

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources
Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

FORM C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-46977		² Pool Code 33813		³ Pool Name JAL; WOLFCAMP, WEST	
⁴ Property Code 327300		⁵ Property Name BLACK MARLIN FED COM			⁶ Well Number 214H
⁷ OGRID No. #372043		⁸ Operator Name TAP ROCK OPERATING, LLC.			⁹ Elevation 3180'

¹⁰Surface Location

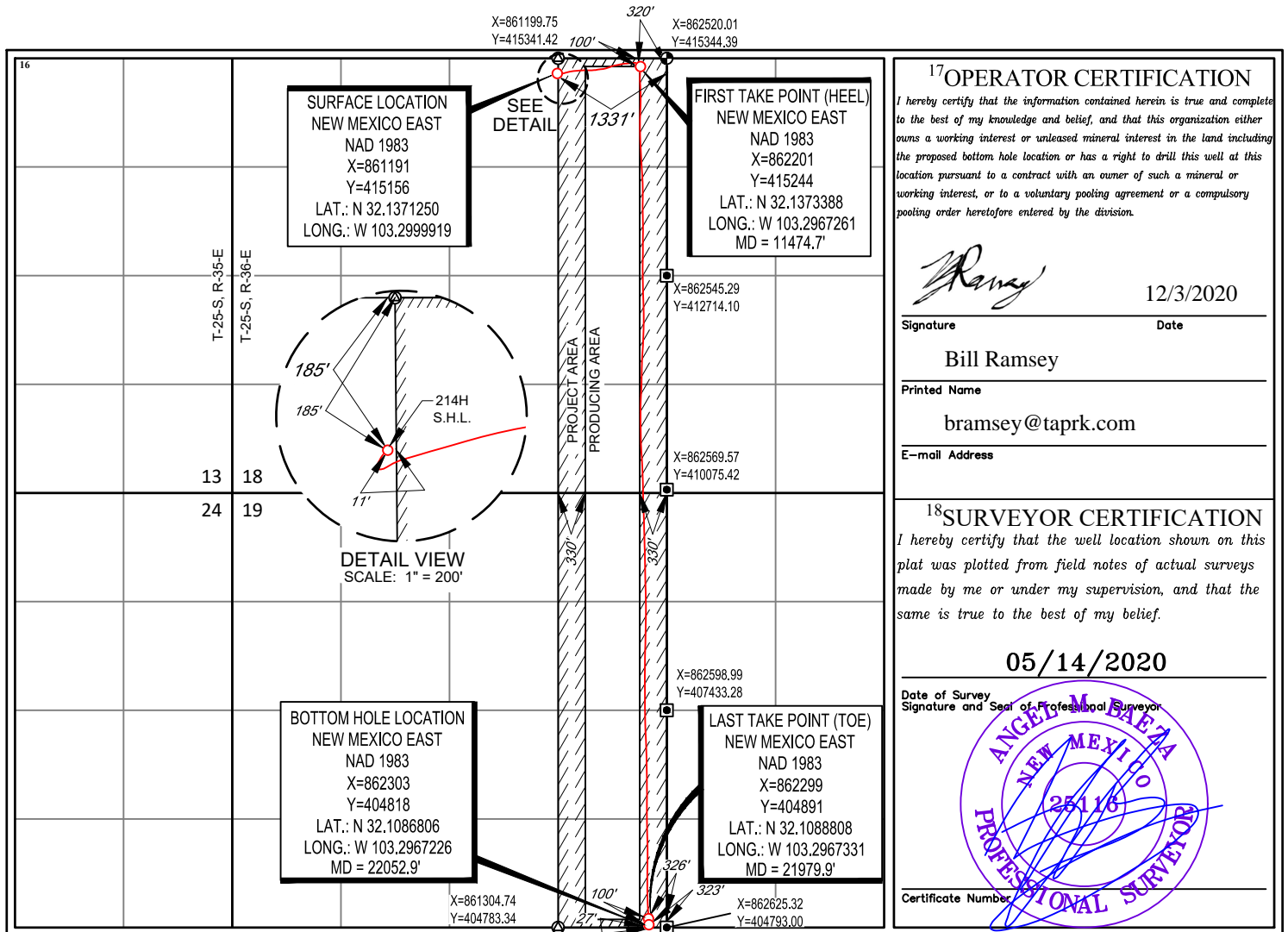
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	18	25-S	36-E	-	185'	NORTH	1331'	EAST	LEA

¹¹Bottom Hole Location If Different From Surface

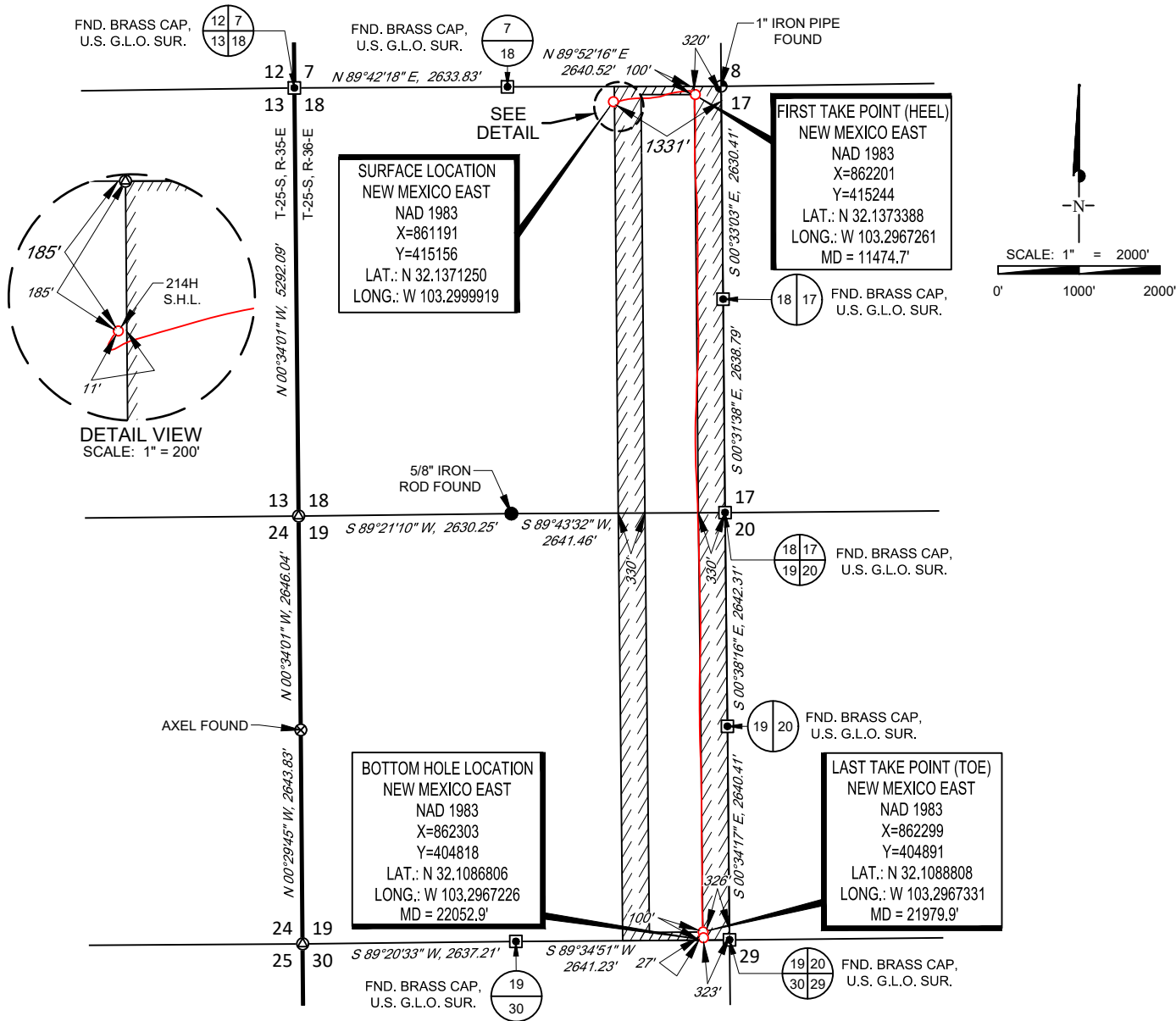
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	19	25-S	36-E	-	27'	SOUTH	323'	EAST	LEA

¹² Dedicated Acres 320.00	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



SECTION 18, TOWNSHIP 25-S, RANGE 36-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: BLACK MARLIN FED COM 214H
 SECTION 18 TWP 25-S RGE 36-E SURVEY N.M.P.M.
 COUNTY LEA STATE NM ELEVATION 3180'
 DESCRIPTION 185' FNL & 1331' FEL

INTERNAL
PRE-COMPLETION
PLAT



1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
 TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
 TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
 WWW.TOPOGRAPHIC.COM

BLACK MARLIN FED COM 214H PRE-COMPLETION	REVISION:	
	INT	DATE
DATE:	06/23/2020	
FILE:	C:\BLACK_MARLIN_FED_COM_214H	
DRAWN BY:	H.B.	
SHEET:	1 OF 1	

NOTES:
 1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
 2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.
 3. THIS WELL LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY TAP ROCK OPERATING, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.



Tap Rock Resources, LLC

Lea County, NM (NAD 83 NME)
(Black Marlin) Sec-18_T-25-S_R-36-E
Black Marlin Fed Com #214H

OWB

Design: AWB

Standard Survey Report

15 June, 2020





Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Black Marlin Fed Com #214H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB @ 3210.0usft (H&P 388)
Site:	(Black Marlin) Sec-18_T-25-S_R-36-E	MD Reference:	KB @ 3210.0usft (H&P 388)
Well:	Black Marlin Fed Com #214H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

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

Site	(Black Marlin) Sec-18_T-25-S_R-36-E				
Site Position:		Northing:	415,156.00 usft	Latitude:	32° 8' 13.653 N
From:	Map	Easting:	861,141.00 usft	Longitude:	103° 18' 0.552 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.55 °

Well	Black Marlin Fed Com #214H					
Well Position	+N/-S	0.0 usft	Northing:	415,156.00 usft	Latitude:	32° 8' 13.648 N
	+E/-W	0.0 usft	Easting:	861,191.00 usft	Longitude:	103° 17' 59.970 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,184.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	05/25/20	6.49	59.73	47,690.19352032

Design	AWB				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	179.43	

Survey Program	Date	06/15/20			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
179.0	22,055.0	Intrepid MWD (OWB)	MWD	OWSG MWD - Standard	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
179.0	0.31	218.28	179.0	-0.4	-0.3	0.4	0.17	0.17	0.00	
240.0	0.62	240.96	240.0	-0.7	-0.7	0.7	0.58	0.51	37.18	
315.0	0.73	238.47	315.0	-1.1	-1.5	1.1	0.15	0.14	-3.32	
Rustler Anhydrite										
330.0	0.75	238.06	330.0	-1.2	-1.6	1.2	0.15	0.15	-2.74	
419.0	1.01	231.99	419.0	-2.0	-2.7	2.0	0.31	0.29	-6.82	
509.0	1.19	223.29	509.0	-3.2	-4.0	3.1	0.27	0.20	-9.67	
602.0	0.97	212.66	601.9	-4.5	-5.1	4.5	0.32	-0.24	-11.43	
693.0	1.10	213.89	692.9	-5.9	-6.0	5.9	0.14	0.14	1.35	
785.0	1.01	221.45	784.9	-7.3	-7.0	7.2	0.18	-0.10	8.22	



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Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
855.1	1.04	213.13	855.0	-8.3	-7.8	8.2	0.22	0.04	-11.87
Top Salt									
877.0	1.05	210.64	876.9	-8.6	-8.0	8.5	0.22	0.06	-11.38
968.0	0.79	206.07	967.9	-9.9	-8.7	9.8	0.30	-0.29	-5.02
1,063.0	0.75	199.65	1,062.9	-11.0	-9.2	11.0	0.10	-0.04	-6.76
1,158.0	0.97	221.18	1,157.9	-12.2	-9.9	12.1	0.41	0.23	22.66
1,256.0	1.27	205.63	1,255.9	-13.8	-10.9	13.7	0.43	0.31	-15.87
1,353.0	1.49	200.44	1,352.8	-16.0	-11.8	15.9	0.26	0.23	-5.35
1,449.0	1.32	196.14	1,448.8	-18.2	-12.6	18.1	0.21	-0.18	-4.48
1,544.0	1.23	161.24	1,543.8	-20.2	-12.6	20.1	0.81	-0.09	-36.74
1,639.0	0.88	145.86	1,638.8	-21.8	-11.8	21.7	0.47	-0.37	-16.19
1,734.0	0.97	136.81	1,733.7	-23.0	-10.9	22.9	0.18	0.09	-9.53
1,829.0	2.20	80.73	1,828.7	-23.3	-8.5	23.2	1.94	1.29	-59.03
1,924.0	2.24	75.46	1,923.6	-22.5	-4.9	22.5	0.22	0.04	-5.55
2,020.0	3.87	54.81	2,019.5	-20.2	-0.4	20.2	2.02	1.70	-21.51
2,115.0	5.76	61.40	2,114.2	-16.1	6.4	16.1	2.07	1.99	6.94
2,210.0	7.52	71.59	2,208.5	-11.8	16.4	12.0	2.22	1.85	10.73
2,305.0	7.47	75.55	2,302.7	-8.3	28.3	8.6	0.55	-0.05	4.17
2,401.0	7.43	72.47	2,397.9	-4.9	40.3	5.3	0.42	-0.04	-3.21
2,496.0	7.56	74.06	2,492.1	-1.3	52.1	1.8	0.26	0.14	1.67
2,591.0	7.47	74.32	2,586.3	2.1	64.1	-1.4	0.10	-0.09	0.27
2,686.0	10.37	74.32	2,680.1	6.0	78.3	-5.3	3.05	3.05	0.00
2,781.0	11.38	73.53	2,773.4	11.0	95.5	-10.1	1.07	1.06	-0.83
2,876.0	12.18	75.29	2,866.4	16.2	114.2	-15.1	0.92	0.84	1.85
2,970.0	12.84	77.22	2,958.2	21.0	134.0	-19.7	0.83	0.70	2.05
3,065.0	13.27	78.54	3,050.7	25.5	154.9	-24.0	0.55	0.45	1.39
3,160.0	13.27	79.94	3,143.2	29.6	176.4	-27.9	0.34	0.00	1.47
3,256.0	13.05	83.46	3,236.7	32.8	198.0	-30.8	0.87	-0.23	3.67
3,351.0	12.70	84.07	3,329.3	35.1	219.0	-32.9	0.40	-0.37	0.64
3,446.0	12.13	85.92	3,422.1	36.9	239.4	-34.5	0.73	-0.60	1.95
3,542.0	10.77	86.54	3,516.1	38.1	258.4	-35.6	1.42	-1.42	0.65
3,636.0	9.80	87.06	3,608.6	39.1	275.1	-36.3	1.04	-1.03	0.55
3,731.0	9.19	86.18	3,702.3	40.0	290.8	-37.1	0.66	-0.64	-0.93
3,827.0	8.66	86.71	3,797.2	40.9	305.6	-37.9	0.56	-0.55	0.55
3,922.0	8.04	86.98	3,891.2	41.7	319.4	-38.5	0.65	-0.65	0.28
4,017.0	7.60	90.58	3,985.3	42.0	332.3	-38.6	0.69	-0.46	3.79
4,112.0	7.43	91.37	4,079.5	41.7	344.8	-38.3	0.21	-0.18	0.83
4,163.0	7.21	90.27	4,130.0	41.7	351.3	-38.2	0.51	-0.42	-2.16
Base Salt									
4,207.0	7.03	89.26	4,173.7	41.7	356.7	-38.1	0.51	-0.42	-2.29
4,302.0	7.30	89.08	4,268.0	41.8	368.6	-38.2	0.29	0.28	-0.19
4,398.0	6.73	93.39	4,363.2	41.6	380.3	-37.8	0.81	-0.59	4.49
4,465.2	6.91	92.27	4,430.0	41.2	388.3	-37.4	0.33	0.27	-1.66



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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Lamar									
4,494.0	6.99	91.81	4,458.6	41.1	391.7	-37.2	0.33	0.27	-1.60
4,515.6	7.17	91.44	4,480.0	41.0	394.4	-37.1	0.86	0.83	-1.70
Delaware Mountain Gp									
4,566.0	7.59	90.65	4,530.0	40.9	400.9	-36.9	0.86	0.83	-1.57
Bell Canyon									
4,589.0	7.78	90.32	4,552.8	40.9	403.9	-36.9	0.86	0.83	-1.45
4,601.3	7.85	90.00	4,565.0	40.9	405.6	-36.8	0.70	0.60	-2.59
Ramsey Sand									
4,683.0	8.35	88.03	4,645.8	41.1	417.1	-36.9	0.70	0.61	-2.41
4,779.0	9.71	83.11	4,740.6	42.3	432.1	-38.0	1.63	1.42	-5.13
4,874.0	9.63	86.36	4,834.3	43.8	448.0	-39.3	0.58	-0.08	3.42
4,970.0	9.71	82.93	4,928.9	45.3	464.1	-40.6	0.61	0.08	-3.57
5,064.0	10.24	78.89	5,021.5	47.8	480.1	-43.1	0.93	0.56	-4.30
5,160.0	10.24	81.88	5,116.0	50.7	496.9	-45.7	0.55	0.00	3.11
5,255.0	10.11	81.26	5,209.5	53.2	513.5	-48.0	0.18	-0.14	-0.65
5,288.0	10.07	83.64	5,242.0	53.9	519.3	-48.7	1.27	-0.12	7.21
5,428.0	9.76	84.51	5,379.9	56.4	543.3	-51.0	0.25	-0.22	0.62
5,458.5	9.55	84.59	5,410.0	56.9	548.3	-51.4	0.70	-0.69	0.27
Cherry Canyon									
5,523.0	9.10	84.78	5,473.6	57.9	558.7	-52.3	0.70	-0.69	0.29
5,618.0	9.32	75.11	5,567.4	60.5	573.7	-54.8	1.64	0.23	-10.18
5,712.0	9.85	72.03	5,660.1	65.0	588.7	-59.1	0.78	0.56	-3.28
5,806.0	9.67	70.98	5,752.7	70.0	603.8	-64.0	0.27	-0.19	-1.12
5,901.0	9.36	71.15	5,846.4	75.1	618.6	-68.9	0.33	-0.33	0.18
5,995.0	9.41	70.36	5,939.2	80.2	633.1	-73.9	0.15	0.05	-0.84
6,090.0	9.23	69.84	6,032.9	85.4	647.6	-78.9	0.21	-0.19	-0.55
6,184.0	9.01	68.96	6,125.7	90.6	661.5	-84.0	0.28	-0.23	-0.94
6,279.0	9.45	74.58	6,219.5	95.4	676.0	-88.6	1.06	0.46	5.92
6,374.0	10.02	80.12	6,313.1	98.9	691.6	-92.0	1.15	0.60	5.83
6,469.0	10.02	78.98	6,406.7	101.9	707.9	-94.8	0.21	0.00	-1.20
6,487.6	10.02	78.98	6,425.0	102.5	711.1	-95.4	0.00	0.00	0.00
Brushy Canyon									
6,564.0	10.02	78.89	6,500.2	105.0	724.1	-97.8	0.02	0.00	-0.12
6,659.0	9.80	79.07	6,593.8	108.2	740.2	-100.8	0.23	-0.23	0.19
6,754.0	9.19	78.71	6,687.5	111.2	755.5	-103.7	0.65	-0.64	-0.38
6,849.0	8.70	78.27	6,781.3	114.1	770.0	-106.5	0.52	-0.52	-0.46
6,944.0	8.62	79.33	6,875.3	116.9	784.0	-109.1	0.19	-0.08	1.12
7,039.0	9.19	81.97	6,969.1	119.3	798.6	-111.3	0.74	0.60	2.78
7,134.0	8.62	83.64	7,063.0	121.1	813.1	-113.0	0.66	-0.60	1.76
7,229.0	7.91	85.39	7,157.0	122.4	826.7	-114.2	0.79	-0.75	1.84
7,324.0	8.48	84.60	7,251.0	123.6	840.2	-115.3	0.61	0.60	-0.83
7,420.0	8.35	85.39	7,346.0	124.9	854.2	-116.4	0.18	-0.14	0.82
7,515.0	7.38	85.48	7,440.1	125.9	867.2	-117.3	1.02	-1.02	0.09
7,610.0	6.29	85.31	7,534.4	126.8	878.4	-118.1	1.15	-1.15	-0.18



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7,705.0	6.55	81.53	7,628.8	128.0	889.0	-119.2	0.52	0.27	-3.98	
7,799.0	5.85	79.07	7,722.3	129.7	899.0	-120.8	0.80	-0.74	-2.62	
7,894.0	6.11	82.76	7,816.7	131.3	908.8	-122.2	0.49	0.27	3.88	
7,989.0	7.30	89.35	7,911.1	132.0	919.8	-122.8	1.49	1.25	6.94	
8,083.0	6.95	90.67	8,004.4	132.0	931.5	-122.7	0.41	-0.37	1.40	
8,178.0	6.51	93.22	8,098.7	131.6	942.6	-122.2	0.56	-0.46	2.68	
8,229.6	6.29	92.94	8,150.0	131.3	948.3	-121.9	0.43	-0.42	-0.54	
Bone Spring Lime										
8,254.8	6.19	92.80	8,175.0	131.2	951.1	-121.7	0.43	-0.42	-0.57	
Upper Avalon										
8,273.0	6.11	92.69	8,193.1	131.1	953.0	-121.6	0.43	-0.42	-0.59	
8,368.0	5.45	93.30	8,287.7	130.6	962.6	-121.0	0.70	-0.69	0.64	
8,463.0	5.01	96.91	8,382.3	129.8	971.2	-120.2	0.58	-0.46	3.80	
8,526.0	4.80	98.23	8,445.0	129.1	976.5	-119.4	0.38	-0.33	2.10	
Middle Avalon										
8,557.0	4.70	98.93	8,475.9	128.7	979.1	-119.0	0.38	-0.33	2.24	
8,652.0	4.40	98.14	8,570.6	127.6	986.5	-117.8	0.32	-0.32	-0.83	
8,748.0	2.07	97.26	8,666.5	126.9	991.9	-117.0	2.43	-2.43	-0.92	
8,842.0	1.10	81.79	8,760.4	126.8	994.5	-116.9	1.12	-1.03	-16.46	
8,937.0	1.10	126.53	8,855.4	126.4	996.1	-116.5	0.88	0.00	47.09	
9,006.6	1.16	131.79	8,925.0	125.5	997.2	-115.6	0.18	0.09	7.56	
Lower Avalon										
9,032.0	1.19	133.56	8,950.4	125.1	997.6	-115.2	0.18	0.10	6.98	
9,127.0	1.23	141.73	9,045.4	123.7	998.9	-113.7	0.19	0.04	8.60	
9,222.0	1.54	144.02	9,140.3	121.8	1,000.3	-111.9	0.33	0.33	2.41	
9,317.0	0.31	338.17	9,235.3	121.0	1,000.9	-111.1	1.94	-1.29	-174.58	
9,413.0	0.62	20.97	9,331.3	121.8	1,001.0	-111.8	0.46	0.32	44.58	
9,501.7	0.33	15.74	9,420.0	122.5	1,001.3	-112.5	0.33	-0.33	-5.90	
1st Bone Spring Sand										
9,508.0	0.31	14.99	9,426.3	122.5	1,001.3	-112.5	0.33	-0.32	-11.79	
9,602.0	1.01	3.13	9,520.3	123.6	1,001.4	-113.6	0.75	0.74	-12.62	
9,696.7	0.41	30.25	9,615.0	124.7	1,001.6	-114.7	0.71	-0.64	28.64	
2nd Bone Spring Carb										
9,698.0	0.40	31.16	9,616.3	124.7	1,001.6	-114.7	0.71	-0.52	69.64	
9,793.0	0.57	42.77	9,711.3	125.3	1,002.1	-115.4	0.21	0.18	12.22	
9,888.0	0.66	51.29	9,806.3	126.0	1,002.9	-116.0	0.13	0.09	8.97	
9,983.0	0.53	73.53	9,901.3	126.5	1,003.7	-116.5	0.28	-0.14	23.41	
10,078.0	0.57	21.50	9,996.3	127.0	1,004.3	-117.1	0.51	0.04	-54.77	
10,081.7	0.57	22.70	10,000.0	127.1	1,004.3	-117.1	0.32	-0.03	32.49	
2nd Bone Spring Sand										
10,173.0	0.62	51.12	10,091.3	127.8	1,004.9	-117.8	0.32	0.06	31.13	
10,269.0	0.97	95.50	10,187.3	128.1	1,006.1	-118.0	0.71	0.36	46.23	
10,364.0	1.49	123.54	10,282.3	127.3	1,007.9	-117.3	0.82	0.55	29.52	
10,459.0	2.11	134.79	10,377.2	125.4	1,010.2	-115.3	0.75	0.65	11.84	



Company: Tap Rock Resources, LLC
Project: Lea County, NM (NAD 83 NME)
Site: (Black Marlin) Sec-18_T-25-S_R-36-E
Well: Black Marlin Fed Com #214H
Wellbore: OWB
Design: AWB
Local Co-ordinate Reference: Well Black Marlin Fed Com #214H
TVD Reference: KB @ 3210.0usft (H&P 388)
MD Reference: KB @ 3210.0usft (H&P 388)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.15 Single User Db

Survey

Table with 11 columns: Measured Depth (usft), Inclination (°), Azimuth (°), Vertical Depth (usft), +N/-S (usft), +E/-W (usft), Vertical Section (usft), Dogleg Rate (°/100usft), Build Rate (°/100usft), Turn Rate (°/100usft). Rows include data for 3rd Bone Spring Carb, 3rd Bone Spring Sand, FTP @ 11475.9'MD, 100'FNL & 319.8'FEL, 3rd BS W Sand, Wolfcamp A X Sand, Wolfcamp A Y Sand, and Wolfcamp A Lower.



Intrepid Survey Report



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Black Marlin Fed Com #214H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB @ 3210.0usft (H&P 388)
Site:	(Black Marlin) Sec-18_T-25-S_R-36-E	MD Reference:	KB @ 3210.0usft (H&P 388)
Well:	Black Marlin Fed Com #214H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,504.0	92.84	178.56	11,757.1	-1,796.3	1,039.9	1,806.5	1.47	1.44	-0.27
13,599.0	90.77	180.67	11,754.1	-1,891.2	1,040.5	1,901.5	3.11	-2.18	2.22
13,694.0	89.36	180.75	11,754.0	-1,986.2	1,039.3	1,996.4	1.49	-1.48	0.08
13,788.0	87.34	179.61	11,756.7	-2,080.1	1,039.1	2,090.4	2.47	-2.15	-1.21
13,883.0	91.56	181.11	11,757.6	-2,175.1	1,038.5	2,185.3	4.71	4.44	1.58
13,978.0	92.18	180.84	11,754.5	-2,270.1	1,036.8	2,280.3	0.71	0.65	-0.28
14,073.0	88.66	179.70	11,753.8	-2,365.0	1,036.4	2,375.2	3.89	-3.71	-1.20
14,169.0	86.77	178.91	11,757.6	-2,460.9	1,037.6	2,471.1	2.13	-1.97	-0.82
14,264.0	87.78	179.08	11,762.2	-2,555.8	1,039.2	2,566.0	1.08	1.06	0.18
14,359.0	89.54	178.56	11,764.4	-2,650.8	1,041.2	2,661.0	1.93	1.85	-0.55
14,453.0	88.79	178.03	11,765.8	-2,744.7	1,044.0	2,755.0	0.98	-0.80	-0.56
14,546.0	90.46	177.59	11,766.4	-2,837.6	1,047.5	2,847.9	1.86	1.80	-0.47
14,636.0	93.01	179.96	11,763.6	-2,927.6	1,049.5	2,937.9	3.87	2.83	2.63
14,725.0	93.01	181.37	11,759.0	-3,016.4	1,048.4	3,026.7	1.58	0.00	1.58
14,814.0	91.82	180.58	11,755.2	-3,105.3	1,046.9	3,115.6	1.60	-1.34	-0.89
14,907.0	93.49	182.16	11,750.9	-3,198.2	1,044.7	3,208.4	2.47	1.80	1.70
15,001.0	88.22	183.48	11,749.5	-3,292.1	1,040.1	3,302.2	5.78	-5.61	1.40
15,094.0	88.53	182.86	11,752.1	-3,384.9	1,034.9	3,395.0	0.75	0.33	-0.67
15,187.0	89.76	183.83	11,753.5	-3,477.7	1,029.5	3,487.8	1.68	1.32	1.04
15,281.0	90.90	180.75	11,753.0	-3,571.6	1,025.7	3,581.6	3.49	1.21	-3.28
15,374.0	88.22	180.93	11,753.7	-3,664.6	1,024.4	3,674.6	2.89	-2.88	0.19
15,467.0	86.59	181.46	11,757.9	-3,757.5	1,022.4	3,767.5	1.84	-1.75	0.57
15,560.0	91.30	183.13	11,759.6	-3,850.4	1,018.7	3,860.3	5.37	5.06	1.80
15,653.0	91.03	180.58	11,757.7	-3,943.3	1,015.7	3,953.2	2.76	-0.29	-2.74
15,746.0	91.25	180.40	11,755.9	-4,036.3	1,014.9	4,046.2	0.31	0.24	-0.19
15,839.0	88.22	179.96	11,756.3	-4,129.2	1,014.6	4,139.1	3.29	-3.26	-0.47
15,931.0	87.65	179.44	11,759.6	-4,221.2	1,015.1	4,231.1	0.84	-0.62	-0.57
16,024.0	87.30	179.00	11,763.7	-4,314.1	1,016.4	4,324.0	0.60	-0.38	-0.47
16,117.0	89.67	179.00	11,766.2	-4,407.0	1,018.0	4,416.9	2.55	2.55	0.00
16,210.0	89.67	177.85	11,766.7	-4,500.0	1,020.5	4,509.9	1.24	0.00	-1.24
16,305.0	89.93	176.36	11,767.1	-4,594.9	1,025.3	4,604.8	1.59	0.27	-1.57
16,400.0	92.04	176.27	11,765.4	-4,689.6	1,031.4	4,699.7	2.22	2.22	-0.09
16,495.0	93.85	178.12	11,760.5	-4,784.4	1,036.1	4,794.5	2.72	1.91	1.95
16,590.0	93.49	177.77	11,754.5	-4,879.1	1,039.5	4,889.2	0.53	-0.38	-0.37
16,685.0	93.76	177.77	11,748.5	-4,973.9	1,043.2	4,984.0	0.28	0.28	0.00
16,778.0	93.49	179.35	11,742.6	-5,066.7	1,045.5	5,076.8	1.72	-0.29	1.70
16,870.0	91.91	178.38	11,738.2	-5,158.5	1,047.3	5,168.7	2.01	-1.72	-1.05
16,962.0	91.25	177.77	11,735.7	-5,250.5	1,050.4	5,260.6	0.98	-0.72	-0.66
17,057.0	91.16	178.38	11,733.7	-5,345.4	1,053.6	5,355.6	0.65	-0.09	0.64
17,152.0	91.56	178.29	11,731.4	-5,440.3	1,056.4	5,450.6	0.43	0.42	-0.09
17,244.0	92.26	178.65	11,728.4	-5,532.2	1,058.8	5,542.5	0.86	0.76	0.39
17,339.0	91.69	178.56	11,725.1	-5,627.1	1,061.1	5,637.4	0.61	-0.60	-0.09
17,430.0	92.92	178.47	11,721.4	-5,718.0	1,063.5	5,728.3	1.36	1.35	-0.10



Intrepid Survey Report



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Black Marlin Fed Com #214H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB @ 3210.0usft (H&P 388)
Site:	(Black Marlin) Sec-18_T-25-S_R-36-E	MD Reference:	KB @ 3210.0usft (H&P 388)
Well:	Black Marlin Fed Com #214H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,525.0	93.45	178.12	11,716.2	-5,812.8	1,066.3	5,823.2	0.67	0.56	-0.37
17,616.0	92.66	178.65	11,711.3	-5,903.7	1,068.9	5,914.0	1.04	-0.87	0.58
17,711.0	89.76	179.61	11,709.3	-5,998.6	1,070.3	6,009.0	3.22	-3.05	1.01
17,804.0	89.71	179.17	11,709.7	-6,091.6	1,071.3	6,102.0	0.48	-0.05	-0.47
17,897.0	86.07	177.24	11,713.2	-6,184.5	1,074.2	6,194.9	4.43	-3.91	-2.08
17,990.0	90.64	178.82	11,715.8	-6,277.4	1,077.4	6,287.8	5.20	4.91	1.70
18,084.0	90.33	179.00	11,715.0	-6,371.4	1,079.2	6,381.8	0.38	-0.33	0.19
18,177.0	90.68	180.14	11,714.2	-6,464.4	1,079.9	6,474.8	1.28	0.38	1.23
18,270.0	90.81	180.05	11,713.0	-6,557.3	1,079.7	6,567.8	0.17	0.14	-0.10
18,363.0	92.44	180.67	11,710.4	-6,650.3	1,079.2	6,660.7	1.88	1.75	0.67
18,456.0	92.40	181.28	11,706.4	-6,743.2	1,077.6	6,753.6	0.66	-0.04	0.66
18,549.0	89.32	181.55	11,705.1	-6,836.2	1,075.3	6,846.5	3.32	-3.31	0.29
18,642.0	87.65	181.37	11,707.5	-6,929.1	1,072.9	6,939.4	1.81	-1.80	-0.19
18,737.0	87.87	181.46	11,711.2	-7,024.0	1,070.6	7,034.3	0.25	0.23	0.09
18,831.0	87.56	180.75	11,715.0	-7,117.9	1,068.8	7,128.2	0.82	-0.33	-0.76
18,927.0	86.73	180.58	11,719.8	-7,213.8	1,067.6	7,224.0	0.88	-0.86	-0.18
19,020.0	88.00	180.14	11,724.0	-7,306.7	1,067.1	7,316.9	1.45	1.37	-0.47
19,115.0	88.04	179.70	11,727.3	-7,401.6	1,067.2	7,411.9	0.46	0.04	-0.46
19,232.0	89.49	179.61	11,729.8	-7,518.6	1,067.9	7,528.8	1.24	1.24	-0.08
19,326.0	91.03	179.96	11,729.4	-7,612.6	1,068.3	7,622.8	1.68	1.64	0.37
19,422.0	90.02	179.52	11,728.5	-7,708.6	1,068.7	7,718.8	1.15	-1.05	-0.46
19,517.0	89.32	178.91	11,729.1	-7,803.6	1,070.0	7,813.8	0.98	-0.74	-0.64
19,612.0	90.42	178.21	11,729.3	-7,898.5	1,072.4	7,908.8	1.37	1.16	-0.74
19,707.0	92.75	177.85	11,726.7	-7,993.4	1,075.6	8,003.7	2.48	2.45	-0.38
19,802.0	92.84	177.50	11,722.0	-8,088.2	1,079.5	8,098.6	0.38	0.09	-0.37
19,897.0	92.44	176.80	11,717.7	-8,183.0	1,084.2	8,193.4	0.85	-0.42	-0.74
19,993.0	92.09	179.35	11,713.9	-8,278.9	1,087.4	8,289.3	2.68	-0.36	2.66
20,087.0	91.74	179.44	11,710.7	-8,372.8	1,088.4	8,383.2	0.38	-0.37	0.10
20,183.0	92.22	178.91	11,707.4	-8,468.7	1,089.8	8,479.2	0.74	0.50	-0.55
20,278.0	88.97	179.35	11,706.4	-8,563.7	1,091.2	8,574.2	3.45	-3.42	0.46
20,374.0	88.35	179.70	11,708.7	-8,659.7	1,092.0	8,670.1	0.74	-0.65	0.36
20,469.0	86.24	179.35	11,713.1	-8,754.6	1,092.8	8,765.0	2.25	-2.22	-0.37
20,564.0	91.96	181.11	11,714.6	-8,849.5	1,092.4	8,859.9	6.30	6.02	1.85
20,659.0	88.22	180.14	11,714.5	-8,944.5	1,091.4	8,954.9	4.07	-3.94	-1.02
20,754.0	91.03	179.17	11,715.1	-9,039.5	1,092.0	9,049.9	3.13	2.96	-1.02
20,849.0	87.96	178.65	11,715.9	-9,134.4	1,093.8	9,144.9	3.28	-3.23	-0.55
20,945.0	84.75	178.82	11,722.0	-9,230.2	1,095.9	9,240.7	3.35	-3.34	0.18
21,040.0	86.81	178.47	11,729.0	-9,324.9	1,098.1	9,335.4	2.20	2.17	-0.37
21,135.0	87.12	179.44	11,734.1	-9,419.8	1,099.9	9,430.3	1.07	0.33	1.02
21,231.0	92.44	180.84	11,734.4	-9,515.7	1,099.6	9,526.2	5.73	5.54	1.46
21,326.0	95.43	180.58	11,727.9	-9,610.5	1,098.5	9,621.0	3.16	3.15	-0.27
21,422.0	91.08	180.75	11,722.5	-9,706.3	1,097.4	9,716.8	4.53	-4.53	0.18
21,517.0	88.22	180.23	11,723.0	-9,801.3	1,096.5	9,811.7	3.06	-3.01	-0.55



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Black Marlin Fed Com #214H
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Site:	(Black Marlin) Sec-18_T-25-S_R-36-E	MD Reference:	KB @ 3210.0usft (H&P 388)
Well:	Black Marlin Fed Com #214H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
21,612.0	88.70	179.35	11,725.6	-9,896.3	1,096.9	9,906.7	1.05	0.51	-0.93
21,707.0	88.70	178.12	11,727.8	-9,991.2	1,099.0	10,001.7	1.29	0.00	-1.29
21,802.0	87.60	177.33	11,730.8	-10,086.1	1,102.8	10,096.6	1.43	-1.16	-0.83
21,897.0	88.35	177.15	11,734.2	-10,180.9	1,107.3	10,191.4	0.81	0.79	-0.19
21,981.6	87.08	176.90	11,737.6	-10,265.3	1,111.7	10,275.9	1.53	-1.50	-0.30
LTP @ 21981.6'MD, 100'FSL & 321.6'FEL									
21,985.0	87.03	176.89	11,737.7	-10,268.7	1,111.9	10,279.3	1.53	-1.50	-0.30
LAST SVY									
22,055.0	87.03	176.89	11,741.4	-10,338.5	1,115.7	10,349.1	0.00	0.00	0.00
Projection to TD @ 22055'MD, 26.8'FSL & 318.4'FEL									

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LTP (Black Marlin Fed - hit/miss target - Shape - Point	0.00	0.00	11,732.5	-10,265.0	1,099.0	404,891.00	862,290.00	32° 6' 31.976 N	103° 17' 48.339 W
- actual wellpath misses target center by 13.6usft at 21980.4usft MD (11737.5 TVD, -10264.1 N, 1111.6 E)									
PBHL (Black Marlin Fed - actual wellpath misses target center by 28.0usft at 22055.0usft MD (11741.4 TVD, -10338.5 N, 1115.7 E) - Rectangle (sides W100.0 H1,605.8 D30.0)	0.50	179.43	11,732.5	-10,360.0	1,100.0	404,796.00	862,291.00	32° 6' 31.036 N	103° 17' 48.338 W
FTP (Black Marlin Fed - actual wellpath misses target center by 238.5usft at 11737.0usft MD (11590.7 TVD, -69.1 N, 1002.0 E) - Point	0.00	0.00	11,770.0	88.0	996.0	415,244.00	862,187.00	32° 8' 14.424 N	103° 17' 48.378 W



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Site:	(Black Marlin) Sec-18_T-25-S_R-36-E	MD Reference:	KB @ 3210.0usft (H&P 388)
Well:	Black Marlin Fed Com #214H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
315.0	315.0	Rustler Anhydrite			
855.1	855.0	Top Salt			
4,163.0	4,130.0	Base Salt			
4,465.2	4,430.0	Lamar			
4,515.6	4,480.0	Delaware Mountain Gp			
4,566.0	4,530.0	Bell Canyon			
4,601.3	4,565.0	Ramsey Sand			
5,458.5	5,410.0	Cherry Canyon			
6,487.6	6,425.0	Brushy Canyon			
8,229.6	8,150.0	Bone Spring Lime			
8,254.8	8,175.0	Upper Avalon			
8,526.0	8,445.0	Middle Avalon			
9,006.6	8,925.0	Lower Avalon			
9,501.7	9,420.0	1st Bone Spring Sand			
9,696.7	9,615.0	2nd Bone Spring Carb			
10,081.7	10,000.0	2nd Bone Spring Sand			
10,721.9	10,640.0	3rd Bone Spring Carb			
11,342.5	11,260.0	3rd Bone Spring Sand			
11,506.6	11,410.0	3rd BS W Sand			
11,559.8	11,455.0	Wolfcamp A X Sand			
11,639.6	11,520.0	Wolfcamp A Y Sand			
11,784.8	11,620.0	Wolfcamp A Lower			

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,475.9	11,383.6	87.7	1,010.2	FTP @ 11475.9'MD, 100'FNL & 319.8'FEL
21,981.6	11,737.6	-10,265.3	1,111.7	LTP @ 21981.6'MD, 100'FSL & 321.6'FEL
21,985.0	11,737.7	-10,268.7	1,111.9	LAST SVY
22,055.0	11,741.4	-10,338.5	1,115.7	Projection to TD @ 22055'MD, 26.8'FSL & 318.4'FEL

Checked By: _____	Approved By: _____	Date: _____
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