

Crestone Peak Resources

CO, Weld County (NAD 83 NZ)
Sec 21 Twn 2 N Rng 68 W
Dream Weaver South 3B-21H-N268 Original Hole
05-123-48005
Ensign 142



Final Survey Report

3-Apr-2020

Well Coordinates: NAD83 Colorado State Plane, Northern Zone, US Ft

40.119727	-105.011080
1286837.48 usFt	3136731.53 usFt

Ground Level:	4901.00 ft MSL
TVD Reference:	KB 28ft @ 4929.00 ft MSL
Local Coordinate Origin:	Dream Weaver South 3B-21H-N268 well head
Vertical Section Azimuth:	180.000 ° (True North)
North Reference:	True North

DOX Version: 2.1

Dream Weaver South 3B-21H-N268 MWD 0' to 15230' Definitive Survey

Geodetic Report

(Def Survey)

Report Date: April 02, 2020 - 06:43 PM
Client: Crestone Peak Resources
Field: CO, Weld County (NAD 83 NZ) - 2019
Structure / Slot: Crestone Peak 21-02N-68W (Dream Weaver Pad) / Dream Weaver South 3B-21H-N268
Well: Dream Weaver South 3B-21H-N268
Borehole: Original Hole
UWI / API#: Unknown / 05-123-48005
Survey Name: Dream Weaver South 3B-21H-N268 MWD 0' to 15230' Definitive
Survey Date: September 05, 2019
Tort / AHD / DDI / ERD Ratio: 235.524 ° / 9341.586 ft / 6.645 / 1.232
Coordinate Reference System: NAD83 Colorado State Plane, Northern Zone, US Feet
Location Lat / Long: N 40° 7' 11.01720", W 105° 0' 39.88800"
Location Grid N/E Y/X: N 1286837.477 ftUS, E 3136731.531 ftUS
CRS Grid Convergence Angle: 0.3159 °
Grid Scale Factor: 0.99995945
Version / Patch: 2.10.810.1

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 180.000 ° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: KB 28ft
TVD Reference Elevation: 4929.000 ft above MSL
Seabed / Ground Elevation: 4901.000 ft above MSL
Magnetic Declination: 8.317 °
Total Gravity Field Strength: 998.9832mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 51899.280 nT
Magnetic Dip Angle: 66.410 °
Declination Date: March 24, 2020
Magnetic Declination Model: HDGM 2019
North Reference: True North
Grid Convergence Used: 0.0000 °
Total Corr Mag North->True North: 8.3172 °
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	116.00	0.53	142.47	116.00	-0.37	0.28	0.37	0.52	0.52
	206.00	0.88	65.65	205.99	-0.42	1.17	0.42	1.02	0.39
	296.00	4.22	346.38	295.91	3.09	1.02	-3.09	4.61	3.71
	387.00	7.21	339.52	386.44	11.69	-1.77	-11.69	3.36	3.29
	476.00	9.33	343.39	474.51	23.84	-5.79	-23.84	2.46	2.38
	546.00	11.30	345.80	543.38	35.93	-9.09	-35.93	2.88	2.81
	635.00	13.27	347.14	630.34	54.34	-13.50	-54.34	2.24	2.21
	724.00	13.77	340.46	716.88	74.28	-19.32	-74.28	1.84	0.56
	814.00	13.63	331.32	804.33	93.68	-27.99	-93.68	2.41	-0.16
	903.00	12.61	320.97	891.01	110.43	-39.15	-110.43	2.87	-1.15
	992.00	12.96	310.72	977.82	124.49	-52.83	-124.49	2.58	0.39
	1082.00	13.68	300.64	1065.41	136.50	-69.64	-136.50	2.70	0.80
	1170.00	13.04	297.21	1151.03	146.35	-87.42	-146.35	1.16	-0.73
	1260.00	13.19	296.69	1238.68	155.60	-105.62	-155.60	0.21	0.17
	1349.00	13.12	297.54	1325.34	164.83	-123.65	-164.83	0.23	-0.08
	1439.00	12.99	298.23	1413.02	174.34	-141.62	-174.34	0.23	-0.14
	1528.00	13.08	299.99	1499.73	184.10	-159.16	-184.10	0.46	0.10
	1614.00	12.99	300.51	1583.51	193.88	-175.91	-193.88	0.17	-0.10
	1703.00	12.96	302.20	1670.24	204.27	-192.98	-204.27	0.43	-0.03
	1792.00	12.66	304.46	1757.02	215.11	-209.46	-215.11	0.66	-0.34
	1882.00	12.92	305.55	1844.79	226.54	-225.78	-226.54	0.39	0.29
	1968.00	11.97	305.53	1928.77	237.31	-240.86	-237.31	1.10	-1.10
	2057.00	11.76	301.45	2015.87	247.41	-256.11	-247.41	0.97	-0.24
	2147.00	11.60	299.91	2104.00	256.70	-271.78	-256.70	0.39	-0.18
Last Surface Survey	2188.00	11.78	302.28	2144.15	261.00	-278.89	-261.00	1.25	0.44
9-5/8" Casing Begin	2237.00	11.31	303.68	2192.16	266.33	-287.12	-266.33	1.12	-0.96
SLB_MWD Survey	2258.00	11.11	304.31	2212.76	268.61	-290.50	-268.61	1.12	-0.95
	2347.00	11.33	301.82	2300.06	278.06	-305.01	-278.06	0.60	0.25
	2436.00	11.50	299.04	2387.30	286.97	-320.20	-286.97	0.65	0.19
	2526.00	11.96	293.52	2475.43	295.05	-336.59	-295.05	1.35	0.51
	2615.00	12.75	290.15	2562.36	302.11	-354.27	-302.11	1.20	0.89
	2704.00	12.76	291.19	2649.17	309.05	-372.65	-309.05	0.26	0.01
	2793.00	13.45	292.03	2735.85	316.48	-391.41	-316.48	0.80	0.78
	2882.00	12.96	288.73	2822.50	323.57	-410.46	-323.57	1.01	-0.55
	2971.00	13.48	291.37	2909.14	330.56	-429.57	-330.56	0.90	0.58
	3060.00	13.80	292.41	2995.63	338.38	-449.04	-338.38	0.45	0.36
	3149.00	13.14	297.05	3082.18	347.03	-467.87	-347.03	1.42	-0.74
	3238.00	12.44	295.85	3168.98	355.81	-485.50	-355.81	0.84	-0.79
	3327.00	11.93	295.37	3255.97	363.93	-502.44	-363.93	0.58	-0.57
	3416.00	11.85	293.78	3343.06	371.56	-519.12	-371.56	0.38	-0.09
	3505.00	12.10	294.95	3430.12	379.18	-535.94	-379.18	0.39	0.28
	3594.00	11.66	299.65	3517.22	387.56	-552.21	-387.56	1.19	-0.49
	3683.00	12.10	295.44	3604.31	396.02	-568.45	-396.02	1.09	0.49
	3772.00	12.36	297.99	3691.30	404.49	-585.28	-404.49	0.67	0.29
	3862.00	12.76	301.40	3779.14	414.19	-602.27	-414.19	0.94	0.44
	3951.00	13.36	297.72	3865.84	424.10	-619.77	-424.10	1.15	0.67
	4040.00	14.31	297.80	3952.26	434.01	-638.60	-434.01	1.07	1.07
	4129.00	14.88	296.06	4038.39	444.16	-658.59	-444.16	0.81	0.64
	4218.00	14.00	295.03	4124.57	453.74	-678.61	-453.74	1.03	-0.99
	4307.00	12.98	293.60	4211.12	462.29	-697.53	-462.29	1.21	-1.15
	4396.00	13.46	298.16	4297.76	471.18	-715.82	-471.18	1.29	0.54
	4485.00	13.31	300.24	4384.34	481.23	-733.80	-481.23	0.57	-0.17
	4574.00	14.24	300.20	4470.78	491.90	-752.12	-491.90	1.04	1.04
	4663.00	14.21	299.81	4557.05	502.83	-771.05	-502.83	0.11	-0.03
	4752.00	13.64	299.65	4643.44	513.46	-789.65	-513.46	0.64	-0.64
	4842.00	12.88	295.97	4731.04	523.10	-807.89	-523.10	1.26	-0.84
	4917.00	13.44	294.97	4804.07	530.44	-823.31	-530.44	0.81	0.75
	4982.00	13.04	294.50	4867.34	536.67	-836.83	-536.67	0.64	-0.62
	5071.00	13.35	295.91	4953.99	545.32	-855.21	-545.32	0.50	0.35
	5160.00	13.24	295.19	5040.61	554.15	-873.67	-554.15	0.22	-0.12
	5249.00	13.41	296.08	5127.21	563.02	-892.17	-563.02	0.30	0.19
	5338.00	13.69	295.03	5213.73	572.02	-910.98	-572.02	0.41	0.31
	5427.00	13.29	294.52	5300.28	580.72	-929.83	-580.72	0.46	-0.44
	5516.00	13.44	295.05	5386.87	589.34	-948.51	-589.34	0.21	0.16

...Original Hole\Dream Weaver South 3B-21H-N268 MWD 0' to 15230' Definitive

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	NS (ft)	EW (ft)	VSEC (ft)	DLS (°/100ft)	BR (°/100ft)
	5605.00	13.26	293.65	5473.46	597.81	-967.23	-597.81	0.42	-0.21
	5694.00	13.33	296.00	5560.08	606.40	-985.79	-606.40	0.61	0.08
	5783.00	13.22	294.17	5646.70	615.06	-1004.30	-615.06	0.49	-0.12
	5872.00	13.34	295.94	5733.32	623.72	-1022.81	-623.72	0.48	0.13
	5962.00	13.06	294.11	5820.95	632.42	-1041.44	-632.42	0.56	-0.30
	6050.00	13.37	293.93	5906.61	640.61	-1059.82	-640.61	0.35	0.35
	6140.00	12.72	293.50	5994.29	648.78	-1078.41	-648.78	0.73	-0.73
	6229.00	13.47	293.97	6080.98	656.89	-1096.87	-656.89	0.85	0.84
	6318.00	13.72	295.04	6167.48	665.57	-1115.90	-665.57	0.40	0.29
	6407.00	12.78	294.46	6254.11	674.12	-1134.43	-674.12	1.07	-1.06
	6496.00	13.45	294.06	6340.79	682.41	-1152.84	-682.41	0.76	0.75
	6585.00	13.64	294.80	6427.31	691.03	-1171.82	-691.03	0.29	0.22
	6674.00	13.61	294.89	6513.81	699.84	-1190.85	-699.84	0.05	-0.04
	6763.00	13.56	295.18	6600.32	708.69	-1209.79	-708.69	0.09	-0.05
	6852.00	14.07	294.68	6686.75	717.64	-1229.06	-717.64	0.59	0.58
	6941.00	14.15	293.57	6773.06	726.51	-1248.87	-726.51	0.32	0.09
	7030.00	13.06	257.19	6859.72	728.63	-1268.69	-728.63	9.53	-1.22
	7119.00	14.40	233.52	6946.24	719.82	-1287.41	-719.82	6.44	1.50
	7208.00	20.20	222.88	7031.20	701.96	-1306.78	-701.96	7.40	6.51
	7297.00	25.32	211.18	7113.28	674.39	-1327.11	-674.39	7.66	5.76
	7386.00	29.49	196.46	7192.37	637.04	-1343.20	-637.04	8.90	4.68
	7476.00	38.05	193.45	7267.12	588.73	-1355.95	-588.73	9.69	9.52
	7565.00	45.43	193.60	7333.48	531.16	-1369.81	-531.16	8.29	8.29
	7654.00	51.96	193.08	7392.19	466.14	-1385.21	-466.14	7.35	7.34
	7743.00	59.82	190.35	7442.06	394.03	-1400.08	-394.03	9.19	8.83
	7832.00	66.49	183.53	7482.27	315.30	-1409.52	-315.30	10.13	7.49
	7921.00	72.88	180.96	7513.15	231.95	-1412.76	-231.95	7.68	7.19
	8010.00	79.35	181.55	7534.50	145.61	-1414.65	-145.61	7.29	7.26
	8099.00	86.04	182.27	7545.81	57.44	-1417.60	-57.44	7.57	7.52
	8189.00	89.49	181.68	7549.32	-32.43	-1420.70	32.43	3.89	3.83
	8278.00	89.54	180.33	7550.07	-121.41	-1422.26	121.41	1.52	0.06
	8367.00	90.54	180.03	7550.01	-210.41	-1422.54	210.41	1.16	1.12
	8456.00	90.54	179.18	7549.18	-299.40	-1421.93	299.40	0.96	0.01
	8545.00	90.83	178.80	7548.11	-388.38	-1420.36	388.38	0.54	0.33
	8634.00	90.76	179.55	7546.87	-477.36	-1419.08	477.36	0.85	-0.09
	8723.00	90.74	179.20	7545.71	-566.35	-1418.11	566.35	0.39	-0.02
	8812.00	90.86	179.84	7544.47	-655.34	-1417.37	655.34	0.73	0.14
	8901.00	91.04	179.97	7543.00	-744.33	-1417.22	744.33	0.24	0.20
	8990.00	90.65	180.72	7541.68	-833.31	-1417.76	833.31	0.95	-0.43
	9079.00	90.90	181.00	7540.48	-922.29	-1419.11	922.29	0.42	0.27
	9168.00	90.92	181.54	7539.07	-1011.26	-1421.08	1011.26	0.60	0.02
	9257.00	90.82	180.93	7537.72	-1100.23	-1423.00	1100.23	0.69	-0.10
	9346.00	90.59	181.02	7536.62	-1189.21	-1424.51	1189.21	0.28	-0.26
	9435.00	90.27	181.20	7535.96	-1278.19	-1426.24	1278.19	0.41	-0.36
	9524.00	90.19	181.45	7535.60	-1367.17	-1428.30	1367.17	0.30	-0.09
	9614.00	89.71	182.08	7535.68	-1457.12	-1431.08	1457.12	0.88	-0.53
Cross Setback (460' FNL, 429' FWL)	9647.26	89.95	181.71	7535.78	-1490.36	-1432.18	1490.36	1.33	0.73
	9703.00	90.36	181.09	7535.63	-1546.09	-1433.54	1546.09	1.33	0.73
	9792.00	89.46	182.22	7535.77	-1635.05	-1436.11	1635.05	1.62	-1.00
	9881.00	89.34	181.00	7536.70	-1724.01	-1438.61	1724.01	1.39	-0.15
	9970.00	88.89	181.27	7538.07	-1812.98	-1440.37	1812.98	0.58	-0.50
	10059.00	89.18	180.74	7539.57	-1901.95	-1441.93	1901.95	0.67	0.32
	10148.00	89.56	180.26	7540.55	-1990.94	-1442.71	1990.94	0.69	0.43
	10237.00	89.33	179.47	7541.41	-2079.94	-1442.50	2079.94	0.92	-0.25
	10326.00	89.43	179.87	7542.37	-2168.93	-1442.00	2168.93	0.46	0.11
	10415.00	89.35	180.13	7543.32	-2257.92	-1442.00	2257.92	0.30	-0.09
	10504.00	89.39	180.31	7544.30	-2346.92	-1442.35	2346.92	0.21	0.05
	10593.00	89.39	180.75	7545.24	-2435.91	-1443.18	2435.91	0.50	0.00
	10682.00	89.37	181.07	7546.21	-2524.89	-1444.60	2524.89	0.36	-0.03
	10771.00	89.33	180.00	7547.22	-2613.88	-1445.43	2613.88	1.21	-0.04
	10860.00	89.79	179.97	7547.90	-2702.88	-1445.40	2702.88	0.51	0.51
	10949.00	90.07	178.71	7548.01	-2791.87	-1444.37	2791.87	1.45	0.32
	11038.00	89.84	179.52	7548.08	-2880.86	-1442.99	2880.86	0.95	-0.26
	11127.00	89.19	178.83	7548.83	-2969.85	-1441.71	2969.85	1.06	-0.73
	11216.00	90.84	180.85	7548.80	-3058.84	-1441.46	3058.84	2.93	1.85
	11305.00	89.74	182.50	7548.35	-3147.79	-1444.07	3147.79	2.23	-1.24
	11394.00	89.12	179.64	7549.24	-3236.76	-1445.73	3236.76	3.29	-0.69
	11483.00	88.99	180.99	7550.70	-3325.75	-1446.22	3325.75	1.52	-0.15
	11573.00	89.73	181.03	7551.70	-3415.73	-1447.81	3415.73	0.82	0.82
	11662.00	90.69	180.78	7551.37	-3504.72	-1449.22	3504.72	1.12	1.08
	11751.00	91.24	180.44	7549.88	-3593.70	-1450.17	3593.70	0.73	0.62
	11840.00	91.18	180.37	7547.99	-3682.68	-1450.80	3682.68	0.11	-0.06
	11929.00	91.41	179.09	7545.98	-3771.65	-1450.38	3771.65	1.45	0.26
	12018.00	90.23	177.17	7544.70	-3860.59	-1447.48	3860.59	2.54	-1.33
	12107.00	88.95	177.08	7545.35	-3949.47	-1443.02	3949.47	1.44	-1.44
	12197.00	89.07	179.36	7546.90	-4039.41	-1440.22	4039.41	2.54	0.14
	12286.00	88.91	179.89	7548.47	-4128.39	-1439.64	4128.39	0.63	-0.18
	12375.00	88.80	180.44	7550.25	-4217.37	-1439.90	4217.37	0.62	-0.13
	12464.00	89.60	180.47	7551.50	-4306.36	-1440.60	4306.36	0.90	0.90
	12553.00	89.55	179.40	7552.16	-4395.36	-1440.49	4395.36	1.20	-0.06
	12642.00	90.56	180.03	7552.08	-4484.36	-1440.05	4484.36	1.34	1.13
	12731.00	90.74	179.62	7551.08	-4573.35	-1439.77	4573.35	0.50	0.20
	12820.00	90.41	179.21	7550.18	-4662.34	-1438.86	4662.34	0.58	-0.36
	12909.00	90.27	178.01	7549.65	-4751.31	-1436.71	4751.31	1.35	-0.16
	12999.00	90.18	179.96	7549.29	-4841.29	-1435.12	4841.29	2.17	-0.11
	13088.00	90.50	179.86	7548.77	-4930.29	-1434.98	4930.29	0.38	0.36
	13177.00	90.09	179.66	7548.31	-5019.29	-1434.61	5019.29	0.51	-0.46
	13266.00	90.04	180.70	7548.21	-5108.29	-1434.89	5108.29	1.16	-0.06
	13355.00	90.72	181.61	7547.61	-5197.26	-1436.69	5197.26	1.29	0.77
	13444.00	90.20	181.14	7546.90	-5286.23	-1438.83	5286.23	0.80	-0.59
	13533.00	90.11	180.95	7546.66	-5375.22	-1440.45	5375.22	0.23	-0.09
	13622.00	89.68	180.83	7546.82	-5464.21	-1441.84	5464.21	0.50	-0.49
	13711.00	89.10	180.83	7547.76	-5553.19	-1443.14	5553.19	0.65	-0.65
	13800.00	89.07	180.62	7549.18	-5642.17	-1444.26	5642.17	0.24	-0.03
	13889.00	88.18	177.60	7551.32	-5731.13	-1442.88	5731.13	3.54	-1.00
	13978.00	87.88	175.39	7554.39	-5819.90	-1437.44	5819.90	2.50	-0.34
	14067.00	88.23	175.06	7557.42	-5908.54	-1430.04	5908.54	0.54	0.40
	14157.00	88.06	175.15	7560.33	-5998.17	-1422.36	5998.17	0.21	-0.19
	14246.00	88.15	175.39	7563.28	-6086.81	-1415.02	6086.81	0.29	0.11

...Original Hole\Dream Weaver South 3B-21H-N268 MWD 0' to 15230' Definitive

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	NS (ft)	EW (ft)	VSEC (ft)	DLS (°/100ft)	BR (°/100ft)
	14335.00	88.60	175.69	7565.80	-6175.51	-1408.10	6175.51	0.61	0.51
	14424.00	89.12	174.87	7567.57	-6264.19	-1400.78	6264.19	1.08	0.58
	14513.00	89.11	172.99	7568.94	-6352.67	-1391.37	6352.67	2.12	-0.01
	14602.00	88.90	172.88	7570.49	-6440.99	-1380.42	6440.99	0.27	-0.23
	14691.00	89.00	174.24	7572.12	-6529.41	-1370.44	6529.41	1.54	0.11
	14780.00	89.17	175.12	7573.55	-6618.01	-1362.19	6618.01	1.00	0.19
	14869.00	89.00	174.33	7574.97	-6706.62	-1354.01	6706.62	0.90	-0.19
	14959.00	88.74	176.07	7576.75	-6796.29	-1346.48	6796.29	1.95	-0.29
	15048.00	89.04	177.89	7578.47	-6885.14	-1341.79	6885.14	2.08	0.34
	15137.00	89.17	178.02	7579.86	-6974.07	-1338.62	6974.07	0.20	0.14
Last SLB_MWD Survey	15187.00	89.02	178.32	7580.65	-7024.04	-1337.02	7024.04	0.68	-0.31
Projection to Bit (709' FNL, 515' FWL)	15230.00	89.02	178.32	7581.39	-7067.02	-1335.76	7067.02	0.01	0.01

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	15.000	1/98.425	13.500	9.625	NAL_MWD-NON_SLB-Depth Only	Original Hole / Dream Weaver South 3B-21H-N268 MWD 0' to 15230' Definitive
	1	15.000	28.000	Act Stns	13.500	9.625	NAL_MWD-NON_SLB-Depth Only	Original Hole / Dream Weaver South 3B-21H-N268 MWD 0' to 15230' Definitive
	1	28.000	2188.000	Act Stns	13.500	9.625	NAL_MWD-NON_SLB	Original Hole / Dream Weaver South 3B-21H-N268 MWD 0' to
	1	2188.000	15230.000	Act Stns	8.500	5.500	NAL_MWD_PLUS_0.5_DEG	Original Hole / Dream Weaver South 3B-21H-N268 MWD 0' to

...Original Hole\Dream Weaver South 3B-21H-N268 MWD 0' to 15230' Definitive