	0.93	-0.19	0.91										300		
										18139	18228	-1	100	197.00	32	550	4700	119	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
18211.0	89.83	359.93	6796.66	14337.06	14337.3 4	-194.05	0.44	0.13	-0.42										300		

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										18228	18318	-1	100	197.00	32	550	4700	135	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
18301.0	90.38	359.78	6796.50	14427.06	14427.34	-194.28	0.63	0.61	-0.17										300		
										18318	18407	-1	100	197.00	32	550	4700	119	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
18390.0	90.15	0.13	6796.08	14516.06	14516.34	-194.35	0.47	-0.26	0.39										300		
										18407	18497	-1	100	197.00	32	550	4700	72	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
18480.0	88.06	359.05	6797.49	14606.04	14606.20	-194.99	2.61	-2.32	-1.20										300		
										18497	18586	-1	100	197.00	32	550	4700	107	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
18569.0	88.61	359.68	6800.08	14694.99	14695.24	-195.98	0.94	0.62	0.71										300		
										18586	18676	-1	100	197.00	32	550	4700	68	300	Cruise Inc @ 89.87 Crusie Azi 6.1 D.C F/100% - T/35%	
18659.0	89.64	359.22	6801.45	14784.98	14785.20	-196.84	1.25	1.14	-0.51										300		
										18676	18765	-1	100	197.00	32	550	4700	63	300	Cruise Inc @ 91.72 Crusie Azi 6.1 D.C F/100% - T/35%	
18748.0	90.40	358.98	6801.42	14873.96	14874.20	-198.24	0.90	0.85	-0.27										300		
										18765	18855	-1	100	197.00	32	550	4700	54	300	Cruise Inc @ 91.72 Crusie Azi 6.1 D.C F/100% - T/35%	
18838.0	92.13	359.36	6799.43	14963.93	14964.10	-199.54	1.97	1.92	0.42										300		
										18855	18945	-1	100	197.00	32	550	4700	98	300	Manual Mode 100% @ 0 TF	

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
18928.0	91.71	359.62	6796.42	15053.87	15054.1 0	-200.34	0.55	-0.47	0.29										300	Manual Mode 100% @ 0 TF	
										18945	19034	-1	100	197.00	32	550	4700	97	300		
19017.0	91.93	0.92	6793.59	15142.82	15143.0 0	-199.92	1.48	0.25	1.46										300	Cruise Inc @ 90.49 Crusie Azi 6.63 D.C F/100% - T/35%	
										19034	19123	-1	100	197.00	32	550	4700	107	300		
19106.0	89.26	359.59	6792.67	15231.81	15232.0 0	-199.53	3.35	-3.00	-1.49										300	Cruise Inc @ 90.22 Crusie Azi 6.63 D.C F/100% - T/35%	
										19123	19213	-1	100	197.00	32	550	4700	90	300		
19196.0	90.43	359.75	6792.91	15321.80	15322.0 0	-200.05	1.31	1.30	0.18										300	Cruise Inc @ 90.22 Crusie Azi 6.63 D.C F/100% - T/35%	
										19213	19302	-1	100	197.00	32	550	4700	119	300		
19285.0	90.12	0.59	6792.48	15410.80	15411.0 0	-199.78	1.01	-0.35	0.94										300	Cruise Inc @ 90.22 Crusie Azi 6.63 D.C F/100% - T/35%	
										19302	19393	-1	100	197.00	32	550	4700	156	300		
19376.0	91.03	1.07	6791.57	15501.79	15502.0 4	-198.46	1.13	1.00	0.53										300	Cruise Inc @ 90.22 Crusie Azi 6.63 D.C F/100% - T/35%	
										19393	19483	-1	100	197.00	32	550	4700	83	300		
19466.0	90.05	0.66	6790.72	15591.78	15592.0 0	-197.11	1.18	-1.09	-0.46										300	Cruise Inc @ 90.22 Crusie Azi 6.63 D.C F/100% - T/35%	
										19483	19572	-1	100	197.00	32	550	4700	133	300		
19555.0	90.40	0.73	6790.37	15680.77	15681.0 0	-196.03	0.40	0.39	0.08										300		

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										19572	19662	-1	100	197.00	32	550	4700	108	300	Cruise Inc @ 90.22 Crusie Azi 6.63 D.C F/100% - T/35%	
19645.0	90.33	1.01	6789.80	15770.76	15771.0 ₄	-194.66	0.32	-0.08	0.31										300		
										19662	19751	-1	100	197.00	32	550	4700	153	300	Cruise Inc @ 90.22 Crusie Azi 6.63 D.C F/100% - T/35%	
19734.0	90.36	1.02	6789.26	15859.74	15859.9 ₀	-193.08	0.04	0.03	0.01										300		
										19751	19841	-1	100	197.00	32	550	4700	154	300	Cruise Inc @ 90.22 Crusie Azi 6.63 D.C F/100% - T/35%	
19824.0	89.68	0.36	6789.23	15949.74	15949.9 ₀	-192.00	1.05	-0.76	-0.73										300		
										19841	19930	-1	100	197.00	32	550	4700	119	300	Cruise Inc @ 90.22 Crusie Azi 6.63 D.C F/100% - T/35%	
19913.0	89.83	0.65	6789.61	16038.73	16038.9 ₀	-191.21	0.37	0.17	0.33										300		
										19930	20020	-1	100	197.00	32	550	4700	108	300	Cruise Inc @ 90.22 Crusie Azi 6.63 D.C F/100% - T/35%	
20003.0	90.59	0.99	6789.28	16128.73	16128.9 ₇	-189.93	0.93	0.84	0.38										300		
										20020	20109	-1	100	197.00	32	550	4700	107	300	Cruise Inc @ 90.22 Crusie Azi 6.63 D.C F/100% - T/35%	
20092.0	90.24	0.91	6788.64	16217.71	16217.9 ₅	-188.45	0.40	-0.39	-0.09										300		
										20109	20200	-1	100	197.00	32	550	4700	21	300	Cruise Inc @ 90.22 Crusie Azi 6.63 D.C F/100% - T/35%	

SURVEY										STEERING				DRILLING PARAMETERS							
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates		DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate		Tool Face (deg)	RPM	Temp (degF)	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment		
					N/S (ft)	E/W (ft)				From (ft)	To (ft)								Run		
										20200	20267	-1	100	197.00	32	550	4700	19	300	Cruise Inc @ 90.22 Crusie Azi 6.63 D.C F/100% - T/35%	

WARRANTY

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WELL INFORMATION
Created On : Apr 16 2020

BHA Report

IADC Rig BHA#

Run#

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

Total: 0

PERFORMANCE Section A

Parameter	Min	Max	Avg	Activity	Hours	BHA Weight	
WOB	:			Drilling	:	in Air (Total)	: N/A
RPM	:			Reaming	:	in Mud (Total)	: N/A
Flow	:			Circ-Other	:	in Air (Bel Jars)	: N/A
SPP	:			Total	:	in Mud (Bel Jars)	: N/A

PERFORMANCE Section B

In	Out	Distance	ROP	Build	Turn	DLS
Inclination		Oriented	:		n/a	n/a
Azimuth		Rotating	:			
*Values are interpolated/ extrapolated		Total	:			

SURVEY STATIONS

Depth	Inclination	Azimuth
Start		
Final		

WELL INFORMATION
Created On : Apr 16 2020

BHA Report

IADC Rig BHA#

Run#

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

Total: 0

PERFORMANCE Section A

Parameter	Min	Max	Avg	Activity	Hours	BHA Weight	
WOB	:			Drilling	:	in Air (Total)	: N/A
RPM	:			Reaming	:	in Mud (Total)	: N/A
Flow	:			Circ-Other	:	in Air (Bel Jars)	: N/A
SPP	:			Total	:	in Mud (Bel Jars)	: N/A

PERFORMANCE Section B

In	Out	Distance	ROP	Build	Turn	DLS
Inclination		Oriented	:		n/a	n/a
Azimuth		Rotating	:			
*Values are interpolated/ extrapolated		Total	:			

SURVEY STATIONS

Depth	Inclination	Azimuth
Start		
Final		

WELL INFORMATION

Created On : Apr 16 2020

BHA Report

IADC Rig BHA# 0300

Run# 0300

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

Date & Time In : 03/21/2020 : 20:45:00

Date & Time Out : 03/27/2020 : 10:00:00

MD In (ft) : 10696

TVD In (ft) : 6780

MD Out (ft) : 20267

TVD Out (ft) : 6789

BIT DATA

Bit Number : 3
Bit Size (in) : 8.500
Manufacturer : HDBS
Model : GTI65DO
Serial Number : 13308217

Nozzles : 6x12
TFA (in2) : 0.6627
Dull Grade In : NEW
Dull Grade Out :

MOTOR DATA

Motor Number : 3
OD (in) : 7.000
Manufacturer : Sperry Drilling
Model : NitroForce
Serial Number : 13243478
Bend (deg) : 0.00

Nozzles (32nd) : 0.0
Avg Diff Press : 648.19
Cumul Cir Hrs : 109.00
Start Temperature (degF) : 154.00
End Temperature (degF) : 197.00

COMPONENT DATA

Item #	Description	Serial Number	OD (in)	ID (in)	Gauge (in)	Weight (lbpf)	Top Connection	Length (ft)	Bit - Center Blade (ft)
1	8 1/2" GTI65DO HDBS PDC	13308217	6.000	2.500	8.500	79.63	P 4-1/2" REG	1.00	
2	6 3/4" iCruise No Flex	12977650	6.750	1.490	8.250	90.66	B 4-1/2" IF	26.40	2.05
	Stabilizer				8.250				2.05
	Stabilizer				7.500				5.00
	Stabilizer				8.375				14.00
3	6 3/4" TM HOC	13077898	6.920	2.875		106.05	B 4-1/2" IF	10.30	
4	6 3/4" Filter Sub	SD116646	6.525	2.875		91.84	B 4-1/2" IF	5.50	
5	6 3/4" NM Pony Flex Collar	SD56403	6.810	3.250		95.86	B 4-1/2" IF	15.18	
6	7" Nitroforce Lobe 6:7-6.5 Stg	13243478	7.000	4.952		91.00	B 4-1/2" IF	36.10	
7	1 STD 5" HWDP		5.000	3.000		42.83	B 4-1/2" IF	93.87	
8	9 STD 5" Drill Pipe		5.000	4.276		22.60	B 4-1/2" IF	806.80	
9	8 5/8" Drill-N-Ream	DTI-DNR-340	6.500	3.500	8.625	80.30	B 4-1/2" IF	8.70	997.35
10	104 STD 5" Drill pipe		5.000	4.276		22.60	B 4-1/2" IF	9319.39	
11	7 STD 5" HWDP		5.000	3.000		42.83	B 4-1/2" IF	653.48	
Total:								10976.72	

PERFORMANCE Section A

Parameter	Min	Max	Avg	Activity	Hours	BHA Weight (klb)	
WOB (klb) :	25	35	32	Drilling :	91.79	in Air (Total) :	12.83
RPM (rpm) :	75	100	99	Reaming :	4.75	in Mud (Total) :	10.80
Flow (gpm) :	550	580	568	Circ-Other :	12.46	in Air (Bel Jars) :	N/A
SPP (psig) :	4200	4700	4483	Total :	109.00	in Mud (Bel Jars) :	N/A

BHA WEIGHT CALCULATION MESSAGE

Jar not found. Could not calculate weight below jars.

PERFORMANCE Section B

	In	Out	Distance (ft)	ROP (fph)	Build (°/100')	Turn (°/100')	DLS (°/100')
Inclination (deg)	90.39	89.55	Oriented :	0	n/a	n/a	0.00
Azimuth (deg)	358.43	0.75	Rotating :	9571	104	0.00	0.00
*Values are interpolated/ extrapolated			Total :	9571	104	-0.01	0.02
						0.03	

SURVEY STATIONS

	Depth (ft)	Inclination (deg)	Azimuth (deg)
Start	10774.00	91.05	358.43
Final	20092.00	90.24	0.91

COMMENTS
OBJECTIVES

Objective was to drill the 9500' of lateral holding 90° inclination.

RESULTS
RECOMMENDATIONS

No recommendations at this time.

OTHER

WELL INFORMATION

Created On : Apr 16 2020

Daily Drilling
Report

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

CURRENT STATUS Report # 1

Date : 03/14/2020

Total Depth (ft) : 0.00	Casing Depth (ft) :	Customer Reps :
Depth Last 24 (ft) : 0.00	Casing Diameter (in) :	Customer Reps :
Hole Size (in) :	Casing ID (in) :	SDS Reps : Jason Yow
Slide (%) :		SDS Reps : Dusty Prochazka
Rotate (%) :		SDS Reps :

LAST SURVEY

LAST FORMATION TOP

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)	Formation Name	MD Top (ft)	TVD Top (ft)

BHA SUMMARY

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lbf2)	Gels	10 sec	10 Min	30 sec	30 min	(lbf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	18:00	18.00			1 - Rig Up / Tear Down	Skid Rig F/ Blue Steel 18H - T/ Blue Steel 12H
18:00	00:00	6.00			14 - Nipple Up BOP	Nipple up and test BOPs

COMMENTS

Daily: \$5,000.00

Total: \$5,000.00

WELL INFORMATION

Created On : Apr 16 2020

Daily Drilling Report

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

CURRENT STATUS Report # 2

Date : 03/15/2020

Total Depth (ft) : 3028.00	Casing Depth (ft) :	Customer Reps :
Depth Last 24 (ft) : 0.00	Casing Diameter (in) :	Customer Reps :
Hole Size (in) :	Casing ID (in) :	SDS Reps : Jason Yow
Slide (%) :		SDS Reps : Dusty Prochazka
Rotate (%) :		SDS Reps :

LAST SURVEY
LAST FORMATION TOP

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)	Formation Name	MD Top (ft)	TVD Top (ft)
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BHA SUMMARY
MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels	10 sec	10 Min	30 sec	30 min	(lhf2)
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Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH
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TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	10:00	10.00			14 - Nipple Up BOP	Nipple up and Test BOPs
10:00	21:30	11.50			15 - Test BOP	Test BOPs
21:30	22:10	0.67			14 - Nipple Up BOP	Install wear bushing
22:10	22:25	0.25		100	6c - PU/LD BHA	Have pre job JSA for picking up BHA
22:25	23:30	1.08		100	6c - PU/LD BHA	P/U BHA 100
23:30	23:35	0.08	3028.00	100	6a - Trip In	P/U 1 JT HWDP
23:35	23:45	0.17	3028.00	100	5 - Circulate	Test mwd 400 gpm 800 psi with bit
23:45	00:00	0.25	3028.00	100	6a - Trip In	Picking up 8 stds hwdp

COMMENTS

Daily: \$20,500.00

Total: \$25,500.00

WELL INFORMATION

Created On : Apr 16 2020

Daily Drilling Report

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

CURRENT STATUS Report # 3

Date : 03/16/2020

Total Depth (ft) : 5182.00	Casing Depth (ft) :	Customer Reps :
Depth Last 24 (ft) : 2154.00	Casing Diameter (in) :	Customer Reps :
Hole Size (in) :	Casing ID (in) :	SDS Reps : Jason Yow
Slide (%) : 3.95		SDS Reps : Dusty Prochazka
Rotate (%) : 96.05		SDS Reps :

LAST SURVEY

LAST FORMATION TOP

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)	Formation Name	MD Top (ft)	TVD Top (ft)
						Brushy Canyon	5105.00	4636.10

BHA SUMMARY

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels	10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:55	0.92	3028.00	100	6a - Trip In	Pickup up 8 stds HWDP
00:55	02:15	1.33	3028.00	100	6a - Trip In	TIH to 2939'tag up cement
02:15	03:05	0.83	3028.00	100	27 - Drill-Out Shoe	Drill out float equipment
03:05	04:05	1.00	3028.00	100	16a - FIT	Test shoe to 11.8# emw
04:05	04:15	0.17	3082.00	100	2a - Drilling	Rotate
04:15	04:20	0.08	3082.00	100	10a - Connection	Connection
04:20	04:38	0.30	3171.00	100	2a - Drilling	Rotate
04:38	04:43	0.08	3171.00	100	10 - Deviation Survey	C/S @ 3114
04:43	05:10	0.45	3260.00	100	2a - Drilling	Rotate
05:10	05:15	0.08	3260.00	100	10 - Deviation Survey	C/S @ 3203

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
05:15	05:35	0.33	3350.00	100	2a - Drilling	Rotate
05:35	05:40	0.08	3350.00	100	10 - Deviation Survey	C/S @ 3293
05:40	06:00	0.33	3439.00	100	2a - Drilling	Rotate
06:00	06:05	0.08	3439.00	100	10 - Deviation Survey	C/S @ 3382
06:05	06:17	0.20	3529.00	100	2a - Drilling	Rotate
06:17	06:22	0.08	3529.00	100	10 - Deviation Survey	C/S @ 3472
06:22	06:40	0.30	3619.00	100	2a - Drilling	Rotate
06:40	06:45	0.08	3619.00	100	10 - Deviation Survey	C/S @ 3562
06:45	06:53	0.13	3640.00	100	2a - Drilling	Rotate
06:53	07:03	0.17	3660.00	100	2b - Drilling - Sliding	Slide @ 130R (20' / 0.17)
07:03	07:11	0.13	3708.00	100	2a - Drilling	Rotate
07:11	07:16	0.08	3708.00	100	10 - Deviation Survey	C/S @ 3651
07:16	07:25	0.15	3750.00	100	2a - Drilling	Rotate
07:25	07:40	0.25	3775.00	100	2b - Drilling - Sliding	Slide @ 110R (45 / 0.48)
07:40	07:48	0.13	3798.00	100	2a - Drilling	Rotate
07:48	07:55	0.12	3798.00	100	10 - Deviation Survey	C/S @ 3741 / SPRs / BAD SVY
07:55	08:10	0.25	3887.00	100	2a - Drilling	Rotate
08:10	08:15	0.08	3887.00	100	10 - Deviation Survey	C/S @ 3830
08:15	08:30	0.25	3978.00	100	2a - Drilling	Rotate
08:30	08:35	0.08	3978.00	100	10 - Deviation Survey	C/S @ 3921
08:35	08:55	0.33	4068.00	100	2a - Drilling	Rotate
08:55	09:00	0.08	4068.00	100	10 - Deviation Survey	C/S @ 4011
09:00	09:10	0.17	4157.00	100	2a - Drilling	Rotate
09:10	09:15	0.08	4157.00	100	10 - Deviation Survey	C/S @ 4100
09:15	09:25	0.17	4247.00	100	2a - Drilling	Rotate
09:25	09:30	0.08	4247.00	100	10 - Deviation Survey	C/S @ 4190
09:30	09:42	0.20	4336.00	100	2a - Drilling	Rotate
09:42	09:47	0.08	4336.00	100	10 - Deviation Survey	C/S @ 4279
09:47	10:00	0.22	4426.00	100	2a - Drilling	Rotate
10:00	10:05	0.08	4426.00	100	10 - Deviation Survey	C/S @ 4369
10:05	10:27	0.37	4515.00	100	2a - Drilling	Rotate
10:27	10:32	0.08	4515.00	100	10 - Deviation Survey	C/S @ 4458
10:32	10:48	0.27	4605.00	100	2a - Drilling	Rotate
10:48	10:58	0.17	4605.00	100	10 - Deviation Survey	C/S @ 4548 / DL MWD
10:58	11:10	0.20	4694.00	100	2a - Drilling	Rotate
11:10	11:15	0.08	4694.00	100	10 - Deviation Survey	C/S @ 4637
11:15	11:30	0.25	4784.00	100	2a - Drilling	Rotate
11:30	11:35	0.08	4784.00	100	10 - Deviation Survey	C/S @ 4727
11:35	11:47	0.20	4805.00	100	2a - Drilling	Rotate
11:47	11:58	0.18	4825.00	100	2b - Drilling - Sliding	Slide @ 100R (46' / 0.66)
11:58	12:05	0.12	4874.00	100	2a - Drilling	Rotate
12:05	12:10	0.08	4874.00	100	10 - Deviation Survey	C/S @ 4817

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
12:10	12:23	0.22	4964.00	100	2a - Drilling	Rotate
12:23	12:28	0.08	4964.00	100	10 - Deviation Survey	C/S @ 4907
12:28	12:43	0.25	5053.00	100	2a - Drilling	Rotate
12:43	12:48	0.08	5053.00	100	10 - Deviation Survey	C/S @ 4996
12:48	13:07	0.32	5143.00	100	2a - Drilling	Rotate
13:07	13:12	0.08	5143.00	100	10 - Deviation Survey	C/S @ 5086
13:12	13:24	0.20	5160.00	100	2a - Drilling	Rotate
13:24	13:37	0.22	5180.00	100	2b - Drilling - Sliding	Slide @ 145R
13:37	13:40	0.05	5182.00	100	2a - Drilling	Rotate
13:40	19:00	5.33	5182.00	100	8 - Rig Repair	Work on Top Drive
19:00	20:00	1.00	5182.00	100	6b - Trip Out	TOOH to shoe
20:00	00:00	4.00	5182.00	100	8 - Rig Repair	Work on Top Drive. C/O ODS traction motor.

COMMENTS

Daily: \$9,800.00

Total: \$35,300.00

WELL INFORMATION

Created On : Apr 16 2020

Daily Drilling
Report

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

CURRENT STATUS Report # 4

Date : 03/17/2020

Total Depth (ft) : 6688.00
Depth Last 24 (ft) : 1506.00
Hole Size (in) :
Slide (%) : 9.83
Rotate (%) : 90.17

Casing Depth (ft) :
Casing Diameter (in) :
Casing ID (in) :

Customer Reps :
Customer Reps :
SDS Reps : Jason Yow
SDS Reps : Dusty Prochazka
SDS Reps :

LAST SURVEY

LAST FORMATION TOP

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)	Formation Name	MD Top (ft)	TVD Top (ft)
						Brushy Canyon	5105.00	4636.10

BHA SUMMARY

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels	10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	09:30	9.50	5182.00	100	8 - Rig Repair	Work on Top Drive. C/O ODS traction motor.
09:30	11:37	2.12	5182.00	100	90 - Miscellaneous	TIH T/5182 begin drilling.
11:37	11:58	0.35	5233.00	100	2a - Drilling	Rotate
11:58	12:05	0.12	5233.00	100	10 - Deviation Survey	C/S @ 5176
12:05	12:17	0.20	5322.00	100	2a - Drilling	Rotate
12:17	12:22	0.08	5322.00	100	10 - Deviation Survey	C/S @ 5265
12:22	12:41	0.32	5412.00	100	2a - Drilling	Rotate
12:41	12:46	0.08	5412.00	100	10 - Deviation Survey	C/S @ 5355
12:46	13:02	0.27	5501.00	100	2a - Drilling	Rotate
13:02	13:07	0.08	5501.00	100	10 - Deviation Survey	C/S @ 5444

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
13:07	13:26	0.32	5536.00	100	2a - Drilling	Rotate
13:26	13:40	0.23	5561.00	100	2b - Drilling - Sliding	Slide @ 30R (25' / 0.23)
13:40	13:52	0.20	5590.00	100	2a - Drilling	Rotate
13:52	13:57	0.08	5590.00	100	10 - Deviation Survey	C/S @ 5533
13:57	14:15	0.30	5680.00	100	2a - Drilling	Rotate
14:15	14:20	0.08	5680.00	100	10 - Deviation Survey	C/S @ 5623
14:20	14:30	0.17	5700.00	100	2a - Drilling	Rotate
14:30	14:52	0.37	5735.00	100	2b - Drilling - Sliding	Slide @ 45R (60' / 0.60)
14:52	15:00	0.13	5769.00	100	2a - Drilling	Rotate
15:00	15:05	0.08	5769.00	100	10 - Deviation Survey	C/S @ 5712
15:05	15:22	0.28	5859.00	100	2a - Drilling	Rotate
15:22	15:27	0.08	5859.00	100	10 - Deviation Survey	C/S @ 5802
15:27	16:40	1.22	5859.00	100	8 - Rig Repair	Change out Swivel Packing
16:40	17:00	0.33	5949.00	100	2a - Drilling	Rotate
17:00	17:10	0.17	5949.00	100	10 - Deviation Survey	C/S @ 5892
17:10	17:15	0.08	5965.00	100	2a - Drilling	Rotate
17:15	17:45	0.50	5990.00	100	2b - Drilling - Sliding	Slide @ 30R (85' / 1.1)
17:45	17:53	0.13	6038.00	100	2a - Drilling	Rotate
17:53	17:58	0.08	6038.00	100	10 - Deviation Survey	C/S @ 5981
17:58	18:06	0.13	6055.00	100	2a - Drilling	Rotate
18:06	18:20	0.23	6070.00	100	2b - Drilling - Sliding	Slide @ 45R (100'/1.33)
18:20	18:32	0.20	6128.00	100	2a - Drilling	Rotate
18:32	18:37	0.08	6128.00	100	10 - Deviation Survey	C/S @ 6071
18:37	18:42	0.08	6134.00	100	2a - Drilling	Rotate
18:42	19:05	0.38	6144.00	100	2b - Drilling - Sliding	Slide @ HS (110 / 1.710)
19:05	19:22	0.28	6217.00	100	2a - Drilling	Rotate
19:22	19:27	0.08	6217.00	100	10 - Deviation Survey	C/S @ 6160
19:27	19:53	0.43	6307.00	100	2a - Drilling	Rotate
19:53	19:58	0.08	6307.00	100	10 - Deviation Survey	C/S @ 6250
19:58	20:01	0.05	6316.00	100	2a - Drilling	Rotate
20:01	20:40	0.65	6328.00	100	2b - Drilling - Sliding	Slide @ HS (122 / 2.36)
20:40	21:03	0.38	6397.00	100	2a - Drilling	Rotate
21:03	21:08	0.08	6397.00	100	10 - Deviation Survey	C/S @ 6340
21:08	21:10	0.03	6399.00	100	2a - Drilling	Rotate
21:10	21:40	0.50	6412.00	100	2b - Drilling - Sliding	Slide @ HS (135 / 2.86)
21:40	22:00	0.33	6487.00	100	2a - Drilling	Rotate
22:00	22:05	0.08	6487.00	100	10 - Deviation Survey	C/S @ 6430
22:05	22:35	0.50	6576.00	100	2a - Drilling	Rotate
22:35	22:40	0.08	6576.00	100	10 - Deviation Survey	C/S @ 6519
22:40	23:10	0.50	6666.00	100	2a - Drilling	Rotate
23:10	23:15	0.08	6666.00	100	10 - Deviation Survey	C/S @ 6609
23:15	23:20	0.08	6675.00	100	2a - Drilling	Rotate

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
23:20	00:00	0.67	6688.00	100	2b - Drilling - Sliding	Slide @ HS (148 / 3.53)

COMMENTS

Daily: \$9,800.00
Total: \$45,100.00

WELL INFORMATION

Created On : Apr 16 2020

Daily Drilling
Report

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

CURRENT STATUS Report # 5

Date : 03/18/2020

Total Depth (ft) : 8164.00	Casing Depth (ft) :	Customer Reps :
Depth Last 24 (ft) : 1476.00	Casing Diameter (in) :	Customer Reps :
Hole Size (in) :	Casing ID (in) :	SDS Reps : Jason Yow
Slide (%) : 13.56		SDS Reps : Dusty Prochazka
Rotate (%) : 86.44		SDS Reps :

LAST SURVEY

LAST FORMATION TOP

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)	Formation Name	MD Top (ft)	TVD Top (ft)
						2 Bone Springs	8007.00	6271.27

BHA SUMMARY

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels	10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:50	0.83	6755.00	100	2a - Drilling	Rotate
00:50	00:55	0.08	6755.00	100	10 - Deviation Survey	C/S @ 6698
00:55	01:05	0.17	6758.00	100	2a - Drilling	Rotate
01:05	02:05	1.00	6774.00	100	2b - Drilling - Sliding	Slide @ 20L (164 / 4.53)
02:05	02:50	0.75	6844.00	100	2a - Drilling	Rotate
02:50	02:55	0.08	6844.00	100	10 - Deviation Survey	C/S @ 6787
02:55	03:50	0.92	6934.00	100	2a - Drilling	Rotate
03:50	03:55	0.08	6934.00	100	10 - Deviation Survey	C/S @ 6877
03:55	04:02	0.12	6943.00	100	2a - Drilling	Rotate
04:02	04:35	0.55	6953.00	100	2b - Drilling - Sliding	Slide @ HS (174 / 5.03)

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
04:35	05:15	0.67	7024.00	100	2a - Drilling	Rotate
05:15	05:20	0.08	7024.00	100	10 - Deviation Survey	C/S @ 6967
05:20	05:23	0.05	7029.00	100	2a - Drilling	Rotate
05:23	07:00	1.62	7054.00	100	2b - Drilling - Sliding	Slide @ HS (25' / 1.62)
07:00	07:40	0.67	7113.00	100	2a - Drilling	Rotate
07:40	07:45	0.08	7113.00	100	10 - Deviation Survey	C/S @ 7056
07:45	07:52	0.12	7129.00	100	2a - Drilling	Rotate
07:52	10:00	2.13	7169.00	100	2b - Drilling - Sliding	Slide @ HS (65' / 3.75)
10:00	10:20	0.33	7203.00	100	2a - Drilling	Rotate
10:20	10:25	0.08	7203.00	100	10 - Deviation Survey	C/S @ 7146
10:25	10:55	0.50	7292.00	100	2a - Drilling	Rotate
10:55	11:00	0.08	7292.00	100	10 - Deviation Survey	C/S @ 7235
11:00	11:10	0.17	7295.00	100	2a - Drilling	Rotate
11:10	14:00	2.83	7355.00	100	2b - Drilling - Sliding	Slide @ HS (125' / 6.58)
14:00	14:25	0.42	7382.00	100	2a - Drilling	Rotate
14:25	14:30	0.08	7382.00	100	10 - Deviation Survey	C/S @ 7325
14:30	15:15	0.75	7433.00	100	2a - Drilling	Rotate
15:15	15:58	0.72	7453.00	100	2b - Drilling - Sliding	Slide @ HS (145' / 7.3)
15:58	16:10	0.20	7472.00	100	2a - Drilling	Rotate
16:10	16:15	0.08	7472.00	100	10 - Deviation Survey	C/S @ 7415
16:15	17:05	0.83	7562.00	100	2a - Drilling	Rotate
17:05	17:20	0.25	7562.00	100	7 - Service Rig	Rig Service
17:20	17:25	0.08	7562.00	100	10 - Deviation Survey	C/S @ 7505
17:25	17:55	0.50	7651.00	100	2a - Drilling	Rotate
17:55	18:00	0.08	7651.00	100	10 - Deviation Survey	C/S @ 7594
18:00	18:33	0.55	7740.00	100	2a - Drilling	Rotate
18:33	18:38	0.08	7740.00	100	10 - Deviation Survey	C/S @ 7683
18:38	19:22	0.73	7830.00	100	2a - Drilling	Rotate
19:22	19:27	0.08	7830.00	100	10 - Deviation Survey	C/S @ 7773
19:27	20:10	0.72	7919.00	100	2a - Drilling	Rotate
20:10	20:15	0.08	7919.00	100	10 - Deviation Survey	C/S @ 7862
20:15	20:55	0.67	8009.00	100	2a - Drilling	Rotate
20:55	21:00	0.08	8009.00	100	10 - Deviation Survey	C/S @ 7952
21:00	21:38	0.63	8098.00	100	2a - Drilling	Rotate
21:38	21:43	0.08	8098.00	100	10 - Deviation Survey	C/S @ 8098
21:43	21:50	0.12	8108.00	100	2a - Drilling	Rotate
21:50	23:30	1.67	8128.00	100	2b - Drilling - Sliding	Slide @ 310M (165' / 8.97)
23:30	00:00	0.50	8164.00	100	2a - Drilling	Rotate

COMMENTS

Daily: \$9,800.00

Total: \$54,900.00

WELL INFORMATION

Created On : Apr 16 2020

Daily Drilling Report

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

CURRENT STATUS Report # 6

Date : 03/19/2020

Total Depth (ft) : 9622.00
Depth Last 24 (ft) : 1458.00
Hole Size (in) :
Slide (%) : 1.74
Rotate (%) : 98.26

Casing Depth (ft) :
Casing Diameter (in) :
Casing ID (in) :

Customer Reps :
Customer Reps :
SDS Reps : Jason Yow
SDS Reps : Dusty Prochazka
SDS Reps :

LAST SURVEY

LAST FORMATION TOP

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)	Formation Name	MD Top (ft)	TVD Top (ft)
						2 Bone Springs	8007.00	6271.27

BHA SUMMARY

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels	10 sec	10 Min	30 sec	30 min	(lhf2)
Oil Based Mud	9.65	55.00	14.00	8		9.00	14.00		16.00	

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH
			13.00		77.00	6.80	

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:35	0.58	8188.00	100	2a - Drilling	Rotate
00:35	00:40	0.08	8188.00	100	10 - Deviation Survey	C/S @ 8131
00:40	02:15	1.58	8277.00	100	2a - Drilling	Rotate
02:15	02:20	0.08	8277.00	100	10 - Deviation Survey	C/S @ 8220
02:20	03:33	1.22	8375.00	100	2a - Drilling	Rotate
03:33	05:00	1.45	8400.00	100	2b - Drilling - Sliding	Slide @ 300M (190 / 10.5)
05:00	05:48	0.80	8457.00	100	2a - Drilling	Rotate
05:48	05:55	0.12	8457.00	100	10 - Deviation Survey	C/S @ 8400
05:55	07:10	1.25	8547.00	100	2a - Drilling	Rotate
07:10	07:15	0.08	8547.00	100	10 - Deviation Survey	C/S @ 8490

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
07:15	08:25	1.17	8636.00	100	2a - Drilling	Rotate
08:25	08:30	0.08	8636.00	100	10 - Deviation Survey	C/S @ 8579
08:30	09:37	1.12	8726.00	100	2a - Drilling	Rotate
09:37	09:42	0.08	8726.00	100	10 - Deviation Survey	C/S @ 8669
09:42	10:40	0.97	8815.00	100	2a - Drilling	Rotate
10:40	10:45	0.08	8815.00	100	10 - Deviation Survey	C/S @ 8758
10:45	11:30	0.75	8905.00	100	2a - Drilling	Rotate
11:30	11:35	0.08	8905.00	100	10 - Deviation Survey	C/S @ 8848
11:35	12:35	1.00	8994.00	100	2a - Drilling	Rotate
12:35	12:40	0.08	8994.00	100	10 - Deviation Survey	C/S @ 8937
12:40	14:00	1.33	9084.00	100	2a - Drilling	Rotate
14:00	14:05	0.08	9084.00	100	10 - Deviation Survey	C/S @ 9027
14:05	15:25	1.33	9174.00	100	2a - Drilling	Rotate
15:25	15:30	0.08	9174.00	100	10 - Deviation Survey	C/S @ 9117
15:30	16:45	1.25	9263.00	100	2a - Drilling	Rotate
16:45	17:00	0.25	9263.00	100	7 - Service Rig	Rig Service
17:00	17:05	0.08	9263.00	100	10 - Deviation Survey	C/S @ 9206
17:05	18:15	1.17	9353.00	100	2a - Drilling	Rotate
18:15	18:20	0.08	9353.00	100	10 - Deviation Survey	C/S @ 9296
18:20	19:25	1.08	9442.00	100	2a - Drilling	Rotate
19:25	19:30	0.08	9442.00	100	10 - Deviation Survey	C/S @ 9385
19:30	20:45	1.25	9532.00	100	2a - Drilling	Rotate
20:45	20:50	0.08	9532.00	100	10 - Deviation Survey	C/S @ 9475
20:50	22:00	1.17	9622.00	100	2a - Drilling	Rotate
22:00	22:05	0.08	9622.00	100	10 - Deviation Survey	Svy @ 9565
22:05	22:20	0.25	9622.00	100	5 - Circulate	Circulate
22:20	22:55	0.58	9622.00	100	90 - Miscellaneous	Flow check
22:55	23:30	0.58	9622.00	100	5 - Circulate	Circulate and pump slug
23:30	00:00	0.50	9622.00	100	6b - Trip Out	TOOH

COMMENTS

Daily: \$9,800.00

Total: \$64,700.00

WELL INFORMATION

Created On : Apr 16 2020

Daily Drilling Report

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

CURRENT STATUS Report # 7

Date : 03/20/2020

Total Depth (ft) : 10005.00	Casing Depth (ft) :	Customer Reps :
Depth Last 24 (ft) : 383.00	Casing Diameter (in) :	Customer Reps :
Hole Size (in) :	Casing ID (in) :	SDS Reps : Jason Yow
Slide (%) : 92.95		SDS Reps : Dusty Prochazka
Rotate (%) : 7.05		SDS Reps :

LAST SURVEY

LAST FORMATION TOP

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)	Formation Name	MD Top (ft)	TVD Top (ft)
						WolfCamp X	9994.00	6748.16

BHA SUMMARY

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels	10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	03:30	3.50	9622.00	100	6e - Trip Out (at Surface)	TOOH
03:30	04:15	0.75	9622.00	100	6c - PU/LD BHA	L/D BHA 100
04:15	05:00	0.75	9622.00	200	6c - PU/LD BHA	P/U BHA 200
05:00	06:45	1.75	9622.00	200	6a - Trip In	TIH
06:45	08:05	1.33	9622.00	200	9 - Cut Drill Line	Slip and cut drill line
08:05	12:00	3.92	9622.00	200	6a - Trip In	TIH
12:00	12:45	0.75	9622.00	200	90 - Miscellaneous	Relog Gamma F/ 9530 - T/ 9619
12:45	15:30	2.75	9709.00	200	2b - Drilling - Sliding	Slide @ HS (87' / 2.75)
15:30	15:35	0.08	9709.00	200	10 - Deviation Survey	C/S @ 9655
15:35	18:05	2.50	9799.00	200	2b - Drilling - Sliding	Slide @ HS (186 / 5.25)

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
18:05	18:10	0.08	9799.00	200	10 - Deviation Survey	C/S @ 9745
18:10	20:55	2.75	9888.00	200	2b - Drilling - Sliding	Slide @ HS (275 / 8)
20:55	21:00	0.08	9888.00	200	10 - Deviation Survey	C/S @ 9834
21:00	23:20	2.33	9978.00	200	2b - Drilling - Sliding	Slide @ HS (365 / 10.33)
23:20	23:25	0.08	9978.00	200	10 - Deviation Survey	C/S @ 9924
23:25	00:00	0.58	10005.00	200	2a - Drilling	Slide @ HS (392 / 10.91)

COMMENTS

Daily: \$20,500.00

Total: \$85,200.00

WELL INFORMATION

Created On : Apr 16 2020

Daily Drilling Report

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

CURRENT STATUS Report # 8

Date : 03/21/2020

Total Depth (ft) : 10696.00	Casing Depth (ft) : 3028.00	Customer Reps :
Depth Last 24 (ft) : 691.00	Casing Diameter (in) : 9.625	Customer Reps :
Hole Size (in) : 0.000	Casing ID (in) : 8.921	SDS Reps : Jason Yow
Slide (%) : 68.79		SDS Reps : Dusty Prochazka
Rotate (%) : 31.21		SDS Reps :

LAST SURVEY

LAST FORMATION TOP

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)	Formation Name	MD Top (ft)	TVD Top (ft)
						WC XY	10019.00	6750.52

BHA SUMMARY

Well: BlueSteelFed12H Run: 0300 - 10976.72 ft; 8 1/2" GTI65DO HDBS PDC, 6 3/4" iCruise No Flex, 6 3/4" TM HOC, 6 3/4" Filter Sub, 6 3/4" NM Pony Flex Collar, 7" Nitroforce Lobe 6:7-6.5 Stg, 1 STD 5" HWDP, 9 STD 5" Drill Pipe, 8 5/8" Drill-N-Ream, 104 STD 5" Drill pipe, 7 STD 5" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lbf2)	Gels	10 sec	10 Min	30 sec	30 min	(lbf2)
Oil Based Mud	9.90	62.00	15.00	8		9.00	13.00		16.00	

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH
			14.00		77.00		

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:51	0.85	10068.00	200	2b - Drilling - Sliding	Slide @ HS (451 / 11.76)
00:51	00:56	0.08	10068.00	200	10 - Deviation Survey	C/S @ 10014
00:56	02:45	1.82	10158.00	200	2b - Drilling - Sliding	Slide @ HS (541 / 13.58)
02:45	02:50	0.08	10158.00	200	10 - Deviation Survey	C/S @ 10104
02:50	04:09	1.32	10248.00	200	2b - Drilling - Sliding	Slide @ HS (631 / 14.9)
04:09	04:14	0.08	10248.00	200	10 - Deviation Survey	C/S @ 10194
04:14	05:50	1.60	10338.00	200	2b - Drilling - Sliding	Slide @ HS (90' / 1.6)
05:50	06:00	0.17	10338.00	200	10 - Deviation Survey	C/S @ 10284

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
06:00	07:00	1.00	10427.00	200	2b - Drilling - Sliding	Slide @ HS (179' / 2.6)
07:00	07:10	0.17	10427.00	200	10 - Deviation Survey	C/S @10373
07:10	08:15	1.08	10500.00	200	2b - Drilling - Sliding	Slide 58' HS / Slide 15' 90R (252' / 3.68)
08:15	08:35	0.33	10516.00	200	2a - Drilling	Rotate
08:35	08:40	0.08	10516.00	200	10 - Deviation Survey	C/S @ 10462
08:40	09:50	1.17	10606.00	200	2a - Drilling	Rotate
09:50	09:55	0.08	10606.00	200	10 - Deviation Survey	C/S @ 10552
09:55	10:50	0.92	10696.00	200	2a - Drilling	Rotate
10:50	10:55	0.08	10696.00	200	10 - Deviation Survey	Svy @ 10642
10:55	11:30	0.58	10696.00	200	90 - Miscellaneous	Flow Check
11:30	12:25	0.92	10696.00	200	5 - Circulate	Circulate and condition wellbore
12:25	17:00	4.58	10696.00	200	6b - Trip Out	POOH
17:00	17:15	0.25	10696.00	200	6e - Trip Out (at Surface)	JSA L/D BHA
17:15	18:00	0.75	10696.00	200	6c - PU/LD BHA	L/D BHA
18:00	18:15	0.25	10696.00	200	6c - PU/LD BHA	JSA P/U iCruise
18:15	19:00	0.75	10696.00	300	6c - PU/LD BHA	P/U BHA - iCruise, TM Collar, Filter Sub, Flex Pony
19:00	19:30	0.50	10696.00	300	90 - Miscellaneous	Test iCruise
19:30	19:45	0.25	10696.00	300	6c - PU/LD BHA	P/U MARs Motor
19:45	23:00	3.25	10696.00	300	6a - Trip In	TIH with RSS @ 110' per minute.
23:00	00:00	1.00	10696.00	300	3a - Reaming	Ream tight spots 6015 - 6730

COMMENTS

Daily: \$40,800.00

Total: \$126,000.00

WELL INFORMATION

Created On : Apr 16 2020

Daily Drilling Report

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

CURRENT STATUS Report # 9

Date : 03/22/2020

Total Depth (ft) : 12187.00	Casing Depth (ft) : 3028.00	Customer Reps :
Depth Last 24 (ft) : 1491.00	Casing Diameter (in) : 9.625	Customer Reps :
Hole Size (in) : 0.000	Casing ID (in) : 8.921	SDS Reps : Jason Yow
Slide (%) : 0.00		SDS Reps : Dusty Prochazka
Rotate (%) : 100.00		SDS Reps :

LAST SURVEY

LAST FORMATION TOP

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)	Formation Name	MD Top (ft)	TVD Top (ft)
12123.00	90.74	359.65	6795.03	8252.54	0.07	WC XY	10019.00	6750.52

BHA SUMMARY

Well: BlueSteelFed12H Run: 0300 - 10976.72 ft; 8 1/2" GTI65DO HDBS PDC, 6 3/4" iCruise No Flex, 6 3/4" TM HOC, 6 3/4" Filter Sub, 6 3/4" NM Pony Flex Collar, 7" Nitroforce Lobe 6:7-6.5 Stg, 1 STD 5" HWDP, 9 STD 5" Drill Pipe, 8 5/8" Drill-N-Ream, 104 STD 5" Drill pipe, 7 STD 5" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels	10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:30	0.50	10696.00	300	6a - Trip In	TIH to 7050
00:30	00:55	0.42	10696.00	300	5 - Circulate	Perform perturbation test
00:55	01:35	0.67	10696.00	300	35 - Stuck Pipe	Stuck at 7050
01:35	03:05	1.50	10696.00	300	6a - Trip In	TIH to 9645
03:05	03:40	0.58	10696.00	300	35 - Stuck Pipe	Stuck @ 9645
03:40	07:25	3.75	10696.00	300	3a - Reaming	Ream thru curve
07:25	08:30	1.08	10696.00	300	5 - Circulate	Relog F/ 10548 - T/ 10696
08:30	08:40	0.17	10696.00	300	30f - GeoSpan Up/Down Link	Down Link RSS

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
08:40	10:00	1.33	10791.00	300	2a - Drilling	Rotate
10:00	10:05	0.08	10791.00	300	10 - Deviation Survey	C/S @ 10774
10:05	11:20	1.25	10883.00	300	2a - Drilling	Rotate
11:20	11:25	0.08	10883.00	300	10 - Deviation Survey	C/S @ 10866
11:25	12:15	0.83	10976.00	300	2a - Drilling	Rotate
12:15	12:20	0.08	10976.00	300	10 - Deviation Survey	C/S @ 10959
12:20	13:00	0.67	11066.00	300	2a - Drilling	Rotate
13:00	13:05	0.08	11066.00	300	10 - Deviation Survey	C/S @ 11049
13:05	13:40	0.58	11155.00	300	2a - Drilling	Rotate
13:40	13:45	0.08	11155.00	300	10 - Deviation Survey	C/S @ 11138
13:45	14:40	0.92	11244.00	300	2a - Drilling	Rotate
14:40	14:45	0.08	11244.00	300	10 - Deviation Survey	C/S @ 11227
14:45	15:45	1.00	11334.00	300	2a - Drilling	Rotate
15:45	15:50	0.08	11334.00	300	10 - Deviation Survey	C/S @ 11317
15:50	16:50	1.00	11423.00	300	2a - Drilling	Rotate
16:50	17:00	0.17	11423.00	300	7 - Service Rig	Rig Service
17:00	17:05	0.08	11423.00	300	10 - Deviation Survey	C/S @ 11406
17:05	17:55	0.83	11513.00	300	2a - Drilling	Rotate
17:55	18:00	0.08	11513.00	300	10 - Deviation Survey	C/S @ 11496
18:00	18:35	0.58	11603.00	300	2a - Drilling	Rotate
18:35	18:40	0.08	11603.00	300	10 - Deviation Survey	C/S @ 11586
18:40	19:15	0.58	11692.00	300	2a - Drilling	Rotate
19:15	19:20	0.08	11692.00	300	10 - Deviation Survey	C/S @ 11675
19:20	19:55	0.58	11782.00	300	2a - Drilling	Rotate
19:55	20:00	0.08	11782.00	300	10 - Deviation Survey	C/S @ 11765
20:00	20:33	0.55	11871.00	300	2a - Drilling	Rotate
20:33	20:38	0.08	11871.00	300	10 - Deviation Survey	C/S @ 11854
20:38	21:30	0.87	11961.00	300	2a - Drilling	Rotate
21:30	21:35	0.08	11961.00	300	10 - Deviation Survey	C/S @ 11944
21:35	22:25	0.83	12051.00	300	2a - Drilling	Rotate
22:25	22:30	0.08	12051.00	300	10 - Deviation Survey	C/S @ 12034
22:30	23:25	0.92	12140.00	300	2a - Drilling	Rotate
23:25	23:30	0.08	12140.00	300	10 - Deviation Survey	C/S @ 12140
23:30	00:00	0.50	12187.00	300	2a - Drilling	Rotate

COMMENTS

Daily: \$26,838.00

Total: \$152,838.00

WELL INFORMATION

Created On : Apr 16 2020

Daily Drilling Report

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

CURRENT STATUS Report # 10 Date : 03/23/2020

Total Depth (ft) : 14520.00	Casing Depth (ft) : 3028.00	Customer Reps :
Depth Last 24 (ft) : 2333.00	Casing Diameter (in) : 9.625	Customer Reps :
Hole Size (in) : 0.000	Casing ID (in) : 8.921	SDS Reps : Jason Yow
Slide (%) : 0.00		SDS Reps : Dusty Prochazka
Rotate (%) : 100.00		SDS Reps :

LAST SURVEY

LAST FORMATION TOP

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)	Formation Name	MD Top (ft)	TVD Top (ft)
14449.00	89.67	359.85	6795.22	10577.42	0.07	WC XY	10019.00	6750.52

BHA SUMMARY

Well: BlueSteelFed12H Run: 0300 - 10976.72 ft; 8 1/2" GTI65DO HDBS PDC, 6 3/4" iCruise No Flex, 6 3/4" TM HOC, 6 3/4" Filter Sub, 6 3/4" NM Pony Flex Collar, 7" Nitroforce Lobe 6:7-6.5 Stg, 1 STD 5" HWDP, 9 STD 5" Drill Pipe, 8 5/8" Drill-N-Ream, 104 STD 5" Drill pipe, 7 STD 5" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lbf2)	Gels	10 sec	10 Min	30 sec	30 min	(lbf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:30	0.50	12230.00	300	2a - Drilling	Rotate
00:30	00:35	0.08	12230.00	300	10 - Deviation Survey	C/S @ 12213
00:35	01:40	1.08	12319.00	300	2a - Drilling	Rotate
01:40	01:45	0.08	12319.00	300	10 - Deviation Survey	C/S @ 12302
01:45	02:30	0.75	12409.00	300	2a - Drilling	Rotate
02:30	02:35	0.08	12409.00	300	10 - Deviation Survey	C/S @ 12392
02:35	03:10	0.58	12498.00	300	2a - Drilling	Rotate
03:10	03:15	0.08	12498.00	300	10 - Deviation Survey	C/S @ 12481

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
03:15	04:00	0.75	12588.00	300	2a - Drilling	Rotate
04:00	04:05	0.08	12588.00	300	10 - Deviation Survey	C/S @ 12571
04:05	04:45	0.67	12678.00	300	2a - Drilling	Rotate
04:45	04:50	0.08	12678.00	300	10 - Deviation Survey	C/S @ 12661
04:50	05:40	0.83	12767.00	300	2a - Drilling	Rotate
05:40	05:45	0.08	12767.00	300	10 - Deviation Survey	C/S @ 12750
05:45	07:05	1.33	12856.00	300	2a - Drilling	Rotate
07:05	07:10	0.08	12856.00	300	10 - Deviation Survey	C/S @ 12839
07:10	08:05	0.92	12946.00	300	2a - Drilling	Rotate
08:05	08:10	0.08	12946.00	300	10 - Deviation Survey	C/S @ 12929
08:10	08:55	0.75	13035.00	300	2a - Drilling	Rotate
08:55	09:00	0.08	13035.00	300	10 - Deviation Survey	C/S @ 13018
09:00	09:15	0.25	13035.00	300	7 - Service Rig	Rig Service
09:15	09:55	0.67	13125.00	300	2a - Drilling	Rotate
09:55	10:00	0.08	13125.00	300	10 - Deviation Survey	C/S @ 13108
10:00	10:32	0.53	13214.00	300	2a - Drilling	Rotate
10:32	10:37	0.08	13214.00	300	10 - Deviation Survey	C/S @ 13197
10:37	11:12	0.58	13304.00	300	2a - Drilling	Rotate
11:12	11:17	0.08	13304.00	300	10 - Deviation Survey	C/S @ 13287
11:17	11:50	0.55	13393.00	300	2a - Drilling	Rotate
11:50	11:55	0.08	13393.00	300	10 - Deviation Survey	C/S @ 13376
11:55	12:50	0.92	13483.00	300	2a - Drilling	Rotate
12:50	13:00	0.17	13483.00	300	10 - Deviation Survey	C/S @ 13466
13:00	14:20	1.33	13572.00	300	2a - Drilling	Rotate
14:20	14:25	0.08	13572.00	300	10 - Deviation Survey	C/S @ 13562
14:25	15:24	0.98	13661.00	300	2a - Drilling	Rotate
15:24	15:29	0.08	13661.00	300	10 - Deviation Survey	C/S @ 13644
15:29	16:20	0.85	13750.00	300	2a - Drilling	Rotate
16:20	16:25	0.08	13750.00	300	10 - Deviation Survey	C/S @ 13733
16:25	17:10	0.75	13840.00	300	2a - Drilling	Rotate
17:10	17:15	0.08	13840.00	300	10 - Deviation Survey	C/S @ 13823
17:15	18:20	1.08	13929.00	300	2a - Drilling	Rotate
18:20	18:25	0.08	13929.00	300	10 - Deviation Survey	C/S @ 13912
18:25	19:22	0.95	14019.00	300	2a - Drilling	Rotate
19:22	19:27	0.08	14019.00	300	10 - Deviation Survey	C/S @ 14002
19:27	19:52	0.42	14108.00	300	2a - Drilling	Rotate
19:52	19:57	0.08	14108.00	300	10 - Deviation Survey	C/S @ 14091
19:57	20:52	0.92	14198.00	300	2a - Drilling	Rotate
20:52	20:57	0.08	14198.00	300	10 - Deviation Survey	C/S @ 14181
20:57	22:00	1.05	14287.00	300	2a - Drilling	Rotate
22:00	22:05	0.08	14287.00	300	10 - Deviation Survey	C/S @ 14270
22:05	22:30	0.42	14377.00	300	2a - Drilling	Rotate

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
22:30	22:35	0.08	14377.00	300	10 - Deviation Survey	C/S @ 14360
22:35	23:24	0.82	14466.00	300	2a - Drilling	Rotate
23:24	23:29	0.08	14466.00	300	10 - Deviation Survey	C/S @ 14449
23:29	00:00	0.52	14520.00	300	2a - Drilling	Rotate

COMMENTS

Daily: \$41,994.00

Total: \$194,832.00

WELL INFORMATION

Created On : Apr 16 2020

Daily Drilling Report

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

CURRENT STATUS Report # 11 Date : 03/24/2020

Total Depth (ft) : 16745.00	Casing Depth (ft) : 3028.00	Customer Reps :
Depth Last 24 (ft) : 2225.00	Casing Diameter (in) : 9.625	Customer Reps :
Hole Size (in) : 0.000	Casing ID (in) : 8.921	SDS Reps : Jason Yow
Slide (%) : 0.00		SDS Reps : Dusty Prochazka
Rotate (%) : 100.00		SDS Reps :

LAST SURVEY

LAST FORMATION TOP

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)	Formation Name	MD Top (ft)	TVD Top (ft)
16690.00	90.85	1.21	6794.85	12817.81	0.07	WC XY	10019.00	6750.52

BHA SUMMARY

Well: BlueSteelFed12H Run: 0300 - 10976.72 ft; 8 1/2" GTI65DO HDBS PDC, 6 3/4" iCruise No Flex, 6 3/4" TM HOC, 6 3/4" Filter Sub, 6 3/4" NM Pony Flex Collar, 7" Nitroforce Lobe 6:7-6.5 Stg, 1 STD 5" HWDP, 9 STD 5" Drill Pipe, 8 5/8" Drill-N-Ream, 104 STD 5" Drill pipe, 7 STD 5" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lbf2)	Gels	10 sec	10 Min	30 sec	30 min	(lbf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:15	0.25	14556.00	300	2a - Drilling	Rotate
00:15	00:20	0.08	14556.00	300	10 - Deviation Survey	C/S @ 14539
00:20	01:05	0.75	14646.00	300	2a - Drilling	Rotate
01:05	01:10	0.08	14646.00	300	10 - Deviation Survey	C/S @ 14629
01:10	01:50	0.67	14735.00	300	2a - Drilling	Rotate
01:50	01:55	0.08	14735.00	300	10 - Deviation Survey	C/S @ 14718
01:55	02:30	0.58	14825.00	300	2a - Drilling	Rotate
02:30	02:35	0.08	14825.00	300	10 - Deviation Survey	C/S @ 14808

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
02:35	03:20	0.75	14914.00	300	2a - Drilling	Rotate
03:20	03:25	0.08	14914.00	300	10 - Deviation Survey	C/S @ 14897
03:25	04:00	0.58	15003.00	300	2a - Drilling	Rotate
04:00	04:05	0.08	15003.00	300	10 - Deviation Survey	C/S @ 14986
04:05	04:40	0.58	15095.00	300	2a - Drilling	Rotate
04:40	04:45	0.08	15095.00	300	10 - Deviation Survey	C/S @ 15078
04:45	05:20	0.58	15184.00	300	2a - Drilling	Rotate
05:20	05:25	0.08	15184.00	300	10 - Deviation Survey	C/S @ 15167
05:25	06:05	0.67	15273.00	300	2a - Drilling	Rotate
06:05	06:10	0.08	15273.00	300	10 - Deviation Survey	C/S @ 15256
06:10	06:50	0.67	15363.00	300	2a - Drilling	Rotate
06:50	06:55	0.08	15363.00	300	10 - Deviation Survey	C/S @ 15346
06:55	07:38	0.72	15453.00	300	2a - Drilling	Rotate
07:38	07:43	0.08	15453.00	300	10 - Deviation Survey	C/S @ 15436
07:43	08:15	0.53	15542.00	300	2a - Drilling	Rotate
08:15	08:20	0.08	15542.00	300	10 - Deviation Survey	C/S @ 15525
08:20	08:45	0.42	15582.00	300	2a - Drilling	Rotate
08:45	12:00	3.25	15582.00	300	8 - Rig Repair	Work on MP / Pulsation Dampner
12:00	12:48	0.80	15632.00	300	2a - Drilling	Rotate
12:48	12:53	0.08	15632.00	300	10 - Deviation Survey	C/S @ 15615
12:53	13:35	0.70	15722.00	300	2a - Drilling	Rotate
13:35	14:00	0.42	15722.00	300	8 - Rig Repair	Work on MP 3
14:00	14:05	0.08	15722.00	300	10 - Deviation Survey	C/S @ 15705
14:05	14:40	0.58	15811.00	300	2a - Drilling	Rotate
14:40	14:45	0.08	15811.00	300	10 - Deviation Survey	C/S @ 15794
14:45	15:10	0.42	15901.00	300	2a - Drilling	Rotate
15:10	15:15	0.08	15901.00	300	10 - Deviation Survey	C/S @ 15884
15:15	15:50	0.58	15991.00	300	2a - Drilling	Rotate
15:50	15:55	0.08	15991.00	300	10 - Deviation Survey	C/S @ 15974
15:55	16:25	0.50	16080.00	300	2a - Drilling	Rotate
16:25	16:40	0.25	16080.00	300	8 - Rig Repair	Work on MP 3
16:40	16:45	0.08	16080.00	300	10 - Deviation Survey	C/S @ 16063
16:45	17:35	0.83	16170.00	300	2a - Drilling	Rotate
17:35	18:00	0.42	16170.00	300	10 - Deviation Survey	C/S @ 16153
18:00	18:50	0.83	16259.00	300	2a - Drilling	Rotate
18:50	18:55	0.08	16259.00	300	10 - Deviation Survey	C/S @ 16242
18:55	19:50	0.92	16349.00	300	2a - Drilling	Rotate
19:50	19:55	0.08	16349.00	300	10 - Deviation Survey	C/S @ 16332
19:55	20:40	0.75	16438.00	300	2a - Drilling	Rotate
20:40	20:45	0.08	16438.00	300	10 - Deviation Survey	C/S @ 16421
20:45	21:30	0.75	16528.00	300	2a - Drilling	Rotate
21:30	21:35	0.08	16528.00	300	10 - Deviation Survey	C/S @ 16511

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
21:35	22:20	0.75	16617.00	300	2a - Drilling	Rotate
22:20	22:25	0.08	16617.00	300	10 - Deviation Survey	C/S @ 16600
22:25	23:20	0.92	16707.00	300	2a - Drilling	Rotate
23:20	23:25	0.08	16707.00	300	10 - Deviation Survey	C/S @ 16690
23:25	00:00	0.58	16745.00	300	2a - Drilling	Rotate

COMMENTS

Daily: \$40,050.00

Total: \$234,882.00

WELL INFORMATION

Created On : Apr 16 2020

Daily Drilling Report

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

CURRENT STATUS Report # 12 Date : 03/25/2020

Total Depth (ft) : 18945.00	Casing Depth (ft) : 3028.00	Customer Reps :
Depth Last 24 (ft) : 2200.00	Casing Diameter (in) : 9.625	Customer Reps :
Hole Size (in) : 0.000	Casing ID (in) : 8.921	SDS Reps : Jason Yow
Slide (%) : 0.00		SDS Reps : Dusty Prochazka
Rotate (%) : 100.00		SDS Reps :

LAST SURVEY

LAST FORMATION TOP

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)	Formation Name	MD Top (ft)	TVD Top (ft)
18928.00	91.71	359.62	6796.42	15055.46	0.07	WC XY	10019.00	6750.52

BHA SUMMARY

Well: BlueSteelFed12H Run: 0300 - 10976.72 ft; 8 1/2" GTI65DO HDBS PDC, 6 3/4" iCruise No Flex, 6 3/4" TM HOC, 6 3/4" Filter Sub, 6 3/4" NM Pony Flex Collar, 7" Nitroforce Lobe 6:7-6.5 Stg, 1 STD 5" HWDP, 9 STD 5" Drill Pipe, 8 5/8" Drill-N-Ream, 104 STD 5" Drill pipe, 7 STD 5" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lbf2)	Gels	10 sec	10 Min	30 sec	30 min	(lbf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:20	0.33	16797.00	300	2a - Drilling	Rotate
00:20	00:25	0.08	16797.00	300	10 - Deviation Survey	C/S @ 16780
00:25	01:15	0.83	16886.00	300	2a - Drilling	Rotate
01:15	01:20	0.08	16886.00	300	10 - Deviation Survey	C/S @ 16869
01:20	02:05	0.75	16976.00	300	2a - Drilling	Rotate
02:05	02:10	0.08	16976.00	300	10 - Deviation Survey	C/S @ 16959
02:10	02:45	0.58	17065.00	300	2a - Drilling	Rotate
02:45	02:50	0.08	17065.00	300	10 - Deviation Survey	C/S @ 17048

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
02:50	03:35	0.75	17155.00	300	2a - Drilling	Rotate
03:35	03:40	0.08	17155.00	300	10 - Deviation Survey	C/S @ 17138
03:40	04:15	0.58	17244.00	300	2a - Drilling	Rotate
04:15	04:20	0.08	17244.00	300	10 - Deviation Survey	C/S @ 17227
04:20	05:10	0.83	17334.00	300	2a - Drilling	Rotate
05:10	05:15	0.08	17334.00	300	10 - Deviation Survey	C/S @ 17317
05:15	05:55	0.67	17423.00	300	2a - Drilling	Rotate
05:55	06:00	0.08	17423.00	300	10 - Deviation Survey	C/S @ 17406
06:00	06:40	0.67	17512.00	300	2a - Drilling	Rotate
06:40	06:45	0.08	17512.00	300	10 - Deviation Survey	C/S @ 17495
06:45	07:25	0.67	17601.00	300	2a - Drilling	Rotate
07:25	07:30	0.08	17601.00	300	10 - Deviation Survey	C/S @ 17584
07:30	08:05	0.58	17691.00	300	2a - Drilling	Rotate
08:05	08:10	0.08	17691.00	300	10 - Deviation Survey	C/S @ 17674
08:10	08:45	0.58	17780.00	300	2a - Drilling	Rotate
08:45	08:55	0.17	17780.00	300	10 - Deviation Survey	C/S @ 17763 / SPRs
08:55	09:30	0.58	17870.00	300	2a - Drilling	Rotate
09:30	09:35	0.08	17870.00	300	10 - Deviation Survey	C/S @ 17853
09:35	10:30	0.92	17959.00	300	2a - Drilling	Rotate
10:30	10:35	0.08	17959.00	300	10 - Deviation Survey	C/S @ 17942
10:35	11:35	1.00	18049.00	300	2a - Drilling	Rotate
11:35	11:40	0.08	18049.00	300	10 - Deviation Survey	C/S @ 18032
11:40	12:25	0.75	18139.00	300	2a - Drilling	Rotate
12:25	13:05	0.67	18139.00	300	7 - Service Rig	Rig Service
13:05	13:10	0.08	18139.00	300	10 - Deviation Survey	C/S @ 18122
13:10	13:55	0.75	18228.00	300	2a - Drilling	Rotate
13:55	14:00	0.08	18228.00	300	10 - Deviation Survey	C/S @ 18211
14:00	14:40	0.67	18318.00	300	2a - Drilling	Rotate
14:40	14:45	0.08	18318.00	300	10 - Deviation Survey	C/S @ 18301
14:45	15:30	0.75	18407.00	300	2a - Drilling	Rotate
15:30	15:35	0.08	18407.00	300	10 - Deviation Survey	C/S @ 18390
15:35	16:50	1.25	18497.00	300	2a - Drilling	Rotate
16:50	17:00	0.17	18497.00	300	10 - Deviation Survey	C/S @ 18480
17:00	17:50	0.83	18586.00	300	2a - Drilling	Rotate
17:50	18:00	0.17	18586.00	300	10 - Deviation Survey	C/S @ 18569
18:00	19:20	1.33	18676.00	300	2a - Drilling	Rotate
19:20	19:35	0.25	18676.00	300	10 - Deviation Survey	C/S @ 18659
19:35	21:00	1.42	18765.00	300	2a - Drilling	Rotate
21:00	21:05	0.08	18765.00	300	10 - Deviation Survey	C/S @ 18748
21:05	22:45	1.67	18855.00	300	2a - Drilling	Rotate
22:45	22:55	0.17	18855.00	300	10 - Deviation Survey	C/S @ 18838
22:55	23:50	0.92	18945.00	300	2a - Drilling	Rotate

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
23:50	00:00	0.17	18945.00	300	10 - Deviation Survey	C/S @ 18928

COMMENTS

Daily: \$39,600.00

Total: \$274,482.00

WELL INFORMATION

Created On : Apr 16 2020

Daily Drilling
Report

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

CURRENT STATUS Report # 13

Date : 03/26/2020

Total Depth (ft) : 20267.00	Casing Depth (ft) : 3028.00	Customer Reps :
Depth Last 24 (ft) : 1322.00	Casing Diameter (in) : 9.625	Customer Reps :
Hole Size (in) : 0.000	Casing ID (in) : 8.921	SDS Reps : Jason Yow
Slide (%) : 0.00		SDS Reps : Dusty Prochazka
Rotate (%) : 100.00		SDS Reps :

LAST SURVEY

LAST FORMATION TOP

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)	Formation Name	MD Top (ft)	TVD Top (ft)
20092.00	90.24	0.91	6788.64	16219.05	0.07	WC XY	10019.00	6750.52

BHA SUMMARY

Well: BlueSteelFed12H Run: 0300 - 10976.72 ft; 8 1/2" GTI65DO HDBS PDC, 6 3/4" iCruise No Flex, 6 3/4" TM HOC, 6 3/4" Filter Sub, 6 3/4" NM Pony Flex Collar, 7" Nitroforce Lobe 6:7-6.5 Stg, 1 STD 5" HWDP, 9 STD 5" Drill Pipe, 8 5/8" Drill-N-Ream, 104 STD 5" Drill pipe, 7 STD 5" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lbf2)	Gels	10 sec	10 Min	30 sec	30 min	(lbf2)
	10.40	58.00	14.00	12		10.00	18.00		20.00	

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH
			9.17		66.00	6.80	

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:55	0.92	19034.00	300	2a - Drilling	Rotate
00:55	01:00	0.08	19034.00	300	10 - Deviation Survey	C/S @ 19017
01:00	01:50	0.83	19123.00	300	2a - Drilling	Rotate
01:50	01:55	0.08	19123.00	300	10 - Deviation Survey	C/S @ 19106
01:55	02:55	1.00	19213.00	300	2a - Drilling	Rotate
02:55	03:00	0.08	19213.00	300	10 - Deviation Survey	C/S @ 19196
03:00	03:45	0.75	19302.00	300	2a - Drilling	Rotate
03:45	03:50	0.08	19302.00	300	10 - Deviation Survey	C/S @ 19285

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
03:50	04:25	0.58	19393.00	300	2a - Drilling	Rotate
04:25	04:30	0.08	19393.00	300	10 - Deviation Survey	C/S @ 19376
04:30	05:35	1.08	19483.00	300	2a - Drilling	Rotate
05:35	05:45	0.17	19483.00	300	10 - Deviation Survey	C/S @ 19466
05:45	06:25	0.67	19572.00	300	2a - Drilling	Rotate
06:25	06:30	0.08	19572.00	300	10 - Deviation Survey	C/S @ 19555
06:30	07:20	0.83	19662.00	300	2a - Drilling	Rotate
07:20	07:25	0.08	19662.00	300	10 - Deviation Survey	C/S @ 19645
07:25	08:00	0.58	19751.00	300	2a - Drilling	Rotate
08:00	08:05	0.08	19751.00	300	10 - Deviation Survey	C/S @ 19734
08:05	08:40	0.58	19841.00	300	2a - Drilling	Rotate
08:40	08:45	0.08	19841.00	300	10 - Deviation Survey	C/S @ 19824
08:45	09:30	0.75	19930.00	300	2a - Drilling	Rotate
09:30	09:35	0.08	19930.00	300	10 - Deviation Survey	C/S @ 19913
09:35	10:25	0.83	20020.00	300	2a - Drilling	Rotate
10:25	10:30	0.08	20020.00	300	10 - Deviation Survey	C/S @ 20003
10:30	11:20	0.83	20109.00	300	2a - Drilling	Rotate
11:20	11:25	0.08	20109.00	300	10 - Deviation Survey	C/S @ 20092
11:25	15:50	4.42	20200.00	300	2a - Drilling	Rotate
15:50	16:00	0.17	20200.00	300	10 - Deviation Survey	C/S @ 20183
16:00	19:30	3.50	20267.00	300	2a - Drilling	Rotate
19:30	19:35	0.08	20267.00	300	10 - Deviation Survey	C/S @ 20250
19:35	20:10	0.58	20267.00	300	90 - Miscellaneous	Flow check
20:10	21:20	1.17	20267.00	300	5 - Circulate	Circulate
21:20	00:00	2.67	20267.00	300	6b - Trip Out	TOOH

COMMENTS

Daily: \$52,509.00

Total: \$326,991.00

WELL INFORMATION

Created On : Apr 16 2020

Daily Drilling Report

Customer : Marathon Oil
Well Name : Blue Steel 12H
Job Number : MO-XX-0906381966
Rig Name : Precesion 582
Field Name : Permian
Country : USA

CURRENT STATUS Report

14

Date : 03/27/2020

Total Depth (ft) : 20267.00	Casing Depth (ft) : 3028.00	Customer Reps :
Depth Last 24 (ft) : 337.00	Casing Diameter (in) : 9.625	Customer Reps :
Hole Size (in) : 0.000	Casing ID (in) : 8.921	SDS Reps : Jason Yow
Slide (%) :		SDS Reps : Dusty Prochazka
Rotate (%) :		SDS Reps :

LAST SURVEY

LAST FORMATION TOP

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)	Formation Name	MD Top (ft)	TVD Top (ft)
20092.00	90.24	0.91	6788.64	16219.05	0.07	WC XY	10019.00	6750.52

BHA SUMMARY

Well: BlueSteelFed12H Run: 0300 - 10976.72 ft; 8 1/2" GTI65DO HDBS PDC, 6 3/4" iCruise No Flex, 6 3/4" TM HOC, 6 3/4" Filter Sub, 6 3/4" NM Pony Flex Collar, 7" Nitroforce Lobe 6:7-6.5 Stg, 1 STD 5" HWDP, 9 STD 5" Drill Pipe, 8 5/8" Drill-N-Ream, 104 STD 5" Drill pipe, 7 STD 5" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lbf2)	Gels	10 sec	10 Min	30 sec	30 min	(lbf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	02:30	2.50	20267.00	300	6b - Trip Out	TOOH to 9620
02:30	02:50	0.33	20267.00	300	90 - Miscellaneous	Flow check
02:50	09:00	6.17	20267.00	300	6e - Trip Out (at Surface)	TOOH

COMMENTS

Daily: \$0.00
 Total: \$326,991.00