

<u>Type of Survey</u>	<u>Depth</u>	<u>Degree of Deviation</u>	<u>Displacement</u>	<u>Total Displacement</u>	<u>Direction</u>
TOTCO	12,371	2 1/2	2.8353	300.1786	
TOTCO	12,416	2	1.5705	301.7491	
TOTCO	12,702	2 1/2	9.9813	311.7304	
TOTCO	12,789	2	3.0363	314.7667	
TOTCO	12,880	2 1/2	3.9684	318.7361	
TOTCO	13,026	2 1/2	6.3684	325.1045	
TOTCO	13,089	2	2.1987	327.3032	
TOTCO	13,140	2 3/4	2.4469	329.7501	
TOTCO	13,216	2 1/2	3.3151	333.0652	
TOTCO	13,347	3	6.8560	339.9212	
TOTCO	13,389	2 1/2	1.8320	341.7532	
TOTCO	13,515	2 1/2	5.4960	347.2492	
TOTCO	13,619	2 3/4	4.9897	352.2389	
TOTCO	13,681	2 3/4	2.9746	355.2135	
TOTCO	13,707	3	1.3607	356.5742	
TOTCO	13,764	3	2.9831	359.5573	
TOTCO	13,860	2 1/2	4.1875	363.7448	
TOTCO	13,921	3	3.1925	366.9373	
TOTCO	14,081	3 1/2	9.7678	376.7051	
TOTCO	14,206	3 1/2	7.6311	384.3362	
TOTCO	14,269	3 1/2	3.8461	388.1823	
TOTCO	14,341	4	5.0225	393.2048	
TOTCO	14,691	2 3/4	16.7923	409.9971	
TOTCO	15,003	1 3/4	9.5280	419.5251	
TOTCO	15,580	5 1/4	52.7964	472.3215	
TOTCO	15,693	6	11.8117	484.1332	
TOTCO	15,782	6 1/2	10.0751	494.2083	
TOTCO	15,947	7	20.1084	514.3167	
TOTCO	15,970	7	2.8030	517.1197	

No TOTCO Surveys were made from 15,970 - 16,775' due to small size drill collars.

Sperry Sun Magnetic Direction Survey

<u>Type of Survey</u>	<u>Depth</u>	<u>Degree of Deviation</u>	<u>Displacement</u>	<u>Total Displacement</u>	<u>Direction</u>
Sperry	16,000	14	7.2577	524.3774	N-26-E
Sperry	16,100	18	30.9017	555.2791	N-45-E
Sperry	16,200	32	52.9919	608.2710	N-56-E
Sperry	16,300	38	61.5661	669.8371	N-72-E
Sperry	16,400	46	71.9340	741.7711	N-77-E
Sperry	16,500	56	82.9038	824.6749	N-82-E
Sperry	16,600	60	86.6025	911.2774	N-79-E
Sperry	16,610	61	8.7462	920.0236	N-85-E

Plug back to 15,747'. Drill to 16,000'.

<u>Type of Survey</u>	<u>Depth</u>	<u>Degree of Deviation</u>	<u>Displacement</u>	<u>Total Displacement</u>	<u>Direction</u>
TOTCO	15,700	6	12.5434	484.865	
TOTCO	15,800	6	10.4528	495.3179	
TOTCO	15,900	6	10.4528	505.7707	
TOTCO	15,925	7	3.0467	508.8174	
TOTCO	15,950	8	3.4793	512.2967	
TOTCO	15,975	10	4.3412	516.638	