



OCD – HOBBS
05/05/2020
RECEIVED

Tap Rock Resources, LLC

Lea County, NM (NAD 83 NME)
(Zeus State) Sec-9_T24-S_R-33-E
Zeus Unit State #106H

OWB

Design: AWB

Standard Survey Report

05 November, 2019





Operator: Taprock Resources LLC
Well Name: Zeus Unit State #106H
County: Lea
State: New Mexico
Rig Name: H&P 388
API Number: 30-025-45843

Intrepid Directional Drilling Specialists certifies that the surveys performed on the above referenced well are true and correct MWD surveys, data provided as follows:

Surveyor: Intrepid Directional Drilling Specialists
Survey Depths: 8859' MD – 14315' MD
Projection to Bit: 14382' MD
Dates Performed: 10/24/2019 – 11/05/2019
Type of Survey: MWD

Sincerely,

A handwritten signature in blue ink, appearing to read "Jim", with a stylized flourish at the end.

James Burleson
Vice President of MWD Operations
Intrepid Directional Drilling Specialists



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Zeus Unit State #106H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB @ 3644.0usft (H&P 388)
Site:	(Zeus State) Sec-9_T24-S_R-33-E	MD Reference:	KB @ 3644.0usft (H&P 388)
Well:	Zeus Unit State #106H	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	(Zeus State) Sec-9_T24-S_R-33-E		
Site Position:		Northing:	447,193.00 usft
From:	Map	Easting:	777,416.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 13' 37.575 N
		Longitude:	103° 34' 11.577 W
		Grid Convergence:	0.41 °

Well	Zeus Unit State #106H		
Well Position	+N/-S	0.0 usft	Northing: 446,969.00 usft
	+E/-W	0.0 usft	Easting: 775,953.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 13' 35.461 N
		Longitude:	103° 34' 28.626 W
		Ground Level:	3,618.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/26/19	6.70	60.03	47,695.31606861

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	359.59	

Survey Program	Date	11/05/19			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
139.5	8,732.0	VES Gyro Svys (OWB)	GYRO-NS	OWSG Gyrocompass Gyro	
8,859.0	14,382.0	Intrepid MWD Crv/Lat (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	
139.5	1.02	186.95	139.5	-1.2	-0.2	-1.2	0.73	0.73	0.00	
234.3	1.38	185.69	234.2	-3.2	-0.4	-3.2	0.38	0.38	-1.33	
329.0	1.32	192.07	329.0	-5.4	-0.7	-5.4	0.17	-0.06	6.73	
423.8	1.37	192.07	423.7	-7.6	-1.2	-7.6	0.05	0.05	0.00	
518.6	1.48	166.42	518.5	-9.9	-1.1	-9.9	0.68	0.12	-27.07	
613.3	1.72	166.60	613.2	-12.5	-0.5	-12.5	0.25	0.25	0.19	
708.1	1.66	167.56	707.9	-15.2	0.1	-15.2	0.07	-0.06	1.01	
802.9	1.75	174.68	802.7	-18.0	0.6	-18.0	0.24	0.09	7.51	
897.7	1.49	173.54	897.4	-20.6	0.8	-20.6	0.28	-0.27	-1.20	

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992.4	1.31	201.61	992.1	-22.9	0.6	-22.9	0.74	-0.19	29.62
1,087.2	1.46	194.83	1,086.9	-25.0	-0.1	-25.0	0.23	0.16	-7.15
1,182.0	1.56	188.12	1,181.6	-27.5	-0.6	-27.5	0.21	0.11	-7.08
1,264.4	1.48	186.08	1,264.0	-29.6	-0.9	-29.6	0.12	-0.10	-2.48
Rustler Anhydrite									
1,276.7	1.47	185.75	1,276.4	-30.0	-0.9	-30.0	0.12	-0.09	-2.63
1,371.5	1.65	188.25	1,371.1	-32.5	-1.3	-32.5	0.20	0.19	2.64
1,466.3	1.26	205.64	1,465.8	-34.8	-1.9	-34.8	0.62	-0.41	18.35
1,561.0	1.53	187.86	1,560.6	-37.0	-2.5	-37.0	0.53	0.28	-18.76
1,655.8	2.58	144.12	1,655.3	-40.0	-1.5	-40.0	1.91	1.11	-46.15
1,750.6	2.54	139.68	1,750.0	-43.3	1.2	-43.3	0.21	-0.04	-4.69
1,766.6	2.46	140.66	1,766.0	-43.9	1.6	-43.9	0.55	-0.48	6.12
Top Salt									
1,845.4	2.10	146.50	1,844.6	-46.4	3.5	-46.4	0.55	-0.46	7.42
1,940.1	2.06	144.76	1,939.4	-49.2	5.4	-49.2	0.08	-0.04	-1.84
2,034.9	2.37	142.84	2,034.1	-52.2	7.6	-52.2	0.34	0.33	-2.03
2,129.7	2.06	143.82	2,128.8	-55.1	9.8	-55.2	0.33	-0.33	1.03
2,224.4	1.40	160.77	2,223.5	-57.6	11.2	-57.6	0.87	-0.70	17.89
2,319.2	1.51	161.65	2,318.2	-59.8	11.9	-59.9	0.12	0.12	0.93
2,414.0	1.30	157.45	2,413.0	-62.0	12.7	-62.1	0.25	-0.22	-4.43
2,508.7	0.86	151.21	2,507.7	-63.6	13.5	-63.7	0.48	-0.46	-6.58
2,603.5	2.00	153.78	2,602.5	-65.7	14.6	-65.8	1.20	1.20	2.71
2,698.3	2.18	165.78	2,697.2	-69.0	15.7	-69.1	0.50	0.19	12.66
2,793.1	2.64	172.36	2,791.8	-72.9	16.5	-73.0	0.57	0.49	6.94
2,887.8	3.67	172.94	2,886.5	-78.1	17.1	-78.2	1.09	1.09	0.61
2,982.6	4.71	169.50	2,981.0	-84.9	18.2	-85.0	1.13	1.10	-3.63
3,077.4	4.19	167.76	3,075.5	-92.1	19.7	-92.2	0.57	-0.55	-1.84
3,172.1	3.65	167.59	3,170.0	-98.4	21.0	-98.6	0.57	-0.57	-0.18
3,266.9	3.40	174.51	3,264.6	-104.2	22.0	-104.3	0.52	-0.26	7.30
3,361.7	3.42	182.13	3,359.2	-109.8	22.1	-110.0	0.48	0.02	8.04
3,456.4	4.02	181.82	3,453.8	-115.9	21.9	-116.1	0.63	0.63	-0.33
3,551.2	4.04	181.25	3,548.3	-122.6	21.7	-122.8	0.05	0.02	-0.60
3,646.0	4.68	181.11	3,642.8	-129.8	21.6	-130.0	0.68	0.68	-0.15
3,740.8	5.09	177.04	3,737.2	-137.9	21.7	-138.0	0.57	0.43	-4.29
3,835.5	5.04	175.97	3,831.6	-146.2	22.2	-146.4	0.11	-0.05	-1.13
3,930.3	5.93	174.50	3,926.0	-155.2	23.0	-155.4	0.95	0.94	-1.55
4,025.1	6.16	175.94	4,020.2	-165.2	23.8	-165.4	0.29	0.24	1.52
4,119.8	5.30	174.16	4,114.5	-174.6	24.6	-174.8	0.93	-0.91	-1.88
4,214.6	4.38	170.80	4,208.9	-182.5	25.7	-182.7	1.02	-0.97	-3.55
4,309.4	4.59	166.73	4,303.4	-189.8	27.1	-190.0	0.40	0.22	-4.29
4,404.1	5.10	171.90	4,397.9	-197.7	28.6	-197.9	0.71	0.54	5.46
4,498.9	5.41	169.03	4,492.2	-206.2	30.0	-206.4	0.43	0.33	-3.03
4,593.7	5.20	163.15	4,586.6	-214.7	32.1	-214.9	0.61	-0.22	-6.20

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,688.5	4.86	159.12	4,681.0	-222.6	34.8	-222.8	0.52	-0.36	-4.25
4,783.2	5.13	151.30	4,775.4	-230.0	38.3	-230.3	0.77	0.28	-8.25
4,878.0	5.38	152.06	4,869.8	-237.7	42.4	-238.0	0.27	0.26	0.80
4,972.8	5.19	161.05	4,964.2	-245.7	45.8	-246.0	0.90	-0.20	9.49
4,980.7	5.14	161.27	4,972.0	-246.3	46.1	-246.7	0.63	-0.58	2.84
Base Salt									
5,067.5	4.65	164.03	5,058.6	-253.4	48.3	-253.8	0.63	-0.57	3.17
5,162.3	3.41	158.25	5,153.1	-259.7	50.4	-260.1	1.38	-1.31	-6.10
5,229.3	3.39	156.07	5,220.0	-263.4	51.9	-263.7	0.20	-0.03	-3.25
Delaware Mountain Gp									
5,237.3	3.39	155.81	5,228.0	-263.8	52.1	-264.2	0.20	-0.03	-3.28
Lamar									
5,257.1	3.38	155.16	5,247.7	-264.9	52.6	-265.2	0.20	-0.03	-3.28
5,262.4	3.38	155.86	5,253.0	-265.2	52.7	-265.5	0.78	0.05	13.20
Bell Canyon									
5,281.4	3.40	158.36	5,272.0	-266.2	53.2	-266.6	0.78	0.07	13.14
Ramsey Sand									
5,351.8	3.50	167.34	5,342.3	-270.2	54.4	-270.6	0.78	0.15	12.75
5,446.6	4.23	179.50	5,436.9	-276.6	55.1	-276.9	1.15	0.77	12.83
5,541.4	4.98	181.46	5,531.3	-284.2	55.0	-284.5	0.81	0.79	2.07
5,636.2	5.66	178.74	5,625.7	-292.9	55.0	-293.3	0.77	0.72	-2.87
5,730.9	6.81	174.43	5,719.9	-303.2	55.7	-303.6	1.31	1.21	-4.55
5,825.7	7.43	188.98	5,813.9	-314.9	55.2	-315.2	2.01	0.65	15.35
5,920.5	7.85	190.75	5,907.9	-327.3	53.1	-327.6	0.51	0.44	1.87
6,015.2	7.53	191.37	6,001.8	-339.7	50.6	-340.1	0.35	-0.34	0.65
6,110.0	6.73	190.62	6,095.8	-351.3	48.4	-351.6	0.85	-0.84	-0.79
6,202.8	6.15	191.03	6,188.0	-361.5	46.4	-361.8	0.62	-0.62	0.44
Cherry Canyon									
6,204.8	6.14	191.04	6,190.0	-361.7	46.4	-362.0	0.62	-0.62	0.48
6,299.5	6.01	188.62	6,284.2	-371.6	44.7	-371.9	0.30	-0.14	-2.55
6,394.3	5.50	190.90	6,378.5	-380.9	43.1	-381.2	0.59	-0.54	2.41
6,489.1	5.40	190.23	6,472.9	-389.8	41.4	-390.1	0.13	-0.11	-0.71
6,583.9	5.48	190.85	6,567.2	-398.6	39.8	-398.9	0.10	0.08	0.65
6,678.6	5.36	193.90	6,661.6	-407.4	37.9	-407.6	0.33	-0.13	3.22
6,773.4	5.02	191.30	6,755.9	-415.7	36.0	-416.0	0.44	-0.36	-2.74
6,868.2	4.40	192.31	6,850.4	-423.3	34.4	-423.6	0.66	-0.65	1.07
6,962.9	4.30	192.56	6,944.9	-430.4	32.9	-430.6	0.11	-0.11	0.26
7,057.7	5.21	185.19	7,039.3	-438.1	31.7	-438.3	1.15	0.96	-7.78
7,152.5	5.42	183.68	7,133.7	-446.9	31.0	-447.1	0.27	0.22	-1.59
7,247.2	5.11	184.24	7,228.1	-455.5	30.4	-455.7	0.33	-0.33	0.59
7,342.0	5.04	182.87	7,322.5	-463.9	29.9	-464.1	0.15	-0.07	-1.45
7,436.8	5.04	182.05	7,416.9	-472.2	29.6	-472.4	0.08	0.00	-0.87
7,531.6	4.85	179.90	7,511.3	-480.4	29.4	-480.6	0.28	-0.20	-2.27
7,626.3	4.27	170.96	7,605.8	-487.9	30.0	-488.1	0.97	-0.61	-9.43
7,718.8	3.22	167.29	7,698.0	-493.8	31.1	-494.0	1.17	-1.14	-3.97

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Brushy Canyon									
7,721.1	3.19	167.17	7,700.3	-493.9	31.1	-494.1	1.17	-1.13	-5.30
7,815.9	3.27	162.73	7,794.9	-499.1	32.5	-499.3	0.28	0.08	-4.69
7,910.6	2.92	167.33	7,889.6	-504.0	33.8	-504.3	0.45	-0.37	4.85
8,005.4	2.87	181.70	7,984.2	-508.7	34.3	-509.0	0.77	-0.05	15.16
8,100.2	2.53	186.82	8,078.9	-513.2	34.0	-513.4	0.44	-0.36	5.40
8,194.9	2.46	184.08	8,173.6	-517.3	33.6	-517.5	0.15	-0.07	-2.89
8,289.7	2.46	189.58	8,268.3	-521.3	33.1	-521.6	0.25	0.00	5.80
8,384.5	2.34	187.81	8,362.9	-525.3	32.5	-525.5	0.15	-0.13	-1.87
8,479.3	2.24	186.35	8,457.6	-529.0	32.0	-529.2	0.12	-0.11	-1.54
8,574.0	2.25	189.50	8,552.3	-532.7	31.5	-532.9	0.13	0.01	3.32
8,668.8	2.02	194.59	8,647.0	-536.1	30.8	-536.4	0.31	-0.24	5.37
8,732.0	1.90	204.26	8,710.2	-538.2	30.1	-538.4	0.56	-0.19	15.30
8,859.0	1.80	239.64	8,837.1	-541.1	27.5	-541.3	0.89	-0.08	27.86
8,954.0	12.66	318.74	8,931.3	-534.0	19.3	-534.1	13.10	11.43	83.26
9,049.0	25.93	330.87	9,020.8	-507.9	2.2	-507.9	14.52	13.97	12.77
9,090.7	28.86	333.98	9,057.8	-490.9	-6.6	-490.8	7.83	7.04	7.46
FTP @ 9090.7'MD, 100'FSL & 514.3'FEL									
9,144.0	32.70	337.20	9,103.6	-466.1	-17.8	-465.9	7.83	7.20	6.04
9,167.3	34.88	339.77	9,123.0	-454.0	-22.6	-453.8	11.18	9.35	11.02
Bone Spring Lime									
9,239.0	41.85	346.16	9,179.2	-411.5	-35.4	-411.2	11.18	9.72	8.91
9,333.0	48.26	353.28	9,245.6	-346.1	-47.0	-345.7	8.67	6.82	7.57
9,347.5	49.36	354.04	9,255.1	-335.3	-48.2	-334.9	8.60	7.64	5.24
FTP (Zeus Unit State #106H) v2									
9,350.3	49.58	354.19	9,257.0	-333.1	-48.5	-332.7	8.60	7.66	5.14
Upper Avalon									
9,428.0	55.60	357.85	9,304.2	-271.6	-52.7	-271.2	8.60	7.74	4.72
9,523.0	65.19	359.17	9,351.1	-189.1	-54.8	-188.7	10.17	10.09	1.39
9,618.0	77.27	358.29	9,381.6	-99.4	-56.8	-99.0	12.75	12.72	-0.93
9,712.0	82.46	355.13	9,398.1	-7.0	-62.1	-6.6	6.44	5.52	-3.36
9,806.0	85.45	353.99	9,408.0	86.0	-71.0	86.5	3.40	3.18	-1.21
9,901.0	89.41	354.34	9,412.3	180.4	-80.6	181.0	4.18	4.17	0.37
9,995.0	88.35	354.25	9,414.1	273.9	-90.0	274.6	1.13	-1.13	-0.10
10,090.0	89.67	354.16	9,415.7	368.4	-99.5	369.1	1.39	1.39	-0.09
10,185.0	89.98	355.39	9,416.0	463.0	-108.2	463.8	1.34	0.33	1.29
10,280.0	88.31	355.92	9,417.4	557.7	-115.4	558.6	1.84	-1.76	0.56
10,374.0	88.75	355.74	9,419.9	651.5	-122.2	652.3	0.51	0.47	-0.19
10,469.0	89.36	356.45	9,421.4	746.2	-128.7	747.1	0.99	0.64	0.75
10,564.0	86.55	355.92	9,424.8	840.9	-135.0	841.9	3.01	-2.96	-0.56
10,658.0	86.64	356.45	9,430.4	934.6	-141.3	935.6	0.57	0.10	0.56
10,753.0	88.57	357.76	9,434.4	1,029.4	-146.0	1,030.4	2.45	2.03	1.38
10,848.0	88.48	357.59	9,436.8	1,124.3	-149.9	1,125.3	0.20	-0.09	-0.18
10,943.0	89.32	357.06	9,438.6	1,219.1	-154.3	1,220.2	1.05	0.88	-0.56

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Zeus Unit State #106H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB @ 3644.0usft (H&P 388)
Site:	(Zeus State) Sec-9_T24-S_R-33-E	MD Reference:	KB @ 3644.0usft (H&P 388)
Well:	Zeus Unit State #106H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,038.0	90.37	357.76	9,438.9	1,314.0	-158.6	1,315.1	1.33	1.11	0.74
11,132.0	91.69	357.85	9,437.2	1,407.9	-162.2	1,409.1	1.41	1.40	0.10
11,227.0	91.21	359.43	9,434.8	1,502.9	-164.5	1,504.0	1.74	-0.51	1.66
11,322.0	91.03	359.96	9,432.9	1,597.9	-165.0	1,599.0	0.59	-0.19	0.56
11,416.0	88.62	359.70	9,433.2	1,691.9	-165.3	1,693.0	2.58	-2.56	-0.28
11,511.0	89.85	359.96	9,434.5	1,786.8	-165.5	1,788.0	1.32	1.29	0.27
11,606.0	90.86	0.40	9,433.9	1,881.8	-165.2	1,883.0	1.16	1.06	0.46
11,701.0	90.20	1.19	9,433.0	1,976.8	-163.9	1,978.0	1.08	-0.69	0.83
11,722.9	89.80	1.19	9,433.0	1,998.7	-163.5	1,999.8	1.81	-1.81	0.00
2000'VS (Zeus Unit State #106H)									
11,796.0	88.48	1.19	9,434.1	2,071.8	-162.0	2,072.9	1.81	-1.81	0.00
11,890.0	88.66	1.37	9,436.5	2,165.7	-159.9	2,166.8	0.27	0.19	0.19
11,985.0	89.14	0.84	9,438.3	2,260.7	-158.0	2,261.8	0.75	0.51	-0.56
12,080.0	90.20	1.72	9,438.8	2,355.7	-155.9	2,356.7	1.45	1.12	0.93
12,174.0	87.56	359.70	9,440.7	2,449.6	-154.7	2,450.7	3.54	-2.81	-2.15
12,269.0	86.99	0.05	9,445.2	2,544.5	-154.9	2,545.6	0.70	-0.60	0.37
12,364.0	88.92	359.70	9,448.6	2,639.5	-155.2	2,640.5	2.06	2.03	-0.37
12,459.0	91.25	359.43	9,448.4	2,734.5	-155.9	2,735.5	2.47	2.45	-0.28
12,554.0	92.48	0.14	9,445.4	2,829.4	-156.2	2,830.5	1.49	1.29	0.75
12,648.0	92.53	359.70	9,441.2	2,923.3	-156.4	2,924.4	0.47	0.05	-0.47
12,743.0	92.18	359.43	9,437.3	3,018.2	-157.1	3,019.3	0.47	-0.37	-0.28
12,838.0	92.26	358.82	9,433.7	3,113.2	-158.5	3,114.2	0.65	0.08	-0.64
12,933.0	93.10	359.35	9,429.2	3,208.0	-160.0	3,209.1	1.05	0.88	0.56
13,027.0	89.71	0.23	9,426.9	3,302.0	-160.4	3,303.1	3.73	-3.61	0.94
13,122.0	88.53	359.70	9,428.4	3,397.0	-160.5	3,398.0	1.36	-1.24	-0.56
13,217.0	87.87	359.00	9,431.4	3,491.9	-161.5	3,493.0	1.01	-0.69	-0.74
13,312.0	88.44	358.12	9,434.4	3,586.8	-163.9	3,587.9	1.10	0.60	-0.93
13,407.0	89.41	358.20	9,436.2	3,681.8	-167.0	3,682.9	1.02	1.02	0.08
13,501.0	90.02	358.20	9,436.7	3,775.7	-169.9	3,776.8	0.65	0.65	0.00
13,596.0	90.90	357.76	9,435.9	3,870.7	-173.3	3,871.8	1.04	0.93	-0.46
13,691.0	90.33	358.20	9,434.9	3,965.6	-176.6	3,966.8	0.76	-0.60	0.46
13,786.0	89.14	359.52	9,435.3	4,060.6	-178.5	4,061.7	1.87	-1.25	1.39
13,881.0	89.71	359.61	9,436.3	4,155.6	-179.2	4,156.7	0.61	0.60	0.09
13,975.0	90.59	359.96	9,436.0	4,249.6	-179.6	4,250.7	1.01	0.94	0.37
14,070.0	89.58	359.17	9,435.9	4,344.6	-180.3	4,345.7	1.35	-1.06	-0.83
14,165.0	89.49	359.79	9,436.7	4,439.6	-181.2	4,440.7	0.66	-0.09	0.65
14,260.0	90.29	359.79	9,436.8	4,534.6	-181.5	4,535.7	0.84	0.84	0.00
14,312.2	90.95	359.79	9,436.3	4,586.7	-181.7	4,587.9	1.27	1.27	0.00
LTP (Zeus Unit State #106H)									
14,312.5	90.96	359.79	9,436.3	4,587.0	-181.7	4,588.2	1.27	1.27	0.00
LTP (Zeus Unit State #106H) v2 - LTP (Zeus Unit State #106H) v3									
14,313.0	90.96	359.79	9,436.3	4,587.5	-181.7	4,588.7	1.31	1.31	0.00
LTP @ 14313.0'MD, 100'FNL & 654.2'FEL									
14,315.0	90.99	359.79	9,436.2	4,589.5	-181.7	4,590.7	1.27	1.27	0.00

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Zeus Unit State #106H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB @ 3644.0usft (H&P 388)
Site:	(Zeus State) Sec-9_T24-S_R-33-E	MD Reference:	KB @ 3644.0usft (H&P 388)
Well:	Zeus Unit State #106H	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)
LAST SVY									
14,382.0	90.99	359.79	9,435.1	4,656.5	-182.0	4,657.7	0.00	0.00	0.00
Projection to TD @ 14382'MD, 30.9'FNL & 654'FEL - PBHL (Zeus Unit State #106H) v2 - PBHL (Zeus Unit State #106H) - F									

Design Targets									
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	
	- Shape								Latitude Longitude
FTP (Zeus Unit State	- actual wellpath misses target center by 250.3usft at 9347.5usft MD (9255.1 TVD, -335.3 N, -48.2 E)	0.00	0.00	9,421.0	-492.0	-151.0	446,477.00	775,802.00	32° 13' 30.603 N 103° 34' 30.424 W
	- Point								
LTP (Zeus Unit State :	- actual wellpath misses target center by 5.4usft at 14312.5usft MD (9436.3 TVD, 4587.0 N, -181.7 E)	0.00	0.00	9,435.0	4,587.0	-187.0	451,556.00	775,766.00	32° 14' 20.863 N 103° 34' 30.426 W
	- Point								
2000'VS (Zeus Unit Si	- actual wellpath misses target center by 5.8usft at 11722.9usft MD (9433.0 TVD, 1998.7 N, -163.5 E)	0.40	359.59	9,435.0	1,998.8	-169.0	448,967.80	775,784.03	32° 13' 55.251 N 103° 34' 30.429 W
	- Rectangle (sides W100.0 H2,490.0 D30.0)								
PBHL (Zeus Unit Stati	- actual wellpath misses target center by 6.1usft at 14382.0usft MD (9435.1 TVD, 4656.5 N, -182.0 E)	0.00	359.59	9,435.0	4,657.0	-188.0	451,626.00	775,765.00	32° 14' 21.556 N 103° 34' 30.432 W
	- Rectangle (sides W100.0 H2,658.3 D30.0)								

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,264.4	1,264.0	Rustler Anhydrite				
1,766.6	1,766.0	Top Salt				
4,980.7	4,972.0	Base Salt				
5,229.3	5,220.0	Delaware Mountain Gp				
5,237.3	5,228.0	Lamar				
5,262.4	5,253.0	Bell Canyon				
5,281.4	5,272.0	Ramsey Sand				
6,202.8	6,188.0	Cherry Canyon				
7,718.8	7,698.0	Brushy Canyon				
9,167.3	9,123.0	Bone Spring Lime				
9,350.3	9,257.0	Upper Avalon				

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,090.7	9,057.8	-490.9	-6.6	FTP @ 9090.7'MD, 100'FSL & 514.3'FEL
14,313.0	9,436.3	4,587.5	-181.7	LTP @ 14313.0'MD, 100'FNL & 654.2'FEL
14,315.0	9,436.2	4,589.5	-181.7	LAST SVY
14,382.0	9,435.1	4,656.5	-182.0	Projection to TD @ 14382'MD, 30.9'FNL & 654'FEL



Intrepid
Survey Report



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Zeus Unit State #106H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB @ 3644.0usft (H&P 388)
Site:	(Zeus State) Sec-9_T24-S_R-33-E	MD Reference:	KB @ 3644.0usft (H&P 388)
Well:	Zeus Unit State #106H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Checked By: _____	Approved By: _____	Date: _____
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