

Crestone Peak Resources

CO, Weld County (NAD 83 NZ)
Sec 21 Twn 02 N Rng 68 W
Dream Weaver South 3E-21H-N268 Original Hole
05-123-47948
Ensign 142



Final Survey Report

27-Mar-2020

Well Coordinates:	NAD83 Colorado State Plane, NZ, US Ft	
	40.119642	-105.011011
	1286806.62 usFt	3136751 usFt
Ground Level:	4901.00 ft MSL	
TVD Reference:	KB 28ft @ 4929.00 ft MSL	
Local Coordinate Origin:	Dream Weaver South 3E-21H-N268 well head	
Vertical Section Azimuth:	183.103 ° (True North)	
North Reference:	True North	

DOX Version: 2.1

Dream Weaver South 3E-21H-N268 MWD 0' to 19110' Definitive Survey Geodetic Report (Def Survey)



Report Date: March 27, 2020 - 03:26 PM	Survey / DLS Computation: Minimum Curvature / Lubinski	
Client: Crestone Peak Resources	Vertical Section Azimuth: 183.103 ° (True North)	
Field: CO, Weld County (NAD 83 NZ) - 2019	Vertical Section Origin: 0.000 ft, 0.000 ft	
Structure / Slot: Crestone Peak 21-02N-68W (Dream Weaver Pad) / Dream Weaver South 3E-21H-N268	TVD Reference Datum: KB 28ft	
Well: Dream Weaver South 3E-21H-N268	TVD Reference Elevation: 4929.000 ft above MSL	
Borehole: Original Hole	Seabed / Ground Elevation: 4901.000 ft above MSL	
UWI / API#: Unknown / 05-123-47948	Magnetic Declination: 8.321 °	
Survey Name: Dream Weaver South 3E-21H-N268 MWD 0' to 19110' Definitive	Total Gravity Field Strength: 998.9832mgn (9.80665 Based)	
Survey Date: September 05, 2019	Gravity Model: GARM	
Tort / AHD / DDI / ERD Ratio: 242.287 ° / 12905.860 ft / 6.902 / 1.722	Total Magnetic Field Strength: 51903.694 nT	
Coordinate Reference System: NAD83 Colorado State Plane, Northern Zone, US Feet	Magnetic Dip Angle: 66.412 °	
Location Lat / Long: N 40° 7' 10.71120", W 105° 0' 39.63960"	Declination Date: March 09, 2020	
Location Grid N/E Y/X: N 1286806.620 ftUS, E 3136750.998 ftUS	Magnetic Declination Model: HDGM 2019	
CRS Grid Convergence Angle: 0.3160 °	North Reference: True North	
Grid Scale Factor: 0.99995945	Grid Convergence Used: 0.0000 °	
Version / Patch: 2.10.787.0	Total Corr Mag North->True North: 8.3210 °	
	Local Coord Referenced To: Well Head	

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	NS (ft)	EW (ft)	VSEC (ft)	DLS (°/100ft)	BR (°/100ft)
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A
KB Adjustment	15.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00
Begin Surface Survey	176.00	0.62	200.04	176.00	-0.82	-0.30	0.83	0.39	0.39
	267.00	1.06	180.26	266.99	-2.12	-0.47	2.14	0.57	0.48
	388.00	0.97	290.13	387.98	-2.89	-1.44	2.96	1.37	-0.07
	457.00	2.45	325.85	456.95	-1.47	-2.81	1.62	2.55	2.14
	547.00	2.93	3.77	546.85	2.42	-3.74	-2.21	2.01	0.53
	636.00	2.07	34.61	635.77	6.01	-2.68	-5.86	1.76	-0.97
	725.00	0.55	347.39	724.75	7.75	-1.86	-7.64	1.96	-1.71
	814.00	1.93	339.72	813.72	9.58	-2.47	-9.43	1.56	1.55
	903.00	4.37	352.56	902.58	14.34	-3.43	-14.14	2.84	2.74
	993.00	8.22	355.89	992.02	24.17	-4.34	-23.89	4.30	4.28
	1082.00	9.28	341.01	1080.00	37.30	-7.13	-36.86	2.80	1.19
	1171.00	8.84	325.29	1167.90	49.71	-13.36	-48.91	2.82	-0.49
	1261.00	8.98	318.47	1256.82	60.65	-21.95	-59.37	1.18	0.16
	1350.00	9.00	317.61	1344.73	70.99	-31.25	-69.20	0.15	0.02
	1439.00	9.01	318.70	1432.63	81.37	-40.55	-79.06	0.19	0.01
	1528.00	9.27	320.91	1520.50	92.17	-49.66	-89.35	0.49	0.29
	1614.00	9.70	322.51	1605.32	103.29	-58.44	-99.98	0.59	0.50
	1703.00	9.85	323.07	1693.03	115.33	-67.58	-111.50	0.20	0.17
	1793.00	9.86	322.10	1781.70	127.56	-76.94	-123.21	0.18	0.01
	1882.00	9.51	324.05	1869.43	139.53	-85.94	-134.67	0.54	-0.39
	1968.00	9.41	324.83	1954.26	151.03	-94.16	-145.71	0.19	-0.12
	2057.00	9.50	325.99	2042.06	163.06	-102.45	-157.28	0.24	0.10
	2147.00	9.23	326.12	2130.86	175.21	-110.63	-168.96	0.30	-0.30
Last Surface Survey	2166.00	8.79	325.22	2149.62	177.67	-112.31	-171.33	2.43	-2.32
9 5/8" Casing Begin	2212.00	8.92	325.22	2195.07	183.48	-116.35	-176.92	0.27	0.27
SLB_MWD Survey	2361.00	9.32	325.24	2342.19	202.88	-129.81	-195.55	0.27	0.27
	2450.00	10.09	321.30	2429.92	214.88	-138.80	-207.05	1.14	0.87
	2539.00	10.51	317.31	2517.48	226.93	-149.17	-218.53	0.93	0.47
	2628.00	10.87	315.59	2604.94	238.90	-160.55	-229.85	0.54	0.40
	2717.00	11.02	315.88	2692.32	251.00	-172.34	-241.30	0.18	0.17
	2806.00	10.14	317.02	2779.81	262.83	-183.61	-252.51	1.02	-0.99
	2896.00	10.61	318.02	2868.34	274.79	-194.55	-263.86	0.56	0.52
	2985.00	10.99	318.68	2955.76	287.25	-205.63	-275.70	0.45	0.43
	3074.00	10.13	319.26	3043.25	299.55	-216.34	-287.40	0.97	-0.97
	3163.00	10.49	320.99	3130.81	311.78	-226.55	-299.06	0.53	0.40
	3252.00	10.41	319.69	3218.34	324.21	-236.85	-310.91	0.28	-0.09
	3341.00	9.98	320.01	3305.93	336.25	-247.01	-322.38	0.49	-0.48
	3430.00	9.65	319.59	3393.63	347.84	-256.80	-333.42	0.38	-0.37
	3519.00	9.49	318.47	3481.39	359.01	-266.50	-344.06	0.28	-0.18
	3608.00	9.43	319.42	3569.18	370.04	-276.11	-354.55	0.19	-0.07
	3697.00	9.71	322.26	3656.94	381.51	-285.45	-365.50	0.62	0.31
	3787.00	10.10	325.86	3745.60	394.04	-294.52	-377.52	0.81	0.43
	3876.00	10.44	322.83	3833.18	406.93	-303.77	-389.89	0.72	0.38
	3965.00	10.66	320.33	3920.67	419.69	-313.90	-402.08	0.57	0.25
	4054.00	10.62	320.34	4008.14	432.34	-324.39	-414.15	0.04	-0.04
	4143.00	10.57	323.69	4095.63	445.23	-334.46	-426.47	0.69	-0.06
	4232.00	10.25	323.97	4183.16	458.21	-343.95	-438.92	0.36	-0.36
	4321.00	9.97	325.51	4270.78	470.97	-352.97	-451.17	0.44	-0.31
	4411.00	10.40	321.01	4359.36	483.70	-362.49	-463.37	1.00	0.48
	4500.00	10.25	318.20	4446.92	495.85	-372.82	-474.94	0.59	-0.17
	4589.00	10.48	318.92	4534.47	507.85	-383.42	-486.36	0.30	0.26
	4678.00	10.02	318.76	4622.05	519.78	-393.84	-497.70	0.52	-0.52
	4767.00	9.75	322.46	4709.73	531.58	-403.54	-508.95	0.78	-0.30
	4856.00	10.09	321.01	4797.40	543.61	-413.04	-520.46	0.47	0.38
	4931.00	10.85	322.46	4871.15	554.31	-421.47	-530.69	1.07	1.01
	4983.00	10.49	323.64	4922.25	562.01	-427.26	-538.06	0.81	-0.69
	5072.00	10.80	322.45	5009.72	575.14	-437.14	-550.63	0.42	0.34
	5161.00	10.20	325.15	5097.23	588.22	-446.72	-563.17	0.87	-0.67
	5250.00	10.29	322.67	5184.81	601.01	-456.05	-575.44	0.51	0.11
	5339.00	10.78	323.90	5272.31	614.06	-465.78	-587.94	0.60	0.54
	5428.00	10.88	323.28	5359.72	627.51	-475.70	-600.84	0.17	0.11
	5517.00	10.46	325.44	5447.18	640.90	-485.31	-613.69	0.65	-0.47
	5606.00	10.06	320.18	5534.76	653.53	-494.87	-625.78	1.14	-0.45
	5695.00	10.88	322.20	5622.28	666.14	-505.00	-637.82	1.00	0.91

...Original Hole\Dream Weaver South 3E-21H-N268 MWD 0' to 19110' Definitive

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	NS (ft)	EW (ft)	VSEC (ft)	DLS (°/100ft)	BR (°/100ft)
	14514.00	89.63	177.81	7427.46	-6576.80	-677.71	6603.84	0.77	0.60
	14603.00	89.25	177.92	7428.33	-6665.73	-674.39	6692.46	0.45	-0.43
	14692.00	89.75	179.32	7429.11	-6754.70	-672.25	6781.19	1.67	0.56
	14781.00	88.99	178.39	7430.09	-6843.68	-670.47	6869.93	1.35	-0.85
	14870.00	89.33	179.32	7431.40	-6932.65	-668.69	6958.68	1.11	0.39
	14959.00	89.70	179.98	7432.14	-7021.64	-668.14	7047.51	0.86	0.42
	15048.00	89.59	179.38	7432.69	-7110.64	-667.65	7136.35	0.69	-0.13
	15138.00	89.12	179.34	7433.70	-7200.63	-666.64	7226.15	0.52	-0.52
	15227.00	89.24	179.82	7434.97	-7289.61	-665.98	7314.98	0.56	0.13
	15316.00	89.24	178.79	7436.15	-7378.60	-664.90	7403.77	1.16	0.00
	15405.00	89.26	177.87	7437.32	-7467.55	-662.30	7492.45	1.04	0.02
	15494.00	89.24	178.66	7438.49	-7556.50	-659.60	7581.13	0.89	-0.02
	15583.00	89.21	179.04	7439.69	-7645.48	-657.81	7669.88	0.43	-0.04
	15672.00	89.14	178.30	7440.98	-7734.44	-655.74	7758.60	0.83	-0.08
	15761.00	89.15	178.48	7442.31	-7823.40	-653.24	7847.29	0.21	0.01
	15851.00	89.70	178.96	7443.21	-7913.37	-651.23	7937.02	0.81	0.62
	15940.00	90.15	178.72	7443.33	-8002.35	-649.43	8025.77	0.57	0.50
	16029.00	89.44	178.24	7443.65	-8091.32	-647.06	8114.48	0.96	-0.80
	16118.00	89.35	179.38	7444.59	-8180.29	-645.21	8203.23	1.29	-0.10
	16207.00	88.83	178.51	7446.00	-8269.27	-643.57	8291.98	1.14	-0.59
	16296.00	89.38	179.12	7447.39	-8358.23	-641.73	8380.72	0.92	0.61
	16385.00	89.56	178.05	7448.22	-8447.20	-639.53	8469.44	1.22	0.20
	16475.00	89.14	178.86	7449.24	-8537.16	-637.11	8559.13	1.01	-0.46
	16564.00	89.25	178.12	7450.50	-8626.12	-634.76	8647.84	0.85	0.12
	16653.00	89.15	179.27	7451.74	-8715.09	-632.73	8736.56	1.30	-0.11
	16742.00	89.08	180.23	7453.11	-8804.08	-632.34	8825.40	1.08	-0.08
	16831.00	89.03	180.01	7454.58	-8893.06	-632.53	8914.27	0.26	-0.06
	16920.00	89.62	180.42	7455.63	-8982.06	-632.86	9003.15	0.81	0.67
	17009.00	88.94	180.93	7456.74	-9071.04	-633.91	9092.06	0.96	-0.76
	17098.00	88.39	179.79	7458.82	-9160.02	-634.47	9180.93	1.43	-0.62
	17187.00	88.59	180.19	7461.17	-9248.98	-634.46	9269.77	0.50	0.22
	17277.00	88.78	178.43	7463.24	-9338.95	-633.37	9359.54	1.96	0.21
	17366.00	88.56	178.45	7465.31	-9427.89	-630.95	9448.22	0.24	-0.24
	17455.00	88.64	178.48	7467.48	-9516.83	-628.57	9536.91	0.10	0.09
	17544.00	88.46	179.59	7469.74	-9605.79	-627.07	9625.65	1.26	-0.21
	17633.00	88.73	179.28	7471.92	-9694.76	-626.19	9714.44	0.47	0.31
	17722.00	88.92	179.37	7473.75	-9783.74	-625.14	9803.23	0.23	0.21
	17811.00	88.91	179.94	7475.44	-9872.72	-624.61	9892.05	0.64	0.00
	17900.00	88.90	180.24	7477.13	-9961.70	-624.75	9980.91	0.33	-0.02
	17989.00	89.18	179.63	7478.63	-10050.69	-624.64	10069.76	0.75	0.31
	18078.00	89.50	179.21	7479.66	-10139.68	-623.74	10158.57	0.59	0.36
	18168.00	88.80	178.62	7480.99	-10228.65	-622.03	10248.32	1.01	-0.77
	18257.00	88.97	179.89	7482.72	-10318.62	-620.88	10337.10	1.44	0.19
	18346.00	88.90	179.02	7484.38	-10407.60	-620.03	10425.91	0.99	-0.09
	18435.00	88.82	178.34	7486.15	-10496.56	-617.98	10514.62	0.76	-0.08
	18524.00	89.19	178.45	7487.69	-10585.51	-615.50	10603.31	0.43	0.41
	18614.00	89.50	179.28	7488.72	-10674.48	-613.72	10693.06	0.98	0.35
	18703.00	89.47	179.28	7489.51	-10764.48	-612.60	10781.86	0.04	-0.04
	18792.00	88.98	178.60	7490.72	-10854.45	-610.95	10870.61	0.94	-0.55
	18881.00	88.87	178.87	7492.39	-10944.42	-608.99	10959.34	0.33	-0.13
	18970.00	88.68	178.89	7494.30	-11034.38	-607.25	11048.08	0.21	-0.21
	19059.00	89.67	179.68	7495.58	-11124.36	-606.15	11136.87	1.42	1.11
Last SLB_MWD Survey	19067.00	89.61	180.05	7495.63	-11128.36	-606.13	11144.86	4.67	-0.77
Projection to Bit (478' FSL,1264' FWL)	19110.00	89.61	180.05	7495.92	-11171.36	-606.16	11187.79	0.01	0.00

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
 Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	28.000	1/98.425	13.500	9.625	NAL_MWD-NON_SLB-Depth Only	Original Hole / Dream Weaver South 3E-21H-N268 MWD 0' to 19110' Definitive
	1	28.000	2212.000	Act Stns	13.500	9.625	NAL_MWD-NON_SLB	Original Hole / Dream Weaver South 3E-21H-N268 MWD 0' to 19110' Definitive
	1	2212.000	19110.000	Act Stns	8.500	5.500	NAL_MWD_PLUS_0.5_DEG	Original Hole / Dream Weaver South 3E-21H-N268 MWD 0' to 19110' Definitive