

Grande 4-65 20-19 1CH Plan #0 Proposal Geodetic Report

(Def Plan)

Report Date: May 21, 2020 - 10:59 AM
Client: Crestone Peak Resources
Field: CO, Arapahoe County (NAD 83 CZ)
Structure / Slot: Crestone Peak 21-04S-65W (Grande North Pad) / Grande 4-65 20-19 1CH
Well: Grande 4-65 20-19 1CH
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Grande 4-65 20-19 1CH Plan #0
Survey Date: March 19, 2020
Tort / AHD / DDI / ERD Ratio: 94.023 ° / 10949.292 ft / 6.370 / 1.377
Coordinate Reference System: NAD83 Colorado State Plane, Central Zone, US Feet
Location Lat / Long: N 39° 41' 38.84640", W 104° 40' 32.21040"
Location Grid N/E Y/X: N 1678766.276 ftUS, E 3231984.054 ftUS
CRS Grid Convergence Angle: 0.5199 °
Grid Scale Factor: 0.99989842
Version / Patch: 2.10.810.1

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 269.791 ° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: KB 28ft
TVD Reference Elevation: 5688.200 ft above MSL
Seabed / Ground Elevation: 5660.200 ft above MSL
Magnetic Declination: 8.573 °
Total Gravity Field Strength: 998.9115mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 51549.703 nT
Magnetic Dip Angle: 66.336 °
Declination Date: May 18, 2020
Magnetic Declination Model: HDGM 2020
North Reference: True North
Grid Convergence Used: 0.0000 °
Total Corr Mag North→True North: 8.5733 °
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	1678766.28	3231984.05	39.694124	-104.675614	
Build 1 DLS	100.00	0.00	265.75	100.00	0.00	0.00	0.00	0.00	1678766.28	3231984.05	39.694124	-104.675614	
	200.00	0.00	265.75	200.00	0.00	0.00	0.00	0.00	1678766.28	3231984.05	39.694124	-104.675614	
	250.00	0.00	265.75	250.00	0.00	0.00	0.00	0.00	1678766.28	3231984.05	39.694124	-104.675614	
	300.00	0.50	265.75	300.00	0.22	-0.02	-0.22	1.00	1678766.26	3231983.84	39.694124	-104.675615	
Hold	400.00	1.50	265.75	399.98	1.96	-0.15	-1.96	1.00	1678766.11	3231982.10	39.694124	-104.675621	
	449.64	2.00	265.75	449.60	3.47	-0.26	-3.47	1.00	1678765.99	3231980.59	39.694123	-104.675626	
	500.00	2.00	265.75	499.93	5.22	-0.39	-5.22	0.00	1678765.84	3231978.84	39.694123	-104.675633	
	600.00	2.00	265.75	599.87	8.69	-0.65	-8.69	0.00	1678765.55	3231975.37	39.694122	-104.675645	
Drop 1 DLS	700.00	2.00	265.75	699.81	12.17	-0.90	-12.17	0.00	1678765.26	3231971.90	39.694122	-104.675657	
	800.00	2.00	265.75	799.75	15.64	-1.16	-15.64	0.00	1678764.97	3231968.43	39.694121	-104.675670	
	825.67	2.00	265.75	825.40	16.54	-1.23	-16.53	0.00	1678764.90	3231967.53	39.694121	-104.675673	
	900.00	1.25	265.75	899.70	18.64	-1.38	-18.63	1.00	1678764.72	3231965.43	39.694120	-104.675680	
Hold Vertical	1000.00	0.25	265.75	999.69	19.95	-1.48	-19.94	1.00	1678764.61	3231964.12	39.694120	-104.675685	
	1025.31	0.00	265.75	1025.00	20.01	-1.49	-20.00	1.00	1678764.61	3231964.07	39.694120	-104.675685	
	1100.00	0.00	265.75	1099.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	1200.00	0.00	265.75	1199.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	1300.00	0.00	265.75	1299.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	1400.00	0.00	265.75	1399.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	1500.00	0.00	265.75	1499.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	1600.00	0.00	265.75	1599.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	1700.00	0.00	265.75	1699.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	1800.00	0.00	265.75	1799.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	1900.00	0.00	265.75	1899.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	2000.00	0.00	265.75	1999.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	2100.00	0.00	265.75	2099.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	2200.00	0.00	265.75	2199.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	2300.00	0.00	265.75	2299.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	2400.00	0.00	265.75	2399.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	2500.00	0.00	265.75	2499.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	2600.00	0.00	265.75	2599.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	2700.00	0.00	265.75	2699.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	2800.00	0.00	265.75	2799.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	2900.00	0.00	265.75	2899.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	3000.00	0.00	265.75	2999.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	3100.00	0.00	265.75	3099.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	3200.00	0.00	265.75	3199.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	3300.00	0.00	265.75	3299.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	3400.00	0.00	265.75	3399.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	3500.00	0.00	265.75	3499.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	3600.00	0.00	265.75	3599.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	3700.00	0.00	265.75	3699.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	3800.00	0.00	265.75	3799.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	3900.00	0.00	265.75	3899.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	4000.00	0.00	265.75	3999.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	4100.00	0.00	265.75	4099.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685	
	Build 2 DLS	4200.00	0.00	265.75	4199.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685
		4300.00	0.00	265.75	4299.69	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685
		4300.31	0.00	265.75	4300.00	20.01	-1.49	-20.00	0.00	1678764.61	3231964.07	39.694120	-104.675685
		4400.00	1.99	265.75	4399.67	21.74	-1.61	-21.73	2.00	1678764.47	3231962.34	39.694120	-104.675691
		4500.00	3.99	265.75	4499.53	26.94	-2.00	-26.94	2.00	1678764.03	3231957.14	39.694119	-104.675710
		4600.00	5.99	265.75	4599.14	35.63	-2.65	-35.62	2.00	1678763.31	3231948.46	39.694117	-104.675741
		4700.00	7.99	265.75	4698.40	47.77	-3.55	-47.76	2.00	1678762.30	3231936.33	39.694114	-104.675784
		4800.00	9.99	265.75	4797.16	63.37	-4.71	-63.35	2.00	1678761.00	3231920.75	39.694111	-104.675839
	Hold	4831.99	10.63	265.75	4828.63	69.08	-5.13	-69.06	2.00	1678760.52	3231915.04	39.694110	-104.675859
		4900.00	10.63	265.75	4895.48	81.60	-6.06	-81.58	0.00	1678759.48	3231902.54	39.694107	-104.675904
		5000.00	10.63	265.75	4993.76	100.00	-7.43	-99.98	0.00	1678757.94	3231884.15	39.694104	-104.675969
5100.00		10.63	265.75	5092.04	118.41	-8.79	-118.38	0.00	1678756.41	3231865.76	39.694100	-104.676035	
	5200.00	10.63	265.75	5190.32	136.82	-10.16	-136.78	0.00	1678754.87	3231847.37	39.694096	-104.676100	
	5300.00	10.63	265.75	5288.61	155.23	-11.53	-155.18	0.00	1678753.34	3231828.98	39.694092	-104.676165	
	5400.00	10.63	265.75	5386.89	173.63	-12.90	-173.59	0.00	1678751.81	3231810.59	39.694089	-104.676231	
	5500.00	10.63	265.75	5485.17	192.04	-14.26	-191.99	0.00	1678750.27	3231792.21	39.694085	-104.676296	
	5600.00	10.63	265.75	5583.46	210.45	-15.63	-210.39	0.00	1678748.74	3231773.82	39.694081	-104.676362	
	5700.00	10.63	265.75	5681.74	228.85	-17.00	-228.79	0.00	1678747.20	3231755.43	39.694077	-104.676427	
	5800.00	10.63	265.75	5780.02	247.26	-18.37	-247.19	0.00	1678745.67	3231737.04	39.694074	-104.676492	
	5900.00	10.63	265.75	5878.30	265.67	-19.73	-265.60	0.00	1678744.14	3231718.65	39.694070	-104.676558	
	6000.00	10.63	265.75	5976.59	284.07	-21.10	-284.00	0.00	1678742.60	3231700.26	39.694066	-104.676623	
	6100.00	10.63	265.75	6074.87	302.48	-22.47	-302.40	0.00	1678741.07	3231681.87	39.694062	-104.676689	
	6200.00	10.63	265.75	6173.15	320.89	-23.83	-320.80	0.00	1678739.53	3231663.49	39.694059	-104.676754	
	6300.00	10.63	265.75	6271.43	339.29	-25.20	-339.20	0.00	1678738.00	3231645.10	39.694055	-104.676819	
	6400.00	10.63	265.75	6369.72	357.70	-26.57	-357.61	0.00	1678736.46	3231626.71	39.694051	-104.676885	
	6500.00	10.63	265.75	6468.00	376.11	-27.94	-376.01	0.00	1678734.93	3231608.32	39.694047	-104.676950	
	6600.00	10.63	265.75	6566.28	394.51	-29.30	-394.41	0.00	1678733.40	3231589.93	39.694044	-104.677016	
	6700.00	10.63	265.75	6664.57	412.92	-30.67	-412.81	0.00	1678731.86	3231571.54	39.694040	-104.677081	
	6800.00	10.63	265.75	6762.85	431.33	-32.04	-431.21	0.00	1678730.33	3231553.15	39.694036	-104.677146	
	6900.00	10.63	265.75	6861.13	449.74	-33.40	-449.62	0.00	1678728.79	3231534.77	39.694032	-104.677212	
	7000.00	10.63	265.75	6959.41	468.14	-34.77	-468.02	0.00	1678727.26	3231516.38			

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
	7200.00	10.63	265.75	7155.98	504.96	-37.51	-504.82	0.00	1678724.19	3231479.60	39.694021	-104.677408
	7300.00	10.63	265.75	7254.26	523.36	-38.87	-523.22	0.00	1678722.66	3231461.21	39.694017	-104.677473
	7400.00	10.63	265.75	7352.54	541.77	-40.24	-541.63	0.00	1678721.12	3231442.82	39.694014	-104.677539
KOP, Build/Turn 8 DLS	7413.33	10.63	265.75	7365.65	544.22	-40.42	-544.08	0.00	1678720.92	3231440.37	39.694013	-104.677547
	7500.00	17.55	267.50	7449.66	565.29	-41.59	-565.14	8.00	1678719.56	3231419.32	39.694010	-104.677622
	7600.00	25.55	268.36	7542.59	601.97	-42.86	-601.82	8.00	1678717.95	3231382.66	39.694006	-104.677753
	7700.00	33.55	268.83	7629.51	651.23	-44.05	-651.08	8.00	1678716.33	3231333.41	39.694003	-104.677928
	7800.00	41.54	269.14	7708.74	712.12	-45.11	-711.96	8.00	1678714.71	3231272.55	39.694000	-104.678144
	7900.00	49.54	269.36	7778.72	783.43	-46.03	-783.27	8.00	1678713.14	3231201.24	39.693998	-104.678397
	8000.00	57.54	269.54	7838.10	863.79	-46.80	-863.63	8.00	1678711.64	3231120.90	39.693995	-104.678683
	8100.00	65.54	269.68	7885.71	951.64	-47.40	-951.47	8.00	1678710.25	3231033.07	39.693994	-104.678995
	8200.00	73.54	269.81	7920.64	1045.25	-47.81	-1045.08	8.00	1678708.99	3230939.46	39.693993	-104.679328
	8300.00	81.54	269.93	7942.20	1142.82	-48.03	-1142.65	8.00	1678707.88	3230841.90	39.693992	-104.679674
	8400.00	89.54	270.04	7949.98	1242.43	-48.06	-1242.26	8.00	1678706.95	3230742.29	39.693992	-104.680028
TPZ Point, Hold to TD	8405.79	90.00	270.05	7950.00	1248.22	-48.05	-1248.05	8.00	1678706.90	3230736.50	39.693992	-104.680049
	8500.00	90.00	270.05	7950.00	1342.43	-47.97	-1342.26	0.00	1678706.13	3230642.30	39.693992	-104.680384
	8600.00	90.00	270.05	7950.00	1442.43	-47.89	-1442.26	0.00	1678705.30	3230542.30	39.693992	-104.680739
	8700.00	90.00	270.05	7950.00	1542.43	-47.81	-1542.26	0.00	1678704.48	3230442.31	39.693993	-104.681094
	8800.00	90.00	270.05	7950.00	1642.43	-47.72	-1642.26	0.00	1678703.65	3230342.31	39.693993	-104.681450
	8900.00	90.00	270.05	7950.00	1742.43	-47.64	-1742.26	0.00	1678702.83	3230242.32	39.693993	-104.681805
	9000.00	90.00	270.05	7950.00	1842.43	-47.55	-1842.26	0.00	1678702.01	3230142.32	39.693993	-104.682161
	9100.00	90.00	270.05	7950.00	1942.42	-47.47	-1942.26	0.00	1678701.18	3230042.33	39.693993	-104.682516
	9200.00	90.00	270.05	7950.00	2042.42	-47.39	-2042.26	0.00	1678700.36	3229942.33	39.693994	-104.682871
	9300.00	90.00	270.05	7950.00	2142.42	-47.30	-2142.26	0.00	1678699.54	3229842.33	39.693994	-104.683227
	9400.00	90.00	270.05	7950.00	2242.42	-47.22	-2242.26	0.00	1678698.71	3229742.34	39.693994	-104.683582
	9500.00	90.00	270.05	7950.00	2342.42	-47.13	-2342.26	0.00	1678697.89	3229642.34	39.693994	-104.683937
	9600.00	90.00	270.05	7950.00	2442.42	-47.05	-2442.26	0.00	1678697.07	3229542.35	39.693995	-104.684293
	9700.00	90.00	270.05	7950.00	2542.42	-46.97	-2542.26	0.00	1678696.24	3229442.35	39.693995	-104.684648
	9800.00	90.00	270.05	7950.00	2642.42	-46.88	-2642.26	0.00	1678695.42	3229342.36	39.693995	-104.685003
	9900.00	90.00	270.05	7950.00	2742.42	-46.80	-2742.26	0.00	1678694.60	3229242.36	39.693995	-104.685359
	10000.00	90.00	270.05	7950.00	2842.42	-46.71	-2842.26	0.00	1678693.77	3229142.37	39.693995	-104.685714
	10100.00	90.00	270.05	7950.00	2942.41	-46.63	-2942.26	0.00	1678692.95	3229042.37	39.693996	-104.686069
	10200.00	90.00	270.05	7950.00	3042.41	-46.55	-3042.26	0.00	1678692.13	3228942.38	39.693996	-104.686425
	10300.00	90.00	270.05	7950.00	3142.41	-46.46	-3142.26	0.00	1678691.30	3228842.38	39.693996	-104.686780
	10400.00	90.00	270.05	7950.00	3242.41	-46.38	-3242.26	0.00	1678690.48	3228742.39	39.693996	-104.687135
	10500.00	90.00	270.05	7950.00	3342.41	-46.29	-3342.26	0.00	1678689.66	3228642.39	39.693996	-104.687491
	10600.00	90.00	270.05	7950.00	3442.41	-46.21	-3442.26	0.00	1678688.83	3228542.39	39.693997	-104.687846
	10700.00	90.00	270.05	7950.00	3542.41	-46.13	-3542.26	0.00	1678688.01	3228442.40	39.693997	-104.688202
	10800.00	90.00	270.05	7950.00	3642.41	-46.04	-3642.26	0.00	1678687.18	3228342.40	39.693997	-104.688557
	10900.00	90.00	270.05	7950.00	3742.41	-45.96	-3742.26	0.00	1678686.36	3228242.41	39.693997	-104.688912
	11000.00	90.00	270.05	7950.00	3842.41	-45.88	-3842.26	0.00	1678685.54	3228142.41	39.693997	-104.689268
	11100.00	90.00	270.05	7950.00	3942.40	-45.79	-3942.26	0.00	1678684.71	3228042.42	39.693997	-104.689623
	11200.00	90.00	270.05	7950.00	4042.40	-45.71	-4042.26	0.00	1678683.89	3227942.42	39.693998	-104.689978
	11300.00	90.00	270.05	7950.00	4142.40	-45.62	-4142.26	0.00	1678683.07	3227842.43	39.693998	-104.690334
	11400.00	90.00	270.05	7950.00	4242.40	-45.54	-4242.26	0.00	1678682.24	3227742.43	39.693998	-104.690689
	11500.00	90.00	270.05	7950.00	4342.40	-45.46	-4342.26	0.00	1678681.42	3227642.44	39.693998	-104.691044
	11600.00	90.00	270.05	7950.00	4442.40	-45.37	-4442.26	0.00	1678680.60	3227542.44	39.693998	-104.691400
	11700.00	90.00	270.05	7950.00	4542.40	-45.29	-4542.26	0.00	1678679.77	3227442.45	39.693999	-104.691755
	11800.00	90.00	270.05	7950.00	4642.40	-45.20	-4642.26	0.00	1678678.95	3227342.45	39.693999	-104.692110
	11900.00	90.00	270.05	7950.00	4742.40	-45.12	-4742.26	0.00	1678678.13	3227242.46	39.693999	-104.692466
	12000.00	90.00	270.05	7950.00	4842.40	-45.04	-4842.26	0.00	1678677.30	3227142.46	39.693999	-104.692821
	12100.00	90.00	270.05	7950.00	4942.39	-44.95	-4942.26	0.00	1678676.48	3227042.46	39.693999	-104.693176
	12200.00	90.00	270.05	7950.00	5042.39	-44.87	-5042.26	0.00	1678675.66	3226942.47	39.693999	-104.693532
	12300.00	90.00	270.05	7950.00	5142.39	-44.78	-5142.26	0.00	1678674.83	3226842.47	39.694000	-104.693887
	12400.00	90.00	270.05	7950.00	5242.39	-44.70	-5242.26	0.00	1678674.01	3226742.48	39.694000	-104.694243
	12500.00	90.00	270.05	7950.00	5342.39	-44.62	-5342.26	0.00	1678673.19	3226642.48	39.694000	-104.694598
	12600.00	90.00	270.05	7950.00	5442.39	-44.53	-5442.26	0.00	1678672.36	3226542.49	39.694000	-104.694953
	12700.00	90.00	270.05	7950.00	5542.39	-44.45	-5542.26	0.00	1678671.54	3226442.49	39.694000	-104.695309
	12800.00	90.00	270.05	7950.00	5642.39	-44.36	-5642.26	0.00	1678670.71	3226342.50	39.694001	-104.695664
	12900.00	90.00	270.05	7950.00	5742.39	-44.28	-5742.26	0.00	1678669.89	3226242.50	39.694001	-104.696019
	13000.00	90.00	270.05	7950.00	5842.39	-44.20	-5842.26	0.00	1678669.07	3226142.51	39.694001	-104.696375
	13100.00	90.00	270.05	7950.00	5942.38	-44.11	-5942.26	0.00	1678668.24	3226042.51	39.694001	-104.696730
	13200.00	90.00	270.05	7950.00	6042.38	-44.03	-6042.26	0.00	1678667.42	3225942.52	39.694001	-104.697085
	13300.00	90.00	270.05	7950.00	6142.38	-43.94	-6142.26	0.00	1678666.60	3225842.52	39.694001	-104.697441
	13400.00	90.00	270.05	7950.00	6242.38	-43.86	-6242.26	0.00	1678665.77	3225742.53	39.694001	-104.697796
	13500.00	90.00	270.05	7950.00	6342.38	-43.78	-6342.26	0.00	1678664.95	3225642.53	39.694002	-104.698151
	13600.00	90.00	270.05	7950.00	6442.38	-43.69	-6442.26	0.00	1678664.13	3225542.53	39.694002	-104.698507
	13700.00	90.00	270.05	7950.00	6542.38	-43.61	-6542.26	0.00	1678663.30	3225442.54	39.694002	-104.698862
	13800.00	90.00	270.05	7950.00	6642.38	-43.52	-6642.26	0.00	1678662.48	3225342.54	39.694002	-104.699217
	13900.00	90.00	270.05	7950.00	6742.38	-43.44	-6742.26	0.00	1678661.66	3225242.55	39.694002	-104.699573
	14000.00	90.00	270.05	7950.00	6842.38	-43.36	-6842.26	0.00	1678660.83	3225142.55	39.694002	-104.699928
	14100.00	90.00	270.05	7950.00	6942.37	-43.27	-6942.26	0.00	1678660.01	3225042.56	39.694003	-104.700284
	14200.00	90.00	270.05	7950.00	7042.37	-43.19	-7042.26	0.00	1678659.19	3224942.56	39.694003	-104.700639
	14300.00	90.00	270.05	7950.00	7142.37	-43.11	-7142.26	0.00	1678658.36	3224842.57	39.694003	-104.700994
	14400.00	90.00	270.05	7950.00	7242.37	-43.02	-7242.26	0.00	1678657.54	3224742.57	39.694003	-104.701350
	14500.00	90.00	270.05	7950.00	7342.37	-42.94	-7342.26	0.00	1678656.72	3224642.58	39.694003	-104.701705
	14600.00	90.00	270.05	7950.00	7442.37	-42.85	-7442.26	0.00	1678655.89	3224542.58	39.694003	-104.702060
	14700.00	90.00	270.05	7950.00	7542.37	-42.77	-754					

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
	17600.00	90.00	270.05	7950.00	10442.34	-40.34	-10442.26	0.00	1678631.19	3221542.72	39.694007	-104.712721
	17700.00	90.00	270.05	7950.00	10542.34	-40.25	-10542.26	0.00	1678630.36	3221442.72	39.694008	-104.713076
	17800.00	90.00	270.05	7950.00	10642.34	-40.17	-10642.26	0.00	1678629.54	3221342.73	39.694008	-104.713432
	17900.00	90.00	270.05	7950.00	10742.34	-40.08	-10742.26	0.00	1678628.72	3221242.73	39.694008	-104.713787
	18000.00	90.00	270.05	7950.00	10842.33	-40.00	-10842.26	0.00	1678627.89	3221142.74	39.694008	-104.714142
	18100.00	90.00	270.05	7950.00	10942.33	-39.92	-10942.26	0.00	1678627.07	3221042.74	39.694008	-104.714498
Grande 4-65 20-19 1CH BHL	18105.44	90.00	270.05	7950.00	10947.77	-39.91	-10947.70	0.00	1678627.03	3221037.31	39.694008	-104.714517

Survey Type: Def Plan

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 Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	28.000	1/100.000	13.500	9.625	NAL_MWD-NON_SLB-Depth Only	Original Hole / Grande 4-65 20-19 1CH Plan #0
	1	28.000	2200.000	1/100.000	13.500	9.625	NAL_MWD-NON_SLB	Original Hole / Grande 4-65 20-19 1CH Plan #0
	1	2200.000	18105.435	1/100.000	8.500	5.500	NAL_MWD_PLUS_0.5_DEG	Original Hole / Grande 4-65 20-19 1CH Plan #0