

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
STK	2895.4	69.00	342.6	2868.4	61.2	-19.2	64.2	57.3
1	2915.4	71.00	342.6	2875.2	79.1	-24.9	83.0	10.0
2	2935.4	73.00	342.6	2881.4	97.3	-30.6	102.0	10.0
3	2955.4	75.00	342.6	2886.9	115.6	-36.3	121.2	10.0
4	2975.4	77.00	342.6	2891.7	134.1	-42.2	140.6	10.0
5	2995.4	79.00	342.6	2895.9	152.8	-48.0	160.2	10.0
6	3015.4	81.00	342.6	2899.4	171.6	-53.9	179.9	10.0
7	3035.4	83.00	342.6	2902.1	190.5	-59.9	199.7	10.0
8	3055.4	85.00	342.6	2904.2	209.4	-65.8	219.6	10.0
9	3075.4	87.00	342.6	2905.6	228.5	-71.8	239.5	10.0
10	3090.4	88.50	342.6	2906.2	242.8	-76.3	254.5	10.0
11	4090.4	88.60	342.6	2931.5	1196.5	-376.1	1254.2	0.0
12	4236.3	88.60	342.6	2935.1	1335.6	-419.8	1400.0	0.0