

RECEIVED

AUG 06 2019

DISTRICT II-ARTESIA O.C.D.

COMPANY: Tap Rock Resources, LLC
FIELD: Lea County, NM (NAD 83 NME)
WELL NAME: Zeus Unit State #216H
WELLBORE NAME: OWB
Survey Name: AWB
Extraction Date: 2019/05/27

Calculation Method: Minimum Curvature
Datum Name: KB
LAT:Reference: Well

Slot EW Map (us/ft): 775863.000
Slot NS Map (us/ft): 446980.000
Surface Latitude Map: 32° 13' 35.576 N
Surface Longitude Map: 103° 34' 29.673 W
Bottom Hole MD (us/ft): 17729.00
Bottom Hole TVD (us/ft): 12784.17
Bottom Hole EW Map (us/ft): 776074.674
Bottom Hole NS Map (us/ft): 451626.664

GL Elevation: 3617.00
KB Elevation: 3643.50

MAGNETIC CALCULATION DATE.....: 15-Apr-2019
Map-Zone: New Mexico Eastern Zone
North Reference: Grid
Total Correction: 6.35
Magnetic dip: 60.04
Magnetic field strength: 47750.00
Geo Datum: North American Datum 1983
VSDIR: 359.59

HOBBS OCD

AUG 07 2019

RECEIVED

Measured Depth (ft)	Incl.	Azim.	TVD (ft)	NS (ft)	EW (ft)	Vertical Section (ft)	Dogleg Rate (dega/100ft)	Easting	Northing
0	0	0	0	0	0	0	0	775863	446980
211	0.75	206.04	210.99	-1.24	-0.61	-1.24	0.36	775862.4	446978.8
330	1.41	178.97	329.97	-3.4	-0.92	-3.4	0.69	775862.1	446976.6
391	0.97	175.98	390.96	-4.67	-0.87	-4.66	0.73	775862.1	446975.3
516	1.05	170.71	515.94	-6.86	-0.61	-6.85	0.1	775862.4	446973.1
608	1.1	148.82	607.92	-8.44	-0.02	-8.44	0.45	775863	446971.6
792	0.84	174.31	791.9	-11.3	1.03	-11.3	0.27	775864	446968.7
884	1.93	178.62	883.87	-13.52	1.13	-13.52	1.19	775864.1	446966.5
976	2.77	180.37	975.79	-17.29	1.16	-17.3	0.92	775864.2	446962.7
1067	3.43	175.36	1066.66	-22.2	1.36	-22.21	0.78	775864.4	446957.8
1160	3.47	166.57	1159.49	-27.71	2.24	-27.73	0.57	775865.2	446952.3
1296	2.99	165.26	1295.27	-35.14	4.1	-35.17	0.36	775867.1	446944.9
1442	2.29	163.59	1441.12	-41.62	5.89	-41.67	0.48	775868.9	446938.4
1537	3.82	158.75	1535.98	-46.4	7.57	-46.45	1.63	775870.6	446933.6
1632	5.63	160.51	1630.65	-53.74	10.28	-53.81	1.91	775873.3	446926.3
1726	6.77	163.67	1724.1	-63.4	13.37	-63.5	1.27	775876.4	446916.6
1821	6.73	164.2	1818.44	-74.13	16.46	-74.25	0.08	775879.5	446905.9
1916	6.46	164.11	1912.82	-84.63	19.44	-84.77	0.28	775882.4	446895.4
2011	6.24	164.82	2007.23	-94.75	22.26	-94.91	0.25	775885.3	446885.2
2106	5.93	163.67	2101.7	-104.44	24.99	-104.62	0.35	775888	446875.6
2201	5.71	162.36	2196.21	-113.66	27.8	-113.85	0.27	775890.8	446866.3
2295	5.63	161.39	2289.75	-122.48	30.69	-122.7	0.13	775893.7	446857.5
2390	5.36	160.42	2384.31	-131.08	33.66	-131.32	0.3	775896.7	446848.9
2485	5.1	161.83	2478.92	-139.27	36.47	-139.53	0.31	775899.5	446840.7
2580	5.27	156.73	2573.53	-147.29	39.51	-147.57	0.52	775902.5	446832.7
2675	5.49	150.4	2668.11	-155.25	43.48	-155.56	0.67	775906.5	446824.7
2770	5.23	153.39	2762.69	-163.07	47.66	-163.41	0.4	775910.7	446816.9
2864	4.75	151.81	2856.34	-170.33	51.42	-170.7	0.53	775914.4	446809.7
2959	4.48	150.75	2951.03	-177.04	55.09	-177.43	0.3	775918.1	446803
3054	4.04	151.28	3045.77	-183.21	58.51	-183.62	0.47	775921.5	446796.8

3149	4.66	152.16	3140.49	-189.56	61.92	-190	0.66	775924.9	446790.4
3244	5.19	153.13	3235.14	-196.8	65.66	-197.27	0.56	775928.7	446783.2
3339	4.92	152.86	3329.77	-204.26	69.46	-204.75	0.29	775932.5	446775.7
3433	4.4	151.55	3423.46	-211.02	73.02	-211.54	0.56	775936	446769
3528	4.79	153.04	3518.16	-217.76	76.56	-218.3	0.43	775939.6	446762.2
3623	5.71	153.48	3612.76	-225.52	80.46	-226.09	0.97	775943.5	446754.5
3717	5.45	153.48	3706.31	-233.7	84.54	-234.3	0.28	775947.5	446746.3
3812	4.88	152.34	3800.92	-241.32	88.44	-241.94	0.61	775951.4	446738.7
3907	4.4	151.63	3895.61	-248.1	92.04	-248.75	0.51	775955	446731.9
4002	4.79	157.08	3990.31	-254.96	95.32	-255.64	0.62	775958.3	446725
4097	5.19	159.28	4084.95	-262.63	98.38	-263.33	0.47	775961.4	446717.4
4191	4.66	158.05	4178.6	-270.15	101.32	-270.87	0.57	775964.3	446709.8
4286	4.22	156.82	4273.32	-276.94	104.13	-277.68	0.47	775967.1	446703.1
4381	5.19	157.79	4367.99	-284.14	107.13	-284.9	1.02	775970.1	446695.9
4475	6.95	154.71	4461.46	-293.22	111.17	-294	1.9	775974.2	446686.8
4570	7.65	151.72	4555.69	-303.98	116.62	-304.81	0.84	775979.6	446676
4665	7.25	151.9	4649.89	-314.84	122.44	-315.71	0.42	775985.4	446665.2
4760	7.56	151.02	4744.1	-325.59	128.29	-326.5	0.35	775991.3	446654.4
4855	8.18	150.58	4838.2	-336.95	134.64	-337.9	0.66	775997.6	446643.1
4950	7.38	156.91	4932.33	-348.45	140.35	-349.44	1.23	776003.4	446631.6
4991	7.03	158.75	4973.01	-353.21	142.3	-354.22	1.02	776005.3	446626.8
5129	6.51	161.56	5110.04	-368.5	147.83	-369.55	0.45	776010.8	446611.5
5223	6.15	161.92	5203.47	-378.34	151.08	-379.41	0.39	776014.1	446601.7
5318	5.71	160.69	5297.96	-387.64	154.22	-388.73	0.48	776017.2	446592.4
5412	5.71	161.65	5391.5	-396.49	157.24	-397.6	0.1	776020.2	446583.5
5507	5.71	162.27	5486.02	-405.48	160.17	-406.61	0.06	776023.2	446574.5
5602	5.54	160.69	5580.57	-414.31	163.12	-415.46	0.24	776026.1	446565.7
5697	5.23	158.58	5675.15	-422.66	166.22	-423.84	0.39	776029.2	446557.3
5792	5.14	159.37	5769.76	-430.68	169.3	-431.88	0.12	776032.3	446549.3
5886	5.36	159.28	5863.36	-438.72	172.34	-439.95	0.23	776035.3	446541.3
5981	5.63	157.7	5957.93	-447.19	175.68	-448.43	0.33	776038.7	446532.8
6075	5.01	158.31	6051.52	-455.27	178.94	-456.53	0.66	776041.9	446524.7
6170	4.4	157.26	6146.2	-462.48	181.88	-463.77	0.65	776044.9	446517.5
6264	4.48	157.79	6239.92	-469.21	184.67	-470.52	0.1	776047.7	446510.8

6359	4.4	155.5	6334.64	-475.96	187.58	-477.29	0.2	776050.6	446504
6454	4.22	157.08	6429.37	-482.49	190.45	-483.84	0.23	776053.5	446497.5
6549	4.4	160.42	6524.1	-489.15	193.03	-490.51	0.33	776056	446490.9
6644	4.48	160.33	6618.81	-496.07	195.5	-497.46	0.08	776058.5	446483.9
6739	4.44	160.16	6713.53	-503.03	198	-504.43	0.04	776061	446477
6834	4.22	159.46	6808.25	-509.76	200.48	-511.18	0.24	776063.5	446470.2
6928	4.13	161.48	6902	-516.21	202.76	-517.64	0.18	776065.8	446463.8
7023	4.04	160.33	6996.76	-522.6	204.98	-524.05	0.13	776068	446457.4
7118	4.18	160.25	7091.52	-529.01	207.27	-530.48	0.15	776070.3	446451
7213	2.33	163.06	7186.36	-534.12	209.01	-535.6	1.95	776072	446445.9
7307	1.14	158.4	7280.32	-536.81	209.91	-538.3	1.27	776072.9	446443.2
7402	1.45	161.04	7375.29	-538.83	210.65	-540.32	0.33	776073.6	446441.2
7497	1.41	170.18	7470.26	-541.12	211.24	-542.62	0.24	776074.2	446438.9
7592	1.71	165.08	7565.23	-543.64	211.8	-545.14	0.35	776074.8	446436.4
7686	0.22	133.18	7659.21	-545.12	212.29	-546.62	1.63	776075.3	446434.9
7781	0.44	214.21	7754.21	-545.54	212.22	-547.05	0.48	776075.2	446434.5
7876	0.66	162.8	7849.21	-546.37	212.18	-547.87	0.54	776075.2	446433.6
7970	0.88	180.99	7943.2	-547.61	212.32	-549.11	0.35	776075.3	446432.4
8065	1.14	185.38	8038.18	-549.28	212.22	-550.78	0.29	776075.2	446430.7
8160	1.05	194	8133.17	-551.06	211.92	-552.57	0.2	776074.9	446428.9
8255	0.88	194	8228.15	-552.62	211.54	-554.12	0.18	776074.5	446427.4
8349	0.92	227.66	8322.14	-553.82	210.8	-555.32	0.56	776073.8	446426.2
8444	0.88	212.81	8417.13	-554.95	209.85	-556.44	0.25	776072.8	446425
8539	1.05	210.08	8512.12	-556.32	209.01	-557.8	0.19	776072	446423.7
8634	1.27	216.85	8607.1	-557.91	207.95	-559.39	0.27	776070.9	446422.1
8728	1.32	228.54	8701.07	-559.46	206.51	-560.93	0.29	776069.5	446420.5
8823	0.35	263.34	8796.06	-560.22	205.4	-561.68	1.11	776068.4	446419.8
8917	0.7	25.07	8890.06	-559.74	205.36	-561.19	0.99	776068.4	446420.3
9012	0.44	24.1	8985.06	-558.88	205.76	-560.33	0.27	776068.8	446421.1
9107	0.4	350	9080.05	-558.22	205.85	-559.68	0.26	776068.8	446421.8
9202	0.04	68.58	9175.05	-557.88	205.82	-559.34	0.41	776068.8	446422.1
9296	0.26	8.99	9269.05	-557.66	205.88	-559.11	0.26	776068.9	446422.3
9391	0.09	214.04	9364.05	-557.5	205.88	-558.96	0.36	776068.9	446422.5
9485	0.48	275.12	9458.05	-557.53	205.44	-558.99	0.47	776068.4	446422.5

9580	0.53	237.33	9553.05	-557.73	204.68	-559.18	0.35	776067.7	446422.3
9675	0.62	219.66	9648.04	-558.37	203.98	-559.81	0.21	776067	446421.6
9769	0.35	222.21	9742.04	-558.97	203.46	-560.41	0.29	776066.5	446421
9864	0.88	254.03	9837.03	-559.39	202.56	-560.82	0.64	776065.6	446420.6
9958	1.05	277.58	9931.02	-559.47	201.02	-560.89	0.45	776064	446420.5
10053	1.01	268.26	10026	-559.38	199.32	-560.79	0.18	776062.3	446420.6
10148	1.67	241.98	10120.98	-560.06	197.26	-561.45	0.93	776060.3	446419.9
10242	2.07	234.16	10214.93	-561.69	194.67	-563.07	0.5	776057.7	446418.3
10337	0.66	254.99	10309.9	-562.84	192.75	-564.21	1.55	776055.8	446417.2
10431	0.79	44.23	10403.9	-562.52	192.68	-563.88	1.49	776055.7	446417.5
10525	0.35	63.39	10497.89	-561.92	193.39	-563.29	0.5	776056.4	446418.1
10620	0.48	11.8	10592.89	-561.4	193.73	-562.78	0.4	776056.7	446418.6
10715	0.79	2.13	10687.88	-560.36	193.84	-561.73	0.34	776056.8	446419.6
10809	0.13	277.67	10781.88	-559.7	193.76	-561.07	0.84	776056.8	446420.3
10904	0.75	169.3	10876.88	-560.29	193.76	-561.67	0.84	776056.8	446419.7
10999	1.19	168.42	10971.86	-561.87	194.08	-563.25	0.46	776057.1	446418.1
11094	0.31	256.66	11066.86	-562.9	194.03	-564.27	1.28	776057	446417.1
11188	1.54	282.5	11160.84	-562.68	192.55	-564.05	1.35	776055.5	446417.3
11283	1.8	307.99	11255.8	-561.49	190.12	-562.83	0.82	776053.1	446418.5
11378	2.02	314.41	11350.75	-559.4	187.75	-560.73	0.32	776050.8	446420.6
11472	1.71	343.94	11444.7	-556.89	186.18	-558.21	1.06	776049.2	446423.1
11567	2.9	13.73	11539.63	-553.19	186.36	-554.51	1.74	776049.4	446426.8
11662	2.86	8.9	11634.51	-548.52	187.29	-549.84	0.26	776050.3	446431.5
11756	2.37	23.31	11728.41	-544.42	188.43	-545.75	0.87	776051.4	446435.6
11851	2.15	36.94	11823.34	-541.19	190.27	-542.54	0.61	776053.3	446438.8
11945	1.27	15.58	11917.3	-538.78	191.61	-540.13	1.14	776054.6	446441.2
12040	1.27	15.4	12012.27	-536.75	192.18	-538.11	0	776055.2	446443.3
12070	1.19	7.4	12042.27	-536.12	192.31	-537.48	0.63	776055.3	446443.9
12169	1.32	31.31	12141.24	-534.12	193.03	-535.49	0.54	776056	446445.9
12264	6.9	17.69	12235.96	-527.75	195.33	-529.13	5.92	776058.3	446452.3
12311	12.62	18.57	12282.26	-520.18	197.83	-521.59	12.17	776060.8	446459.8
12359	15.96	19.89	12328.77	-509	201.75	-510.43	6.99	776064.7	446471
12387.2	16.979	15.334	12355.82	-501.39	204.15	-502.83	5.83	776067.2	446478.6 FTP @ 12387.2'MD, 100'FSL & 394
12406	17.71	12.59	12373.76	-495.95	205.5	-497.41	5.83	776068.5	446484.1

12454	20.4	8.02	12419.13	-480.54	208.26	-482.01	6.4	776071.3	446499.5
12548	29.14	6.53	12504.4	-441.5	213.16	-443.01	9.32	776076.2	446538.5
12643	41.19	1.52	12581.93	-387.04	216.63	-388.58	13.03	776079.6	446593
12737	52.92	0.37	12645.86	-318.36	217.7	-319.91	12.51	776080.7	446661.6
12784	60.31	0.11	12671.71	-279.14	217.86	-280.69	15.73	776080.9	446700.9
12832	66.55	1.16	12693.17	-236.24	218.35	-237.79	13.15	776081.3	446743.8
12879	68.31	0.81	12711.21	-192.84	219.09	-194.41	3.81	776082.1	446787.2
12927	72.62	0.9	12727.25	-147.62	219.77	-149.19	8.98	776082.8	446832.4
12974	80.18	1.78	12738.3	-101.99	220.84	-103.56	16.19	776083.8	446878
13022	82.99	3.1	12745.32	-54.55	222.86	-56.15	6.46	776085.9	446925.4
13116	88.7	4.33	12752.13	38.96	228.94	37.32	6.21	776091.9	447019
13211	90.86	4.24	12752.5	133.69	236.04	132	2.28	776099	447113.7
13301	92.18	5.12	12750.11	223.36	243.38	221.61	1.76	776106.4	447203.4
13396	90.55	3.27	12747.84	318.07	250.32	316.27	2.59	776113.3	447298.1
13490	90.11	3.1	12747.3	411.92	255.55	410.08	0.5	776118.5	447391.9
13585	89.63	3.1	12747.52	506.78	260.68	504.9	0.51	776123.7	447486.8
13679	89.8	3.8	12747.99	600.61	266.34	598.69	0.77	776129.3	447580.6
13774	87.87	3.8	12749.92	695.38	272.64	693.41	2.03	776135.6	447675.4
13869	87.03	2.57	12754.14	790.13	277.91	788.12	1.57	776140.9	447770.1
13964	87.03	2.92	12759.07	884.9	282.45	882.85	0.37	776145.5	447864.9
14059	88	1.69	12763.19	979.73	286.27	977.65	1.65	776149.3	447959.7
14154	89.23	0.55	12765.48	1074.68	288.12	1072.59	1.77	776151.1	448054.7
14249	89.67	0.11	12766.39	1169.67	288.67	1167.58	0.65	776151.7	448149.7
14344	89.54	359.49	12767.05	1264.67	288.34	1262.57	0.67	776151.3	448244.7
14439	88.79	358.88	12768.43	1359.65	286.99	1357.56	1.02	776150	448339.6
14534	89.93	358.53	12769.49	1454.62	284.84	1452.54	1.26	776147.8	448434.6
14629	89.98	358.7	12769.57	1549.59	282.55	1547.53	0.19	776145.5	448529.6
14724	89.63	0.02	12769.89	1644.58	281.49	1642.52	1.44	776144.5	448624.6
14820	89.76	358.97	12770.4	1740.57	280.64	1738.52	1.1	776143.6	448720.6
14915	90.37	359.93	12770.3	1835.57	279.73	1833.52	1.2	776142.7	448815.6
15010	90.11	0.55	12769.9	1930.56	280.13	1928.51	0.71	776143.1	448910.6
15105	88.04	1.16	12771.43	2025.54	281.54	2023.47	2.27	776144.5	449005.5
15200	88.44	359.58	12774.35	2120.49	282.16	2118.41	1.71	776145.2	449100.5
15295	88.97	358.7	12776.5	2215.45	280.73	2213.38	1.08	776143.7	449195.5

15389	88.18	358.97	12778.83	2309.4	278.82	2307.35	0.89	776141.8	449289.4
15484	90.07	358.35	12780.28	2404.36	276.6	2402.32	2.09	776139.6	449384.4
15579	88.62	355.89	12781.37	2499.22	271.83	2497.21	3.01	776134.8	449479.2
15673	89.76	356.68	12782.7	2593.01	265.74	2591.05	1.48	776128.7	449573
15769	91.38	359.58	12781.74	2688.94	262.6	2687	3.46	776125.6	449668.9
15864	89.23	358.44	12781.24	2783.92	260.96	2781.98	2.56	776124	449763.9
15958	91.47	357.74	12780.66	2877.86	257.83	2875.94	2.5	776120.8	449857.9
16053	93.05	357.74	12776.92	2972.71	254.09	2970.82	1.66	776117.1	449952.7
16148	92.88	357.39	12772	3067.5	250.06	3065.63	0.41	776113.1	450047.5
16243	93.05	357.65	12767.09	3162.28	245.95	3160.44	0.33	776109	450142.3
16338	91.82	357.65	12763.05	3257.11	242.06	3255.3	1.29	776105.1	450237.1
16432	91.78	357.56	12760.1	3350.99	238.13	3349.2	0.1	776101.1	450331
16527	91.43	357.12	12757.44	3445.85	233.73	3444.08	0.59	776096.7	450425.8
16622	92.48	358	12754.2	3540.7	229.68	3538.97	1.44	776092.7	450520.7
16717	91.16	358.53	12751.18	3635.61	226.81	3633.89	1.5	776089.8	450615.6
16812	90.2	359.67	12750.06	3730.59	225.32	3728.88	1.57	776088.3	450710.6
16907	89.45	359.49	12750.35	3825.58	224.62	3823.88	0.81	776087.6	450805.6
17002	88.4	359.14	12752.13	3920.56	223.48	3918.86	1.17	776086.5	450900.6
17097	87.82	359.23	12755.26	4015.5	222.13	4013.8	0.62	776085.1	450995.5
17192	87.25	359.32	12759.35	4110.4	220.93	4108.71	0.61	776083.9	451090.4
17286	88.35	359.58	12762.96	4204.33	220.03	4202.64	1.2	776083	451184.3
17381	88.31	359.41	12765.72	4299.28	219.19	4297.6	0.18	776082.2	451279.3
17476	87.47	359.23	12769.22	4394.21	218.07	4392.54	0.9	776081.1	451374.2
17571	87.16	358.79	12773.67	4489.09	216.43	4487.43	0.57	776079.4	451469.1
17653	85.85	358.09	12778.67	4570.91	214.2	4569.26	1.81	776077.2	451550.9 LAST SVY
17659.8	85.85	358.09	12779.16	4577.68	213.97	4576.04	0	776077	451557.7 LTP @ 17659.8'MD, 100'FNL & 34'
17729	85.85	358.09	12784.17	4646.66	211.67	4645.03	0	776074.7	451626.7 Projection to TD @ 17729'MD, 31'