



SRC Energy

Rev 0

Schlumberger

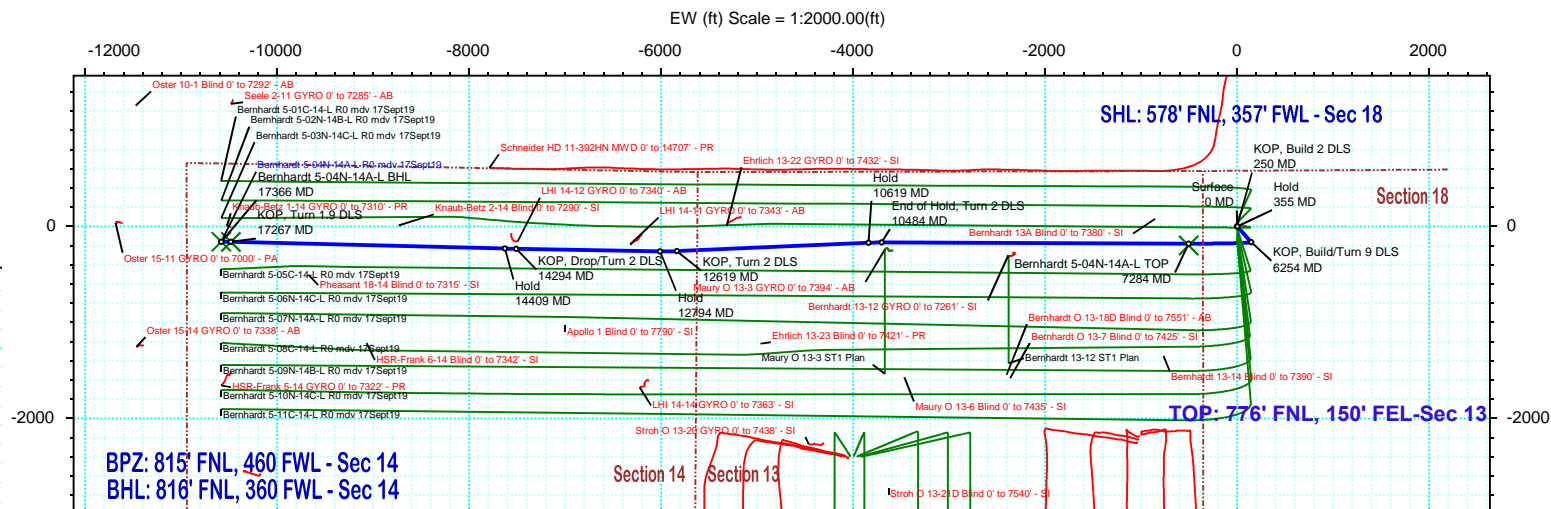
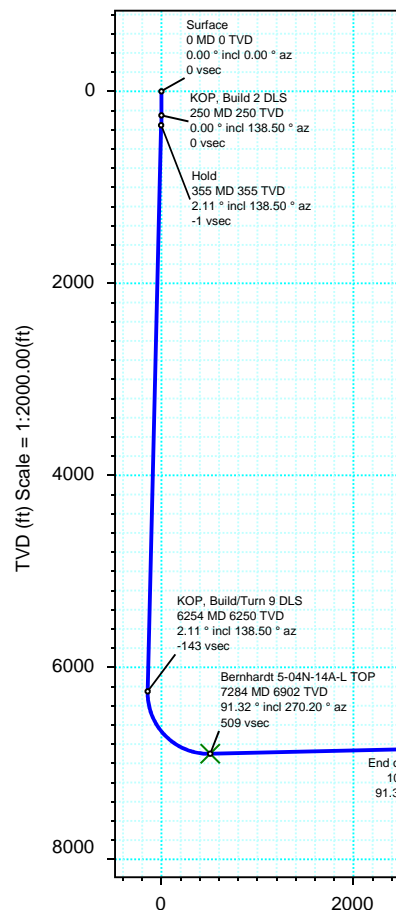
Borehole:	Well:	Field:	Structure:
Original Hole	Bernhardt 5-04N-14A-L	CO, Weld County (NAD 83 NZ) - SRC	SRC Energy 18-04N-66W (Bernhardt 4-18 Pad)

Gravity & Magnetic Parameters					Surface Location				NAD83 Colorado State Plane, Northern Zone, US Feet				Miscellaneous		
Model:	HDGM 2019	Dip:	66.674°	Date:	17-Sep-2019	Lat:	N 40 19 3.42	Northing:	1359258.26ftUS	Grid Conv:	0.4339°	Slot:	Bernhardt 5-04N-14A-L	TVD Ref:	KB 4ft(4742ft above MSL)
MagDec:	8.28°	FS:	52145.298nT	Gravity FS:	999.023mgn (9.80665 Based)	Lon:	W 104 49 42.35	Easting:	3187264.7ftUS	Scale Fact:	0.99995753	Plan:	Bernhardt 5-04N-14A-L R0 mdy 17Sept19		

Proposal



True North
Tot Cor (M->T 8.280°)
Mag Dec (8.280°)
Grid Conv (0.434°)



Surface Location														
Northing:		1359258.26293044	Easting:		3187264.69671277	Latitude:		N 40 19 3.42	Longitude:		W 104 49 42.35	VSec Azimuth:		269.13
Target Description			Grid Coord						Local Coord					
Target Name	Latitude	Longitude	Northing	Easting	TVD	VSec	N(+)/S(-)	E(+)/W(-)						
Bernhardt 4-18 Pad Sec 13-14 - CL	N 40 19 4.02	W 104 49 42.34	1359318.38	3187265.08	4742.00	-1.74	60.11	0.84						
Bernhardt 4-18 Pad Sec 13-14	N 40 19 4.02	W 104 49 42.34	1359318.38	3187265.08	4742.00	-1.74	60.11	0.84						
Bernhardt 5-04N-14A-L BHL	N 40 19 1.80	W 104 51 58.96	1359016.10	3176684.12	6787.00	10583.81	-162.04	-10582.57						
Bernhardt 5-04N-14A-L BPZ	N 40 19 1.80	W 104 51 57.68	1359016.44	3176783.95	6787.00	10484.00	-162.44	-10482.74						
Bernhardt 5-04N-14A-L TOP	N 40 19 1.45	W 104 49 48.88	1359054.81	3186760.11	6902.00	509.09	-199.63	-506.14						

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
KOP, Build 2 DLS	250.00	0.00	138.50	250.00	0.00	0.00	0.00	0.00
Hold	355.38	2.11	138.50	355.36	-1.26	-1.45	1.28	2.00
KOP, Build/Turn 9 DLS	6254.25	2.11	138.50	6250.23	-142.53	-163.94	145.02	0.00
Bernhardt 5-04N-14A-L TOP	7284.50	91.32	270.20	6902.00	508.80	-180.00	-506.14	9.00
End of Hold, Turn 2 DLS	10484.50	91.32	270.20	6828.23	3707.39	-168.83	-3705.27	0.00
Hold	10619.45	91.32	267.50	6825.12	3842.30	-171.54	-3840.15	2.00
KOP, Turn 2 DLS	12619.47	91.32	267.50	6779.01	5840.97	-258.75	-5837.73	0.00
Hold	12794.41	91.32	271.00	6774.97	6015.84	-261.04	-6012.59	2.00
KOP, Drop/Turn 2 DLS	14294.41	91.32	271.00	6740.39	7514.65	-234.87	-7511.96	0.00
Hold	14409.38	89.06	271.41	6740.01	7629.53	-232.46	-7626.89	2.00
KOP, Turn 1.9 DLS	17266.72	89.06	271.41	6787.00	10484.25	-162.40	-10482.99	0.00
Bernhardt 5-04N-14A-L BHL	17366.34	90.94	271.59	6787.00	10583.78	-159.80	-10582.57	1.90

Vertical Section (ft) Azim = 269.13° Scale = 1:2000.00(ft) Origin = 0N/-S, 0E/-W

Bernhardt 5-04N-14A-L R0 mdv 17Sept19 Proposal Geodetic Report

(Def Plan)

Report Date: September 23, 2019 - 12:21 PM
Client: SRC Energy
Field: CO, Weld County (NAD 83 NZ) - SRC
Structure / Slot: SRC Energy 18-04N-66W (Bernhardt 4-18 Pad) / Bernhardt 5-04N-14A-L
Well: Bernhardt 5-04N-14A-L
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Bernhardt 5-04N-14A-L R0 mdv 17Sept19
Survey Date: September 17, 2019
Tort / AHD / DDI / ERD Ratio: 105.220 ° / 10951.325 ft / 6.462 / 1.587
Coordinate Reference System: NAD83 Colorado State Plane, Northern Zone, US Feet
Location Lat / Long: N 40° 19' 3.42480", W 104° 49' 42.34800"
Location Grid N/E Y/X: N 1359258.263 ftUS, E 3187264.697 ftUS
CRS Grid Convergence Angle: 0.4339 °
Grid Scale Factor: 0.99995753
Version / Patch: 2.10.782.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 269.135 ° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: KB 4ft
TVD Reference Elevation: 4742.000 ft above MSL
Seabed / Ground Elevation: 4738.000 ft above MSL
Magnetic Declination: 8.280 °
Total Gravity Field Strength: 999.0228mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 52145.298 nT
Magnetic Dip Angle: 66.674 °
Declination Date: September 17, 2019
Magnetic Declination Model: HDGM 2019
North Reference: True North
Grid Convergence Used: 0.0000 °
Total Corr Mag North-True North: 8.2803 °
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	1359258.26	3187264.70	40.317618	-104.828430
	100.00	0.00	138.50	100.00	0.00	0.00	0.00	0.00	1359258.26	3187264.70	40.317618	-104.828430
	200.00	0.00	138.50	200.00	0.00	0.00	0.00	0.00	1359258.26	3187264.70	40.317618	-104.828430
KOP, Build 2	250.00	0.00	138.50	250.00	0.00	0.00	0.00	0.00	1359258.26	3187264.70	40.317618	-104.828430
DLS	300.00	1.00	138.50	300.00	-0.28	-0.33	0.29	2.00	1359257.94	3187264.99	40.317617	-104.828429
Hold	355.38	2.11	138.50	355.36	-1.26	-1.45	1.28	2.00	1359256.82	3187265.99	40.317614	-104.828425
	400.00	2.11	138.50	399.95	-2.33	-2.68	2.37	0.00	1359255.60	3187267.09	40.317611	-104.828421
	500.00	2.11	138.50	499.88	-4.73	-5.44	4.81	0.00	1359252.86	3187269.55	40.317603	-104.828413
	600.00	2.11	138.50	599.81	-7.12	-8.19	7.24	0.00	1359250.13	3187272.00	40.317596	-104.828404
	700.00	2.11	138.50	699.74	-9.52	-10.94	9.68	0.00	1359247.39	3187274.46	40.317588	-104.828395
	800.00	2.11	138.50	799.68	-11.91	-13.70	12.12	0.00	1359244.66	3187276.92	40.317580	-104.828387
	900.00	2.11	138.50	899.61	-14.30	-16.45	14.55	0.00	1359241.92	3187279.38	40.317573	-104.828378
	1000.00	2.11	138.50	999.54	-16.70	-19.21	16.99	0.00	1359239.18	3187281.83	40.317565	-104.828369
	1100.00	2.11	138.50	1099.47	-19.09	-21.96	19.43	0.00	1359236.45	3187284.29	40.317558	-104.828360
	1200.00	2.11	138.50	1199.40	-21.49	-24.72	21.87	0.00	1359233.71	3187286.75	40.317550	-104.828352
	1300.00	2.11	138.50	1299.34	-23.88	-27.47	24.30	0.00	1359230.98	3187289.20	40.317543	-104.828343
	1400.00	2.11	138.50	1399.27	-26.28	-30.23	26.74	0.00	1359228.24	3187291.66	40.317535	-104.828334
	1500.00	2.11	138.50	1499.20	-28.67	-32.98	29.18	0.00	1359225.51	3187294.12	40.317527	-104.828325
	1600.00	2.11	138.50	1599.13	-31.07	-35.74	31.61	0.00	1359222.77	3187296.58	40.317520	-104.828317
	1700.00	2.11	138.50	1699.07	-33.46	-38.49	34.05	0.00	1359220.03	3187299.03	40.317512	-104.828308
	1800.00	2.11	138.50	1799.00	-35.86	-41.24	36.49	0.00	1359217.30	3187301.49	40.317505	-104.828299
	1900.00	2.11	138.50	1898.93	-38.25	-44.00	38.92	0.00	1359214.56	3187303.95	40.317497	-104.828290
	2000.00	2.11	138.50	1998.86	-40.65	-46.75	41.36	0.00	1359211.83	3187306.41	40.317490	-104.828282
	2100.00	2.11	138.50	2098.80	-43.04	-49.51	43.80	0.00	1359209.09	3187308.86	40.317482	-104.828273
	2200.00	2.11	138.50	2198.73	-45.44	-52.26	46.23	0.00	1359206.35	3187311.32	40.317475	-104.828264
	2300.00	2.11	138.50	2298.66	-47.83	-55.02	48.67	0.00	1359203.62	3187313.78	40.317467	-104.828255
	2400.00	2.11	138.50	2398.59	-50.23	-57.77	51.11	0.00	1359200.88	3187316.24	40.317459	-104.828247
	2500.00	2.11	138.50	2498.53	-52.62	-60.53	53.54	0.00	1359198.15	3187318.69	40.317452	-104.828238
	2600.00	2.11	138.50	2598.46	-55.02	-63.28	55.98	0.00	1359195.41	3187321.15	40.317444	-104.828229
	2700.00	2.11	138.50	2698.39	-57.41	-66.04	58.42	0.00	1359192.67	3187323.61	40.317437	-104.828221
	2800.00	2.11	138.50	2798.32	-59.81	-68.79	60.85	0.00	1359189.94	3187326.07	40.317429	-104.828212
	2900.00	2.11	138.50	2898.25	-62.20	-71.54	63.29	0.00	1359187.20	3187328.52	40.317422	-104.828203
	3000.00	2.11	138.50	2998.19	-64.60	-74.30	65.73	0.00	1359184.47	3187330.98	40.317414	-104.828194
	3100.00	2.11	138.50	3098.12	-66.99	-77.05	68.16	0.00	1359181.73	3187333.44	40.317406	-104.828186
	3200.00	2.11	138.50	3198.05	-69.39	-79.81	70.60	0.00	1359178.99	3187335.90	40.317399	-104.828177
	3300.00	2.11	138.50	3297.98	-71.78	-82.56	73.04	0.00	1359176.26	3187338.35	40.317391	-104.828168
	3400.00	2.11	138.50	3397.92	-74.18	-85.32	75.47	0.00	1359173.52	3187340.81	40.317384	-104.828159
	3500.00	2.11	138.50	3497.85	-76.57	-88.07	77.91	0.00	1359170.79	3187343.27	40.317376	-104.828151
	3600.00	2.11	138.50	3597.78	-78.97	-90.83	80.35	0.00	1359168.05	3187345.73	40.317369	-104.828142
	3700.00	2.11	138.50	3697.71	-81.36	-93.58	82.78	0.00	1359165.32	3187348.18	40.317361	-104.828133
	3800.00	2.11	138.50	3797.65	-83.76	-96.34	85.22	0.00	1359162.58	3187350.64	40.317354	-104.828124
	3900.00	2.11	138.50	3897.58	-86.15	-99.09	87.66	0.00	1359159.84	3187353.10	40.317346	-104.828116
	4000.00	2.11	138.50	3997.51	-88.55	-101.85	90.09	0.00	1359157.11	3187355.55	40.317338	-104.828107
	4100.00	2.11	138.50	4097.44	-90.94	-104.60	92.53	0.00	1359154.37	3187358.01	40.317331	-104.828098
	4200.00	2.11	138.50	4197.38	-93.33	-107.35	94.97	0.00	1359151.64	3187360.47	40.317323	-104.828089
	4300.00	2.11	138.50	4297.31	-95.73	-110.11	97.40	0.00	1359148.90	3187362.93	40.317316	-104.828081
	4400.00	2.11	138.50	4397.24	-98.12	-112.86	99.84	0.00	1359146.16	3187365.38	40.317308	-104.828072
	4500.00	2.11	138.50	4497.17	-100.52	-115.62	102.28	0.00	1359143.43	3187367.84	40.317301	-104.828063
	4600.00	2.11	138.50	4597.10	-102.91	-118.37	104.71	0.00	1359140.69	3187370.30	40.317293	-104.828054
	4700.00	2.11	138.50	4697.04	-105.31	-121.13	107.15	0.00	1359137.96	3187372.76	40.317286	-104.828046
	4800.00	2.11	138.50	4796.97	-107.70	-123.88	109.59	0.00	1359135.22	3187375.21	40.317278	-104.828037
	4900.00	2.11	138.50	4896.90	-110.10	-126.64	112.02	0.00	1359132.48	3187377.67	40.317270	-104.828028
	5000.00	2.11	138.50	4996.83	-112.49	-129.39	114.46	0.00	1359129.75	3187380.13	40.317263	-104.828020
	5100.00	2.11	138.50	5096.77	-114.89	-132.15	116.90	0.00	1359127.01	3187382.59	40.317255	-104.828011
	5200.00	2.11	138.50	5196.70	-117.28	-134.90	119.33	0.00	1359124.28	3187385.04	40.317248	-104.828002
	5300.00	2.11	138.50	5296.63	-119.68	-137.65	121.77	0.00	1359121.54	3187387.50	40.317240	-104.827993
	5400.00	2.11	138.50	5396.56	-122.07	-140.41	124.21	0.00	1359118.80	3187389.96	40.317233	-104.827985
	5500.00	2.11	138.50	5496.50	-124.47	-143.16	126.64	0.00	1359116.07	3187392.42	40.317225	-104.827976
	5600.00	2.11	138.50	5596.43	-126.86	-145.92	129.08	0.00	1359113.33	3187394.87	40.317217	-104.827967
	5700.00	2.11	138.50	5696.36	-129.26	-148.67	131.52	0.00	1359110.60	3187397.33	40.317210	-104.827958
	5800.00	2.11	138.50	5796.29	-131.65	-151.43	133.95	0.00	1359107.86	3187399.79	40.317202	-104.827950
	5900.00	2.11	138.50	5896.23	-134.05	-154.18	136.39	0.00	1359105.13	3187402.25	40.317195	-104.827941
	6000.00	2.11	138.50	5996.16	-136.44	-156.94	138.83	0.00	1359102.39	3187404.70	40.317187	-104.827932
	6100.00	2.11	138.50	6096.09	-138.84	-159.69	141.26	0.00	1359099.65	3187407.16	40.317180	-104.827923
	6200.00	2.11	138.50	6196.02	-141.23	-162.45	143.70	0.00	1359096.92	3187409.62	40.317172	-104.827915
KOP, Build/Turn 9 DLS	6254.25	2.11	138.50	6250.23	-142.53	-163.94	145.02	0.00	1359095.43	3187410.95	40.317168	-104.827910
	6300.00	3.14	240.09	6295.96	-141.98	-165.20	144.49	9.00	1359094.17	3187410.43	40.317165	-104.827912
	6400.00	11.82	262.61	6395.02	-129.39	-167.88	131.94	9.00	1359091.39	3187397.89	40.317157	-104.827957
	6500.00	20.77	266.01	6490.91	-101.44	-170.44	104.03	9.00	1359088.62	3187370.01	40.317150	-104.828057
	6600.00	29.75	267.41	6581.25	-58.85	-172.80	61.46	9.00	1359085.94	3187327.46	40.317144	-104.828210
	6700.00	38.74	268.20	6663.83	-2.64	-174.91	5.28	9.00	1359083.40	3187271.30	40.317138	-104.828411
	6800.00	47.74	268.73	6736.60	65.79	-176.72	-63.13	9.00	1359081.08	3187202.91	40.317133	-104.828656
	6900.00	56.73	269.13	6797.78	144.76	-178.17	-142.09	9.00	1359079.03	3187123.97	40.317129	-104.8

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	
Bernhardt 5-04N-14A-L TOP	7200.00	83.72	269.99	6898.35	424.46	-180.14	-421.78	9.00	1359074.94	3186844.31	40.317124	-104.829943	
	7284.50	91.32	270.20	6902.00	508.80	-180.00	-506.14	9.00	1359074.44	3186759.96	40.317124	-104.830245	
	7300.00	91.32	270.20	6901.64	524.30	-179.95	-521.64	0.00	1359074.38	3186744.46	40.317124	-104.830301	
	7400.00	91.32	270.20	6899.34	624.25	-179.60	-621.61	0.00	1359073.97	3186644.49	40.317125	-104.830659	
	7500.00	91.32	270.20	6897.03	724.21	-179.25	-721.58	0.00	1359073.56	3186544.52	40.317126	-104.831018	
	7600.00	91.32	270.20	6894.73	824.16	-178.90	-821.56	0.00	1359073.16	3186444.56	40.317127	-104.831376	
	7700.00	91.32	270.20	6892.42	924.12	-178.55	-921.53	0.00	1359072.75	3186344.59	40.317128	-104.831735	
	7800.00	91.32	270.20	6890.12	1024.08	-178.20	-1021.50	0.00	1359072.34	3186244.62	40.317129	-104.832093	
	7900.00	91.32	270.20	6887.81	1124.03	-177.85	-1121.47	0.00	1359071.93	3186144.65	40.317130	-104.832452	
	8000.00	91.32	270.20	6885.50	1223.99	-177.50	-1221.45	0.00	1359071.52	3186044.68	40.317131	-104.832810	
	8100.00	91.32	270.20	6883.20	1323.94	-177.15	-1321.42	0.00	1359071.11	3185944.71	40.317132	-104.833169	
	8200.00	91.32	270.20	6880.89	1423.90	-176.81	-1421.39	0.00	1359070.71	3185844.75	40.317133	-104.833527	
	8300.00	91.32	270.20	6878.59	1523.86	-176.46	-1521.37	0.00	1359070.30	3185744.78	40.317134	-104.833886	
	8400.00	91.32	270.20	6876.28	1623.81	-176.11	-1621.34	0.00	1359069.89	3185644.81	40.317134	-104.834244	
	8500.00	91.32	270.20	6873.98	1723.77	-175.76	-1721.31	0.00	1359069.48	3185544.84	40.317135	-104.834603	
	8600.00	91.32	270.20	6871.67	1823.73	-175.41	-1821.28	0.00	1359069.07	3185444.87	40.317136	-104.834961	
	8700.00	91.32	270.20	6869.37	1923.68	-175.06	-1921.26	0.00	1359068.67	3185344.91	40.317137	-104.835320	
	8800.00	91.32	270.20	6867.06	2023.64	-174.71	-2021.23	0.00	1359068.26	3185244.94	40.317138	-104.835678	
	8900.00	91.32	270.20	6864.76	2123.59	-174.36	-2121.20	0.00	1359067.85	3185144.97	40.317139	-104.836037	
	9000.00	91.32	270.20	6862.45	2223.55	-174.01	-2221.18	0.00	1359067.44	3185045.00	40.317140	-104.836395	
	9100.00	91.32	270.20	6860.15	2323.51	-173.66	-2321.15	0.00	1359067.03	3184945.03	40.317141	-104.836754	
	9200.00	91.32	270.20	6857.84	2423.46	-173.32	-2421.12	0.00	1359066.63	3184845.06	40.317142	-104.837112	
	9300.00	91.32	270.20	6855.54	2523.42	-172.97	-2521.09	0.00	1359066.22	3184745.10	40.317143	-104.837471	
	9400.00	91.32	270.20	6853.23	2623.37	-172.62	-2621.07	0.00	1359065.81	3184645.13	40.317144	-104.837829	
	9500.00	91.32	270.20	6850.92	2723.33	-172.27	-2721.04	0.00	1359065.40	3184545.16	40.317145	-104.838188	
	9600.00	91.32	270.20	6848.62	2823.29	-171.92	-2821.01	0.00	1359064.99	3184445.19	40.317146	-104.838546	
9700.00	91.32	270.20	6846.31	2923.24	-171.57	-2920.99	0.00	1359064.58	3184345.22	40.317147	-104.838905		
9800.00	91.32	270.20	6844.01	3023.20	-171.22	-3020.96	0.00	1359064.18	3184245.26	40.317148	-104.839263		
9900.00	91.32	270.20	6841.70	3123.16	-170.87	-3120.93	0.00	1359063.77	3184145.29	40.317148	-104.839622		
10000.00	91.32	270.20	6839.40	3223.11	-170.52	-3220.90	0.00	1359063.36	3184045.32	40.317149	-104.839980		
10100.00	91.32	270.20	6837.09	3323.07	-170.17	-3320.88	0.00	1359062.95	3183945.35	40.317150	-104.840339		
10200.00	91.32	270.20	6834.79	3423.02	-169.83	-3420.85	0.00	1359062.54	3183845.38	40.317151	-104.840697		
10300.00	91.32	270.20	6832.48	3522.98	-169.48	-3520.82	0.00	1359062.14	3183745.42	40.317152	-104.841056		
10400.00	91.32	270.20	6830.18	3622.94	-169.13	-3620.80	0.00	1359061.73	3183645.45	40.317153	-104.841414		
End of Hold, Turn 2 DLS	10484.50	91.32	270.20	6828.23	3707.39	-168.83	-3705.27	0.00	1359061.38	3183560.98	40.317154	-104.841771	
Hold	10500.00	91.32	269.89	6827.87	3722.89	-168.82	-3720.77	2.00	1359061.28	3183545.48	40.317154	-104.841773	
	10600.00	91.32	267.89	6825.56	3822.86	-170.76	-3820.72	2.00	1359058.58	3183445.55	40.317148	-104.842131	
	10619.45	91.32	267.50	6825.12	3842.30	-171.54	-3840.15	2.00	1359057.65	3183426.13	40.317146	-104.842201	
	10700.00	91.32	267.50	6823.26	3922.79	-175.05	-3920.60	0.00	1359053.53	3183345.71	40.317137	-104.842489	
	10800.00	91.32	267.50	6820.95	4022.73	-179.41	-4020.48	0.00	1359048.42	3183245.87	40.317125	-104.842847	
	10900.00	91.32	267.50	6818.65	4122.66	-183.77	-4120.36	0.00	1359043.30	3183146.03	40.317113	-104.843206	
	11000.00	91.32	267.50	6816.34	4222.59	-188.13	-4220.23	0.00	1359038.18	3183046.20	40.317101	-104.843564	
	11100.00	91.32	267.50	6814.04	4322.53	-192.50	-4320.11	0.00	1359033.07	3182946.36	40.317089	-104.843922	
	11200.00	91.32	267.50	6811.73	4422.46	-196.86	-4419.99	0.00	1359027.95	3182846.52	40.317077	-104.844280	
	11300.00	91.32	267.50	6809.43	4522.39	-201.22	-4519.87	0.00	1359022.83	3182746.68	40.317065	-104.844638	
	11400.00	91.32	267.50	6807.12	4622.32	-205.58	-4619.75	0.00	1359017.72	3182646.84	40.317053	-104.844996	
	11500.00	91.32	267.50	6804.81	4722.26	-209.94	-4719.62	0.00	1359012.60	3182547.01	40.317040	-104.845354	
	11600.00	91.32	267.50	6802.51	4822.19	-214.30	-4819.50	0.00	1359007.48	3182447.17	40.317028	-104.845713	
	11700.00	91.32	267.50	6800.20	4922.12	-218.66	-4919.38	0.00	1359002.37	3182347.33	40.317016	-104.846071	
	11800.00	91.32	267.50	6797.90	5022.05	-223.02	-5019.26	0.00	1358997.25	3182247.49	40.317004	-104.846429	
	11900.00	91.32	267.50	6795.59	5121.99	-227.38	-5119.14	0.00	1358992.13	3182147.65	40.316992	-104.846787	
	12000.00	91.32	267.50	6793.29	5221.92	-231.74	-5219.02	0.00	1358987.02	3182047.82	40.316980	-104.847145	
	12100.00	91.32	267.50	6790.98	5321.85	-236.10	-5318.89	0.00	1358981.90	3181947.98	40.316968	-104.847503	
	12200.00	91.32	267.50	6788.68	5421.79	-240.46	-5418.77	0.00	1358976.78	3181848.14	40.316956	-104.847862	
	12300.00	91.32	267.50	6786.37	5521.72	-244.82	-5518.65	0.00	1358971.67	3181748.30	40.316944	-104.848220	
	12400.00	91.32	267.50	6784.07	5621.65	-249.18	-5618.53	0.00	1358966.55	3181648.47	40.316932	-104.848578	
	12500.00	91.32	267.50	6781.76	5721.58	-253.54	-5718.41	0.00	1358961.43	3181548.63	40.316920	-104.848936	
	12600.00	91.32	267.50	6779.45	5821.52	-257.90	-5818.29	0.00	1358956.32	3181448.79	40.316908	-104.849294	
	KOP, Turn 2 DLS	12619.47	91.32	267.50	6779.01	5840.97	-258.75	-5837.73	0.00	1358955.32	3181429.36	40.316906	-104.849364
	Hold	12700.00	91.32	269.11	6777.15	5921.47	-261.13	-5918.20	2.00	1358952.33	3181348.90	40.316899	-104.849653
		12794.41	91.32	271.00	6774.97	6015.84	-261.04	-6012.59	2.00	1358951.71	3181254.53	40.316899	-104.849991
12800.00		91.32	271.00	6774.84	6021.42	-260.94	-6018.17	0.00	1358951.76	3181248.94	40.316900	-104.850011	
12900.00		91.32	271.00	6772.54	6121.35	-259.20	-6118.13	0.00	1358952.75	3181148.98	40.316904	-104.850369	
13000.00		91.32	271.00	6770.23	6221.27	-257.45	-6218.09	0.00	1358953.74	3181049.01	40.316909	-104.850728	
13100.00		91.32	271.00	6767.93	6321.19	-255.71	-6318.05	0.00	1358954.73	3180949.05	40.316914	-104.851086	
13200.00		91.32	271.00	6765.62	6421.11	-253.97	-6418.00	0.0					

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
	17000.00	89.06	271.41	6782.61	10217.77	-168.94	-10216.38	0.00	1359011.97	3177050.34	40.317148	-104.865066
	17100.00	89.06	271.41	6784.26	10317.68	-166.49	-10316.34	0.00	1359013.66	3176950.37	40.317155	-104.865424
	17200.00	89.06	271.41	6785.90	10417.59	-164.04	-10416.30	0.00	1359015.36	3176850.40	40.317162	-104.865783
KOP, Turn 1.9 DLS	17266.72	89.06	271.41	6787.00	10484.25	-162.40	-10482.99	0.00	1359016.49	3176783.70	40.317166	-104.866022
	17300.00	89.69	271.47	6787.36	10517.50	-161.57	-10516.25	1.90	1359017.07	3176750.43	40.317168	-104.866141
Bernhardt 5-04N- 14A-L BHL	17366.34	90.94	271.59	6787.00	10583.78	-159.80	-10582.57	1.90	1359018.33	3176684.11	40.317173	-104.866379

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	4.000	1/100.000	13.500	9.625	NAL_MWD_IFR1-Depth Only	Original Hole / Bernhardt 5-04N- 14A-L R0 mdv 17Sept19
	1	4.000	1800.000	1/100.000	13.500	9.625	NAL_MWD_IFR1	Original Hole / Bernhardt 5-04N- 14A-L R0 mdv 17Sept19
	1	1800.000	17366.345	1/100.000	8.500	5.500	NAL_MWD_IFR1+MS	Original Hole / Bernhardt 5-04N- 14A-L R0 mdv 17Sept19