

30-015-37480

		SURVEY CALCULATION PROGRAM								v1.00.02				TARGET DETAILS					
OPERATOR:		Marbob Energy Corp.				Supervisors:						TARGET N-S		Directional					
WELL:		Showstopper 19 Fed #6H				Joe Hargrove						TARGET E-W							
LOCATION:		Eddy Co. NM.				Nic Black						TARGET RADIUS							
JOB NUMBER:		WT 10475				Nic Black						TARGET DISPLACEMENT							
COMMENTS:		RECEIVED MAY 20 2011 11:08 AM				MAG DEC. (-/+)		7.87		TARGET TVD		Horizontal		7122.00					
						GRID CORR. (-/+)		-0.16		DIP AZ				354.99					
						TOTAL CORR. (-/+)		7.71		DIP DEG UP+/DN-				0.00					
DATE: 01/13/11						TIME: 1:08 PM				TARGET INCLINATION				90.00					
MINIMUM CURVATURE CALCULATIONS(SPE-3362)										PROPOSED DIRECTION		354.99		TARGET TRACKING					
SVY NUM	MD	INC	TRUE AZM	TVD	SECT	N-S	E-W	DLS/ 100	TO CENTER		CLOSURE DIR (DEG AZ)	CLOSURE DISTANCE (FEET)	BUILD RATE/ °/100'	WALK RATE/ °/100'					
									ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)									
Tie	6350	2.0	172.3	6348.83	-45.6	-43.68	23.60		773.17	19.69	151.62	49.65							
1	6521	1.7	173.9	6519.74	-51.08	-49.14	24.27	0.17	602.26	19.88	153.72	54.81	-0.17	0.92					
2	6552	1.5	172.9	6550.73	-51.94	-50.00	24.37	0.65	571.27	19.91	154.02	55.62	-0.65	-3.23					
3	6584	0.0	58.6	6582.73	-52.36	-50.42	24.42	4.69	539.27	19.92	154.16	56.02	-4.69	-357.19					
4	6615	3.0	348.4	6613.71	-51.55	-49.63	24.25	9.68	508.29	19.83	153.95	55.24	9.68	-226.45					
5	6647	6.0	347.3	6645.61	-49.06	-47.17	23.72	9.38	476.39	19.51	153.31	52.80	9.38	-3.44					
6	6679	9.5	349.8	6677.31	-44.78	-42.94	22.88	10.99	444.69	19.04	151.95	48.66	10.94	7.81					
7	6710	13.3	351.1	6707.69	-38.67	-36.90	21.88	12.29	414.31	18.57	149.34	42.90	12.26	4.19					
8	6742	16.9	351.3	6738.58	-30.35	-28.66	20.60	11.25	383.42	18.02	144.29	35.30	11.25	0.62					
9	6774	20.4	352.6	6768.90	-20.13	-18.53	19.18	11.01	353.10	17.49	134.01	26.67	10.94	4.06					
10	6806	23.4	352.9	6798.59	-8.21	-6.69	17.68	9.38	323.41	17.03	110.73	18.90	9.38	0.94					
11	6837	26.4	352.8	6826.70	4.83	6.26	16.05	9.68	295.30	16.54	68.70	17.23	9.68	-0.32					
12	6869	29.6	352.0	6854.95	19.84	21.15	14.06	10.07	267.05	15.85	33.62	25.39	10.00	-2.50					
13	6901	32.7	351.5	6882.34	36.36	37.53	11.68	9.72	239.66	14.91	17.29	39.30	9.69	-1.56					
14	6933	36.2	351.7	6908.72	54.43	55.43	9.04	10.94	213.28	13.85	9.26	56.16	10.94	0.62					
15	6964	39.5	352.9	6933.19	73.43	74.28	6.50	10.91	188.81	12.96	5.00	74.56	10.65	3.87					
16	6995	42.5	354.0	6956.59	93.75	94.48	4.18	9.95	165.41	12.42	2.54	94.57	9.68	3.55					
17	7027	45.8	355.0	6979.55	116.04	116.66	2.05	10.54	142.45	12.24	1.01	116.68	10.31	3.13					
18	7059	49.0	355.1	7001.20	139.59	140.13	0.02	10.00	120.80	12.26	0.01	140.13	10.00	0.31					
19	7090	52.7	355.0	7020.77	163.63	164.08	-2.05	11.94	101.23	12.28	359.28	164.09	11.94	-0.32					
20	7121	56.3	354.6	7038.77	188.86	189.20	-4.34	11.66	83.23	12.20	358.69	189.25	11.61	-1.29					
21	7153	59.3	353.9	7055.82	215.93	216.14	-7.06	9.56	66.18	11.85	358.13	216.26	9.38	-2.19					
22	7184	63.0	353.1	7070.78	243.07	243.12	-10.13	12.15	51.22	11.14	357.61	243.33	11.94	-2.58					
23	7216	66.6	353.5	7084.40	272.01	271.87	-13.51	11.31	37.60	10.29	357.16	272.20	11.25	1.25					
24	7248	70.8	353.5	7096.02	301.81	301.48	-16.88	13.13	25.98	9.51	356.79	301.96	13.13	0.00					
25	7280	75.1	353.9	7105.40	332.38	331.89	-20.24	13.49	16.60	8.82	356.51	332.50	13.44	1.25					
26	7311	79.5	354.2	7112.21	362.61	361.96	-23.37	14.22	9.79	8.33	356.31	362.71	14.19	0.97					



SURVEY CALCULATION PROGRAM

v1.00.02

TARGET DETAILS

OPERATOR:	Marbob Energy Corp.	Supervisors:	TARGET N-S	Directional
WELL:	Showstopper 19 Fed #6H	Joe Hargrove	TARGET E-W	
LOCATION:	Eddy Co. NM.	Nic Black	TARGET RADIUS	
JOB NUMBER:	WT 10475	Nic Black	TARGET DISPLACEMENT	
COMMENTS:			TARGET CLOSURE	
			TARGET TVD	Horizontal 7122.00
			DIP AZ	354.99
			DIP DEG UP+/DN-	0.00
DATE: 01/13/11 TIME: 1:08 PM			TARGET INCLINATION	90.00

MINIMUM CURVATURE CALCULATIONS(SPE-3362)

PROPOSED DIRECTION

354.99

TARGET TRACKING

TO CENTER

SVY NUM	MD	INC	TRUE AZM	TVD	SECT	N-S	E-W	DLS/ 100	ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	CLOSURE DIR (DEG AZ)	CLOSURE DISTANCE (FEET)	BUILD RATE/ °/100'	WALK RATE/ °/100'
27	7343	84.2	354.6	7116.75	394.28	393.47	-26.46	14.74	5.25	8.00	356.15	394.36	14.69	1.25
28	7374	87.8	355.1	7118.91	425.20	424.27	-29.24	11.72	3.09	7.93	356.06	425.27	11.61	1.61
29	7442	89.0	355.1	7120.81	493.17	491.99	-35.04	1.76	1.19	8.06	355.93	493.24	1.76	0.00
30	7538	90.2	354.9	7121.48	589.17	587.62	-43.41	1.27	0.52	8.07	355.78	589.22	1.25	-0.21
31	7632	91.1	354.4	7120.41	683.16	681.21	-52.17	1.10	1.59	7.52	355.62	683.20	0.96	-0.53
32	7727	89.7	354.5	7119.75	778.15	775.76	-61.36	1.48	2.25	6.62	355.48	778.18	-1.47	0.11
33	7823	89.7	353.6	7120.25	874.14	871.24	-71.31	0.94	1.75	5.05	355.32	874.15	0.00	-0.94
34	7918	89.3	352.6	7121.08	969.08	965.54	-82.72	1.13	0.92	1.91	355.10	969.08	-0.42	-1.05
35	8013	88.1	353.8	7123.24	1064.00	1059.85	-93.97	1.79	-1.24	-1.05	354.93	1064.00	-1.26	1.26
36	8077	88.7	355.2	7125.03	1127.98	1123.53	-100.10	2.38	-3.03	-1.60	354.91	1127.98	0.94	2.19
37	8140	90.6	355.5	7125.41	1190.97	1186.31	-105.21	3.05	-3.41	-1.20	354.93	1190.97	3.02	0.48
38	8204	90.8	355.5	7124.63	1254.96	1250.11	-110.23	0.31	-2.63	-0.64	354.96	1254.96	0.31	0.00
39	8268	90.4	355.1	7123.96	1318.96	1313.89	-115.47	0.88	-1.96	-0.29	354.98	1318.96	-0.63	-0.62
40	8363	91.0	355.1	7122.80	1413.95	1408.54	-123.59	0.63	-0.80	-0.11	354.99	1413.95	0.63	0.00
41	8426	89.3	354.3	7122.63	1476.95	1471.27	-129.40	2.98	-0.63	-0.43	354.97	1476.95	-2.70	-1.27
42	8522	88.1	354.1	7124.81	1572.91	1566.75	-139.10	1.27	-2.81	-1.75	354.93	1572.91	-1.25	-0.21
43	8585	88.6	354.9	7126.62	1635.88	1629.43	-145.14	1.50	-4.62	-2.29	354.91	1635.88	0.79	1.27
44	8649	89.0	355.8	7127.97	1699.87	1693.21	-150.33	1.54	-5.97	-1.88	354.93	1699.87	0.62	1.41
45	8713	90.6	356.4	7128.19	1763.85	1757.06	-154.68	2.67	-6.19	-0.65	354.97	1763.85	2.50	0.94
46	8777	90.4	355.8	7127.63	1827.84	1820.90	-159.03	0.99	-5.63	0.59	355.01	1827.84	-0.31	-0.94
47	8840	90.2	355.8	7127.30	1890.83	1883.73	-163.65	0.32	-5.30	1.49	355.04	1890.83	-0.32	0.00
48	8904	91.6	356.5	7126.29	1954.81	1947.58	-167.94	2.45	-4.29	2.78	355.07	1954.81	2.19	1.09
49	8967	91.7	356.8	7124.48	2017.75	2010.45	-171.62	0.50	-2.48	4.60	355.12	2017.76	0.16	0.48
50	9030	93.1	356.6	7121.84	2080.67	2073.28	-175.25	2.24	0.16	6.48	355.17	2080.68	2.22	-0.32
51	9093	94.2	355.5	7117.83	2143.53	2136.01	-179.58	2.47	4.17	7.65	355.19	2143.54	1.75	-1.75
52	9125	94.6	354.3	7115.38	2175.43	2167.78	-182.41	3.94	6.62	7.60	355.19	2175.45	1.25	-3.75
53	9221	89.9	353.4	7111.61	2271.31	2263.13	-192.69	4.98	10.39	5.69	355.13	2271.32	-4.90	-0.94



SURVEY CALCULATION PROGRAM

v1.00.02

TARGET DETAILS

OPERATOR:	Marbob Energy Corp.	Supervisors:		TARGET N-S	Directional	
WELL:	Showstopper 19 Fed #6H	Joe Hargrove		TARGET E-W		
LOCATION:	Eddy Co. NM.	Nic Black		TARGET RADIUS		
JOB NUMBER:	WT 10475	Nic Black		TARGET DISPLACEMENT		
COMMENTS:				TARGET CLOSURE		

			MAG DEC.(-/+)	7.87	TARGET TVD	Horizontal	7122.00
			GRID CORR.(-/+)	-0.16	DIP AZ		354.99
			TOTAL CORR.(-/+)	7.71	DIP DEG UP+/DN-		0.00
DATE:	01/13/11	TIME:	1:08 PM		TARGET INCLINATION		90.00

MINIMUM CURVATURE CALCULATIONS(SPE-3362)						PROPOSED DIRECTION		354.99	TARGET TRACKING		CLOSURE DIR (DEG AZ)	CLOSURE DISTANCE (FEET)	BUILD RATE/ °/100'	WALK RATE/ °/100'
SVY NUM	MD	INC	TRUE AZM	TVD	SECT	N-S	E-W	DLS/ 100	TO CENTER					
									ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)				
54	9316	88.5	353.3	7112.94	2366.26	2357.48	-203.69	1.48	9.06	2.97	355.06	2366.26	-1.47	-0.11
55	9380	90.2	354.3	7113.66	2430.24	2421.10	-210.60	3.08	8.34	1.64	355.03	2430.24	2.66	1.56
56	9443	90.4	354.4	7113.33	2493.24	2483.79	-216.80	0.35	8.67	0.94	355.01	2493.24	0.32	0.16
57	9507	90.5	354.6	7112.83	2557.23	2547.49	-222.93	0.35	9.17	0.39	355.00	2557.23	0.16	0.31
58	9570	90.7	354.4	7112.17	2620.22	2610.20	-228.97	0.45	9.83	-0.15	354.99	2620.22	0.32	-0.32
59	9665	90.7	354.7	7111.01	2715.21	2704.76	-237.99	0.32	10.99	-0.88	354.97	2715.22	0.00	0.32
60	9761	90.6	354.5	7109.92	2811.21	2800.33	-247.03	0.23	12.08	-1.53	354.96	2811.21	-0.10	-0.21
61	9856	89.5	353.9	7109.84	2906.20	2894.84	-256.63	1.32	12.16	-2.84	354.93	2906.20	-1.16	-0.63
62	9920	90.3	354.2	7109.95	2970.19	2958.50	-263.26	1.33	12.05	-3.89	354.91	2970.19	1.25	0.47
63	10015	89.8	353.7	7109.87	3065.17	3052.97	-273.28	0.74	12.13	-5.62	354.89	3065.18	-0.53	-0.53
64	10110	90.3	354.4	7109.78	3160.16	3147.46	-283.12	0.91	12.22	-7.18	354.86	3160.16	0.53	0.74
65	10206	89.8	354.0	7109.70	3256.15	3242.96	-292.82	0.67	12.30	-8.50	354.84	3256.16	-0.52	-0.42
66	10269	89.5	355.0	7110.08	3319.14	3305.67	-298.86	1.66	11.92	-9.04	354.83	3319.15	-0.48	1.59
67	10364	89.2	354.0	7111.16	3414.13	3400.23	-307.97	1.10	10.84	-9.85	354.82	3414.15	-0.32	-1.05
68	10428	89.9	354.6	7111.66	3478.12	3463.91	-314.32	1.44	10.34	-10.62	354.82	3478.14	1.09	0.94
69	10523	90.2	354.9	7111.58	3573.12	3558.51	-323.02	0.45	10.42	-11.02	354.81	3573.14	0.32	0.32
70	10619	90.2	354.0	7111.25	3669.12	3654.06	-332.30	0.94	10.75	-11.92	354.80	3669.14	0.00	-0.94
71	10714	89.2	354.6	7111.74	3764.11	3748.59	-341.74	1.23	10.26	-13.07	354.79	3764.13	-1.05	0.63
72	10809	89.6	355.3	7112.74	3859.10	3843.21	-350.10	0.85	9.26	-13.13	354.80	3859.12	0.42	0.74
73	10905	90.0	354.6	7113.07	3955.10	3938.84	-358.55	0.84	8.93	-13.20	354.80	3955.12	0.42	-0.73
74	11000	90.2	354.8	7112.91	4050.10	4033.43	-367.32	0.30	9.09	-13.68	354.80	4050.12	0.21	0.21
75	11095	90.6	354.7	7112.24	4145.10	4128.03	-376.02	0.43	9.76	-14.08	354.80	4145.12	0.42	-0.11
76	11191	89.1	355.1	7112.50	4241.09	4223.65	-384.55	1.62	9.50	-14.23	354.80	4241.12	-1.56	0.42
77	11286	90.2	355.3	7113.08	4336.09	4318.31	-392.50	1.18	8.92	-13.88	354.81	4336.11	1.16	0.21
78	11382	90.1	355.4	7112.82	4432.09	4413.99	-400.28	0.15	9.18	-13.28	354.82	4432.11	-0.10	0.10
79	11524	89.5	354.4	7113.32	4574.08	4555.43	-412.90	0.82	8.68	-13.50	354.82	4574.10	-0.42	-0.70
TD	11569	89.5	354.4	7113.71	4619.08	4600.21	-417.29	0.00	8.29	-13.97	354.82	4619.10	0.00	0.00



SURVEY CALCULATION PROGRAM

v1.00.02

TARGET DETAILS

OPERATOR:	Marbob Energy Corp.	Supervisors:		TARGET N-S	Directional	
WELL:	Showstopper 19 Fed #6H	Joe Hargrove		TARGET E-W		
LOCATION:	Eddy Co. NM.	Nic Black		TARGET RADIUS		
JOB NUMBER:	WT 10475	Nic Black		TARGET DISPLACEMENT		
COMMENTS:				TARGET CLOSURE		
		MAG DEC.(-/+)	7.87	TARGET TVD	Horizontal	7122.00
		GRID CORR.(-/+)	-0.16	DIP AZ		354.99
		TOTAL CORR.(-/+)	7.71	DIP DEG UP+/DN-		0.00
DATE: 01/13/11		TIME: 1:08 PM		TARGET INCLINATION		90.00
MINIMUM CURVATURE CALCULATIONS(SPE-3362)		PROPOSED DIRECTION	354.99	TARGET TRACKING TO CENTER		
SVY				ABOVE(+)	RIGHT(+)	CLOSURE DIR
NUM	MD	INC	TRUE	BELOW(-)	LEFT(-)	CLOSURE DISTANCE
			AZM			BUILD RATE/
			TVD			WALK RATE/
			SECT			(DEG AZ)
			N-S			(FEET)
			E-W			°/100'
			DLS/			°/100'
			100			