

PHOENIX DRILLING SERVICES
SHORT RADIUS WELLPLAN

COMPANY: TEXACO EXPL & PROD, INC.
WELL: RHODES "23" FED COM NO. 1
LOCATION: LEA COUNTY, NEW MEXICO

DATE: 09/11/96

MINIMUM CURVATURE CALCULATIONS

PROPOSED DIRECTION

342.55

PLANNED RADIUS= 100 FEET

SUR NO.	MD	INC	TRUE AZM	TVD	N-S	E-W	SECT	DLS/ 100
KOP	2775.0	0.00	342.6	2775.0	0.0	0.0	0.0	0.0
1	2785.0	5.73	342.6	2785.0	0.5	-0.1	0.5	57.3
2	2795.0	11.46	342.6	2794.9	1.9	-0.6	2.0	57.3
3	2805.0	17.19	342.6	2804.6	4.3	-1.3	4.5	57.3
4	2815.0	22.92	342.6	2813.9	7.5	-2.4	7.9	57.3
5	2825.0	28.65	342.6	2822.9	11.7	-3.7	12.2	57.3
6	2835.0	34.38	342.6	2831.5	16.7	-5.2	17.5	57.3
7	2845.0	40.11	342.6	2839.4	22.4	-7.1	23.5	57.3
8	2855.0	45.84	342.6	2846.7	28.9	-9.1	30.3	57.3
9	2865.0	51.57	342.6	2853.3	36.1	-11.3	37.8	57.3
10	2875.0	57.30	342.6	2859.1	43.9	-13.8	46.0	57.3
11	2885.0	63.03	342.6	2864.1	52.1	-16.4	54.6	57.3
12	2895.0	68.76	342.6	2868.2	60.8	-19.1	63.8	57.3
13	2929.6	88.60	342.6	2875.0	93.1	-29.3	97.5	57.3
14	3332.2	88.60	342.6	2884.8	477.0	-149.9	500.0	0.0