

ELF AQUITAINE PETRO  
CHACON JICARILLA APACHE D-11

RIG: PARKER RIG 116  
(Notarized)

**RECEIVED**  
SEP 23 1988  
OIL CON. DIV.  
DIST. 3

Date 01/11/11

TELECO OILFIELD SERVICES  
SURVEY CALCULATIONS

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We hereby certify that the surveys contained herein, are the best of our knowledge and accurate account of the work.

Teleco Oilfield Services  
*Collyer*  
FIELD SUPERVISOR

Company: ELF AQUITAINE PETRO  
Well: CHACON JICARILLA APACHE D-11  
Location: W. LYNDRITH  
Rig: PARKER RIG 116

TELECO Job # 2426  
Grid Correction: 0.0°  
Magnetic Declination: 11.5°  
Total grid correction: 11.5°  
Proposed Direction: 175.0°

NOTARY PUBLIC

*Mark B. Verret*  
MARK B. VERRER

MINIMUM CURVATURE CALCULATION  
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Meas	Depth	Course	True	Vertical	Coordinates	Distance	Closure	Dog Leg		
feet	feet	Incl deg	Vert. Deg	Section feet	N/S feet	feet	Angle deg	Severity deg/100		
7888	0	90.8	177.0	7310.58	1050.29	1054.96S	7.57W	1054.99	S 0.41W	0.00
7912	24	90.8	175.7	7310.25	1074.28	1078.91S	6.04W	1078.93	S 0.32W	5.42
7942	30	90.7	176.0	7309.85	1104.27	1108.83S	3.87W	1108.83	S 0.20W	1.05
7974	32	90.7	176.0	7309.46	1136.26	1140.75S	1.64W	1140.75	S 0.08W	0.00
8006	32	90.1	176.4	7309.24	1168.25	1172.68S	0.48E	1172.68	S 0.02E	2.25

TELECO TIE IN TO EASTMAN CHRISTENSEN MWD

TELECO MWD SURVEYS

Company: ELF AQUITAINE PETRO, Well: CHACON JICARILLA APACHE D-11, Location: W. LYNDRITH, Rig: PARKER

Meas Depth feet	Course Incl deg	Azi deg	True Vert. Dp. feet	Vertical Section feet	N/S feet	Coordinates E/W feet	Distance feet	Closure Angle deg	Dog Leg Severity deg/100	
8036	30	89.9	177.4	7309.24	1198.24	1202.63S	2.10E	1202.63	S 0.10E	3.40
8067	31	90.1	176.4	7309.24	1229.22	1233.59S	3.78E	1233.59	S 0.18E	3.29
8099	32	90.7	176.4	7309.01	1261.21	1265.52S	5.79E	1265.53	S 0.26E	1.87
8151	52	91.3	176.7	7308.11	1313.18	1317.42S	8.92E	1317.45	S 0.39E	1.29
8181	30	91.3	175.7	7307.43	1343.17	1347.34S	10.91E	1347.39	S 0.46E	3.33
8211	30	91.8	177.4	7306.61	1373.15	1377.28S	12.71E	1377.34	S 0.53E	5.91
8228	17	92.1	177.1	7306.04	1390.12	1394.25S	13.53E	1394.31	S 0.56E	2.49
8259	31	92.5	177.1	7304.79	1421.08	1425.18S	15.09E	1425.26	S 0.61E	1.29
8292	33	91.8	177.4	7303.55	1454.03	1458.12S	16.67E	1458.22	S 0.66E	2.31
8323	31	90.8	177.8	7302.85	1484.99	1489.09S	17.97E	1489.20	S 0.69E	3.47
8354	31	90.8	177.4	7302.42	1515.95	1520.06S	19.27E	1520.18	S 0.73E	1.29
8386	32	90.9	177.8	7301.94	1547.92	1552.03S	20.61E	1552.16	S 0.76E	1.29
8417	31	90.7	177.8	7301.51	1578.88	1583.00S	21.80E	1583.15	S 0.79E	0.65
8449	32	90.7	178.1	7301.12	1610.83	1614.98S	22.94E	1615.14	S 0.81E	0.93

Company: ELF AQUITAINE PETRO, well: CHACON JICARILLA APACHE D-11, Location: W. LYNDRITH, Rig: PARKER

Meas Depth feet	Course Incl deg	Azi deg	True Vert. feet	Dp. feet	Vertical Section feet	N/S feet	Coordinates E/W feet	Distance feet	Closure Angle deg	Dog Leg Severity deg/100
8479	30	90.4	178.1	7300.83	1640.79	1644.96S	23.94E	1645.13	S 0.83E	1.00
8509	30	90.0	178.8	7300.73	1670.73	1674.95S	24.75E	1675.13	S 0.85E	2.69
8540	31	89.9	178.5	7300.75	1701.67	1705.94S	25.48E	1706.13	S 0.86E	1.02
8571	31	89.7	178.5	7300.86	1732.61	1736.93S	26.29E	1737.13	S 0.87E	0.65
8603	32	89.3	179.2	7301.14	1764.54	1768.92S	26.94E	1769.13	S 0.87E	2.52
8634	31	88.3	179.2	7301.79	1795.45	1799.91S	27.37E	1800.12	S 0.87E	3.23
8665	31	88.4	178.8	7302.68	1826.36	1830.89S	27.91E	1831.10	S 0.87E	1.33
8696	31	87.9	179.2	7303.68	1857.26	1861.87S	28.45E	1862.09	S 0.88E	2.06
8727	31	87.5	179.2	7304.93	1888.16	1892.84S	28.88E	1893.06	S 0.87E	1.29
8756	29	86.6	179.2	7306.42	1917.04	1921.80S	29.29E	1922.02	S 0.87E	3.10
8787	31	86.1	180.2	7308.40	1947.87	1952.74S	29.45E	1952.96	S 0.86E	3.60
8819	32	85.6	179.2	7310.71	1979.68	1984.65S	29.62E	1984.87	S 0.85E	3.49
8848	29	84.8	179.2	7313.14	2008.50	2013.55S	30.02E	2013.77	S 0.85E	2.76

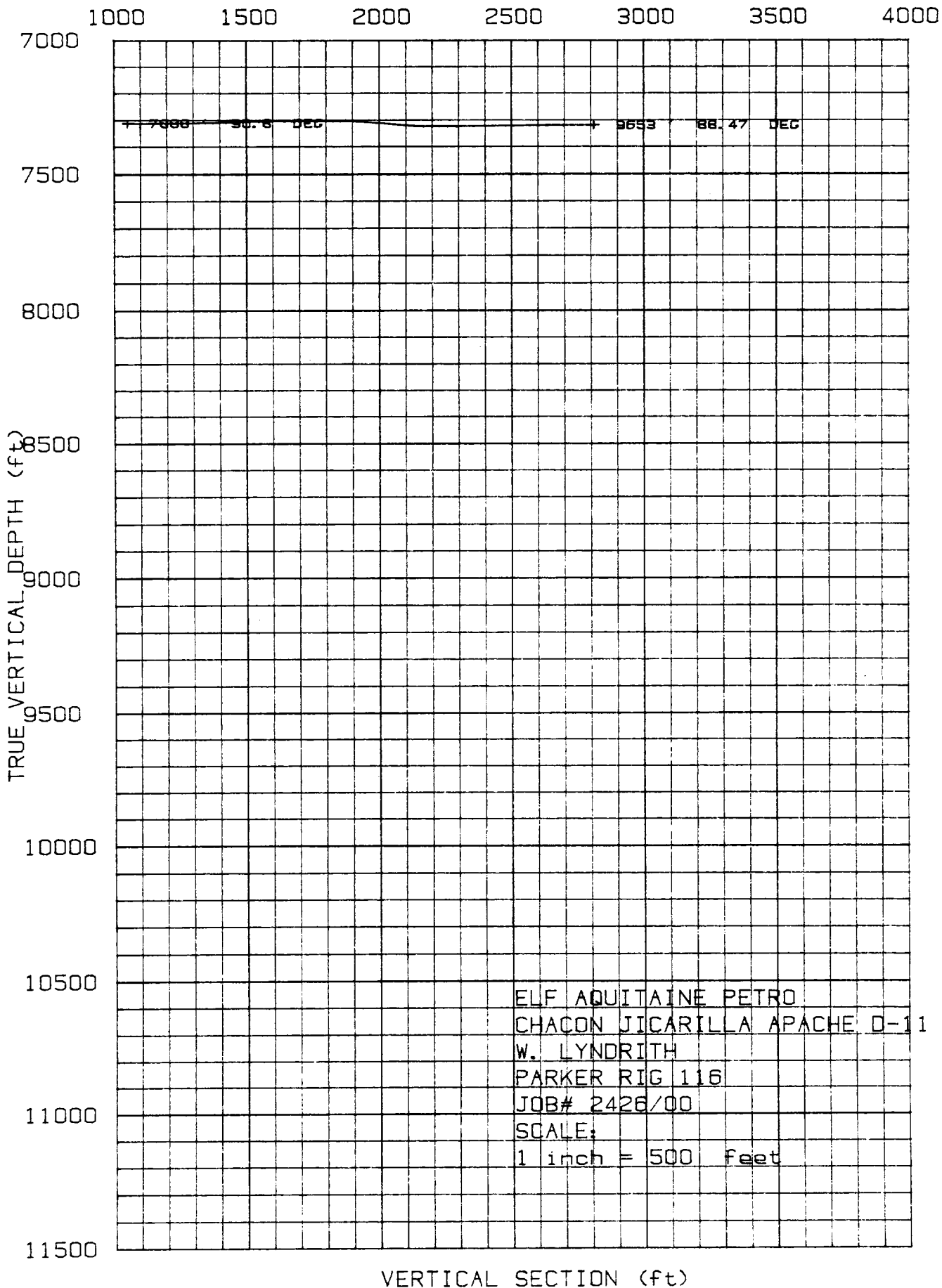
Company: ELF AQUITAINE PETRO, Well: CHACON JICARILLA APACHE D-11, Location: W. LYNDRITH, Rig: PARKER

Meas Depth feet	Course Incl deg	Azi deg	True Vert. Dp. feet	Vertical Section feet	N/S feet	Coordinates E/W feet	Distance feet	Closure Angle deg	Dog Leg Severity deg/100	
8880	32	84.6	179.5	7316.09	2040.27	2045.41S	30.38E	2045.63	S 0.85E	1.12
8911	31	84.3	179.2	7319.09	2071.04	2076.26S	30.73E	2076.49	S 0.85E	1.36
8944	33	84.1	181.0	7322.43	2103.74	2109.09S	30.67E	2109.31	S 0.83E	5.46
8974	30	88.4	180.2	7324.39	2133.52	2139.02S	30.36E	2139.23	S 0.81E	14.58
9006	32	89.8	181.0	7324.89	2165.37	2171.01S	30.03E	2171.22	S 0.79E	5.04
9037	31	90.2	180.6	7324.89	2196.21	2202.01S	29.59E	2202.21	S 0.77E	1.82
9068	31	90.6	179.9	7324.67	2227.08	2233.01S	29.46E	2233.20	S 0.76E	2.60
9100	32	90.7	180.2	7324.31	2258.95	2265.00S	29.43E	2265.20	S 0.74E	0.98
9131	31	91.0	180.2	7323.85	2289.82	2296.00S	29.32E	2296.19	S 0.73E	0.96
9163	32	91.4	177.4	7323.18	2321.74	2327.98S	29.99E	2328.18	S 0.74E	8.84
9193	30	91.6	178.5	7322.40	2351.69	2357.95S	31.06E	2358.16	S 0.75E	3.72
9223	30	91.9	180.2	7321.48	2381.59	2387.94S	31.40E	2388.14	S 0.75E	5.75
9246	23	91.4	179.9	7320.82	2404.49	2410.93S	31.38E	2411.13	S 0.75E	2.53

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Meas Depth feet	Course Incl deg	Azi deg	True Vert. Dp. feet	Vertical Section feet	N/S feet	Coordinates E/W feet	Distance feet	Closure Angle deg	Dog Leg Severity deg/100	
9318	72	90.7	181.7	7319.50	2476.10	2482.90S	30.38E	2483.09	S 0.70E	2.68
9349	31	91.1	179.9	7319.01	2506.94	2513.90S	29.95E	2514.07	S 0.68E	5.95
9378	29	90.9	179.5	7318.51	2535.84	2542.89S	30.10E	2543.07	S 0.68E	1.54
9410	32	90.2	179.5	7318.20	2567.74	2574.89S	30.38E	2575.07	S 0.68E	2.19
9441	31	91.0	181.3	7317.87	2598.60	2605.88S	30.16E	2606.06	S 0.66E	6.35
9473	32	90.6	181.7	7317.43	2630.39	2637.87S	29.32E	2638.03	S 0.64E	1.77
9504	31	90.4	180.6	7317.16	2661.21	2668.86S	28.70E	2669.02	S 0.62E	3.61
9536	32	89.7	180.6	7317.13	2693.05	2700.86S	28.37E	2701.01	S 0.60E	2.19
9567	31	89.3	180.6	7317.40	2723.90	2731.86S	28.04E	2732.00	S 0.59E	1.29
9598	31	89.0	178.1	7317.86	2754.81	2762.85S	28.39E	2763.00	S 0.59E	8.12
PROJECTED BOTTOM HOLE LOCATION										
9653	55	88.5	173.7	7319.07	2809.78	2817.68S	32.34E	2817.87	S 0.66E	8.11

VERTICAL PROJECTION



TELECO Oilfield Services  
PLAN VIEW

