Directional Survey Calculations	Measured Depth (ft)	Sub-Sea Incl. (deg)	Vertical Azim. (ft)	True Vert Depth (ft)	Northings (+) Southings (-) (ft)	Eastings (+) Westings (-) (ft)	Vert Section (ft)	DLS deg/100' (deg)	FNL	FSL	FWL	FEL
SHL	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	256	5041	3316	1980
BHL	9190	90.30	182.00	4869.47	-4700.60	14.42	4700.61	0.00	4957	340	3303	1992
Miss Entry	5081	81.24	180.45	4772.51	-596.15	41.59	596.37	8.60	852	4444	3354	1942
Top Perf	5566	88.40	183.46	4791.56	-1079.88	19.91	1079.97	0.89	1336	3961	3329	1967
Bottom Perf	9014	89.87	181.57	4869.82	-4524.70	20.13	4524.74	0.41	4781	516	3309	1985

Survey Points		X	Y		X	Y		m
	NW Corner XY Coord	2098056	129440				North Line slope	0.0086858
	SW Corner XY Coord	2098087	124136	Surface XY	2101373	129213	East Line slope	-0.00548
	NE Corner XY Coord	2103352	129486				South Line slope	0.0109558
	SE Corner XY Coord	2103381	124194				West Line slope	-0.0058446

	Measured Depth (ft)	Sub-Sea Incl. (deg)	Vertical Azim. (ft)	True Vert Depth (ft)	Northings (+) Southings (-) (ft)	Eastings (+) Westings (-) (ft)	Vert Section (ft)	DLS deg/100' (deg)	FNL	FSL	FWL	FEL
	0	0.0	0	0	0	0	0	0	256	5041	3316	1980
	250	0.30	41.90	250.00	0	0	-0.48	0.12	255	5041	3316	1980
	500	0.50	41.90	499.99	2	2	-1.78	0.08	254	5043	3317	1979
	700	1.30	41.90	699.97	4	4	-4.10	0.40	252	5045	3319	1977
	855	1.60	41.90	854.92	7	6	-7.01	0.19	249	5048	3322	1974
	947	1.10	33.90	946.89	9	8	-8.69	0.58	247	5050	3323	1973
	1404	1.10	69.80	1403.81	14	14	-13.81	0.15	242	5055	3330	1966
	1878	0.70	91.50	1877.75	15	21	-15.27	0.11	241	5056	3337	1959
	2352	0.60	96.30	2351.72	15	27	-14.89	0.02	241	5056	3343	1954
	2826	0.30	96.10	2825.71	15	30	-14.46	0.06	241	5055	3346	1950
	3300	0.20	95.40	3299.70	14	33	-14.24	0.02	242	5055	3348	1948
	3770	0.40	77.50	3769.70	15	35	-14.51	0.05	241	5055	3351	1945
	3991	0.50	100.80	3990.69	15	37	-14.48	0.09	241	5055	3352	1944
	4023	0.40	82.90	4022.69	15	37	-14.47	0.54	241	5055	3353	1944
	4054	1.60	175.00	4053.69	14	37	-14.05	5.37	242	5055	3353	1943
	4086	4.10	177.90	4085.64	13	37	-12.46	7.82	243	5053	3353	1943
	4117	6.40	179.80	4116.51	10	37	-9.63	7.44	246	5050	3353	1943
	4149	6.50	173.00	4148.31	6	37	-6.04	2.41	250	5047	3353	1943
	4180	7.90	166.40	4179.06	2	38	-2.23	5.24	254	5043	3354	1942
	4212	10.70	166.00	4210.64	-3	39	2.80	8.75	259	5038	3355	1941
	4243	13.70	165.20	4240.94	-9	41	9.15	9.69	265	5032	3357	1940
	4274	17.50	165.00	4270.79	-17	43	17.22	12.26	273	5024	3359	1937
	4306	20.70	167.30	4301.02	-27	46	27.40	10.27	283	5013	3361	1935
	4337	23.20	170.40	4329.78	-39	48	38.78	8.89	295	5002	3363	1933
	4369	25.60	173.50	4358.92	-52	50	51.87	8.50	308	4989	3365	1931
	4401	28.10	176.50	4387.47	-66	51	66.28	8.88	322	4974	3366	1930
	4433	30.00	178.40	4415.44	-82	52	81.80	6.60	338	4959	3367	1929
	4465	31.60	180.40	4442.93	-98	52	98.18	5.94	354	4943	3367	1929
	4496	34.10	181.30	4468.97	-115	51	114.99	8.22	371	4926	3367	1930
	4529	36.10	181.50	4495.96	-134	51	133.96	6.07	390	4907	3366	1930
	4560	38.90	180.60	4520.56	-153	51	152.82	9.20	409	4888	3365	1931
	4592	42.20	180.60	4544.87	-173	50	173.62	10.31	430	4867	3365	1931
	4623	45.60	180.40	4567.20	-195	50	195.11	10.98	451	4846	3365	1931
Top of Tangent	4655	48.30	180.80	4589.04	-218	50	218.49	8.49	474	4822	3364	1932
@ 5192'	4687	51.20	180.80	4609.72	-243	50	242.91	9.06	499	4798	3364	1932
	4718	53.10	180.70	4628.74	-267	49	267.38	6.13	523	4773	3363	1933
	4750	55.40	181.10	4647.43	-293	49	293.34	7.26	549	4747	3363	1933
	4781	57.60	181.20	4664.54	-319	48	319.18	7.10	575	4722	3362	1934
Btm of Tangent	4813	59.50	181.60	4681.24	-346	48	346.47	6.03	602	4694	3361	1935
@ 5380'	4844	60.90	181.90	4696.64	-373	47	373.35	4.59	629	4667	3360	1936
	4875	63.30	182.10	4711.15	-400	46	400.72	7.76	657	4640	3359	1937
	4907	66.10	181.60	4724.82	-429	45	429.63	8.86	686	4611	3358	1938
	4938	69.00	181.50	4736.66	-458	44	458.26	9.36	714	4582	3357	1939
	4970	72.20	181.40	4747.29	-488	44	488.43	10.00	744	4552	3356	1940
	5002	75.20	181.60	4756.27	-519	43	519.12	9.39	775	4522	3355	1941
	5033	77.10	180.80	4763.69	-549	42	549.21	6.62	805	4492	3355	1941
	5065	79.90	180.60	4770.07	-580	42	580.56	8.77	837	4460	3354	1942
	5096	82.50	180.30	4774.81	-611	41	611.19	8.44	867	4430	3354	1942
	5128	84.00	180.30	4778.57	-643	41	642.96	4.69	899	4398	3353	1943
	5159	85.20	181.80	4781.49	-674	41	673.81	6.18	930	4367	3352	1943
	5191	87.00	182.70	4783.66	-705	39	705.71	6.29	962	4335	3351	1945
	5222	88.30	183.30	4784.94	-736	38	736.63	4.62	993	4304	3349	1947
	5254	89.00	183.20	4785.69	-768	36	768.56	2.21	1024	4272	3347	1949
	5286	89.50	183.40	4786.11	-800	34	800.49	1.68	1056	4240	3345	1951
	5318	89.90	183.20	4786.28	-832	32	832.43	1.40	1088	4208	3343	1953
	5350	89.60	182.70	4786.42	-864	31	864.37	1.82	1120	4176	3341	1955
	5382	88.70	182.30	4786.89	-896	29	896.33	3.08	1152	4144	3340	1956
	5413	88.50	182.50	4787.65	-927	28	927.29	0.91	1183	4114	3338	1958
	5444	88.40	183.10	4788.49	-958	27	958.23	1.96	1214	4083	3337	1959
	5476	89.10	182.80	4789.18	-990	25	990.17	2.38	1246	4051	3335	1961
	5498	88.40	183.00	4789.66	-1012	24	1012.13	3.31	1268	4029	3334	1962
	5572	88.40	183.50	4791.73	-1086	20	1085.96	0.68	1342	3955	3329	1967
	5667	89.00	183.50	4793.89	-1181	14	1180.72	0.63	1437	3860	3323	1973
	5761	86.80	182.70	4797.33	-1274	9	1274.49	2.49	1530	3766	3317	1979
	5856	86.90	182.20	4802.55	-1369	5	1369.23	0.54	1625	3672	3312	1983

Measured Depth (ft)	Sub-Sea Incl. (deg)	Vertical Azim. (ft)	True Vert Depth (ft)	Northings (+) Southings (-) (ft)	Eastings (+) Westings (-) (ft)	Vert Section (ft)	DLS deg/100' (deg)	FNL	FSL	FWL	FEL
5952	87.30	182.70	4807.41	-1465	1	1465.00	0.67	1721	3576	3308	1988
6046	87.30	183.80	4811.84	-1559	-5	1558.71	1.17	1815	3482	3302	1994
6141	87.90	182.00	4815.81	-1654	-10	1653.47	2.00	1909	3388	3296	1999
6237	88.30	180.80	4819.00	-1749	-12	1749.37	1.32	2005	3292	3294	2002
6332	89.60	182.10	4820.74	-1844	-14	1844.31	1.94	2100	3197	3291	2005
6427	90.20	180.80	4820.90	-1939	-17	1939.26	1.51	2195	3102	3288	2008
6522	89.20	179.80	4821.40	-2034	-17	2034.25	1.49	2290	3007	3287	2009
6617	89.80	178.10	4822.23	-2129	-15	2129.24	1.90	2385	2912	3288	2008
6711	89.50	177.70	4822.80	-2223	-12	2223.19	0.53	2479	2818	3291	2005
6806	88.70	178.30	4824.30	-2318	-9	2318.13	1.05	2574	2723	3293	2002
6900	90.30	177.20	4825.12	-2412	-5	2412.07	2.07	2668	2629	3297	1999
6995	90.10	177.80	4824.79	-2507	-1	2507.00	0.67	2763	2534	3300	1995
7090	89.30	178.00	4825.28	-2602	3	2601.95	0.87	2858	2439	3303	1992
7186	87.70	177.70	4827.80	-2698	6	2697.87	1.70	2954	2343	3306	1989
7280	87.80	177.70	4831.49	-2792	10	2791.74	0.11	3048	2249	3309	1986
7375	88.00	177.60	4834.97	-2887	14	2886.62	0.24	3143	2154	3313	1982
7470	86.40	178.50	4839.61	-2981	17	2981.46	1.93	3237	2059	3315	1980
7564	88.10	179.00	4844.12	-3075	19	3075.34	1.88	3331	1966	3317	1978
7658	88.60	179.10	4846.82	-3169	21	3169.29	0.54	3425	1872	3318	1977
7753	89.70	178.90	4848.23	-3264	22	3264.27	1.18	3520	1777	3319	1976
7848	90.60	179.20	4847.98	-3359	24	3359.27	1.00	3615	1682	3320	1975
7942	89.80	179.00	4847.66	-3453	25	3453.26	0.88	3709	1588	3321	1974
8036	89.60	179.20	4848.15	-3547	27	3547.25	0.30	3803	1494	3322	1973
8131	89.10	179.40	4849.23	-3642	28	3642.24	0.57	3898	1399	3322	1972
8225	89.10	179.70	4850.70	-3736	29	3736.23	0.32	3992	1305	3323	1972
8319	89.00	179.20	4852.26	-3830	30	3830.22	0.54	4086	1211	3323	1972
8413	87.60	179.80	4855.05	-3924	30	3924.17	1.62	4180	1117	3323	1972
8508	88.80	180.00	4858.03	-4019	31	4019.12	1.28	4275	1022	3323	1972
8603	88.30	180.50	4860.44	-4114	30	4114.09	0.74	4370	927	3322	1973
8697	87.10	181.40	4864.21	-4208	29	4207.99	1.60	4464	833	3320	1975
8792	88.70	181.70	4867.69	-4303	26	4302.87	1.71	4559	738	3317	1978
8887	89.50	181.50	4869.18	-4398	23	4397.80	0.87	4654	643	3313	1981
8982	89.80	181.40	4869.76	-4493	21	4492.76	0.33	4749	548	3310	1984
9077	90.00	181.90	4869.93	-4588	18	4587.70	0.57	4844	453	3307	1987
9129	90.30	182.00	4869.79	-4640	17	4639.66	0.61	4896	401	3305	1989
9190	90.30	182.00	4869.47	-4701	14	4700.61	0.00	4957	340	3303	1992
								256	5041	3316	1980
								256	5041	3316	1980
								256	5041	3316	1980
								256	5041	3316	1980
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