

Pathfinder Energy Planning Report

Company: Marbob Energy
Field: Twizzler State #1
Site: Twizzler State #1
Well: Twizzler State #1
Wellpath: OH

Date: 6/27/2007 **Time:** 10:45:50 **Page:** 2
Co-ordinate(NE) Reference: Site: Twizzler State #1, Grid North
Vertical (TVD) Reference: SITE 3084.0
Section (VS) Reference: Well (0 00N,0 00E,357.22Azi).
Plan: Plan #1 6-27-07

Survey

	MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
	1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	0.00	0.00	
	1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00	0.00	0.00	
	1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00	0.00	0.00	
	1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	0.00	0.00	
	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	
	2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	0.00	0.00	
	2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	0.00	0.00	
	2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00	0.00	0.00	
	2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	0.00	0.00	
	2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00	0.00	
	2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	0.00	0.00	
	2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	0.00	0.00	
	2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00	0.00	0.00	
	2900.00	0.00	0.00	2900.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3200.00	0.00	0.00	3200.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3300.00	0.00	0.00	3300.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3400.00	0.00	0.00	3400.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3600.00	0.00	0.00	3600.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3700.00	0.00	0.00	3700.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3800.00	0.00	0.00	3800.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3900.00	0.00	0.00	3900.00	0.00	0.00	0.00	0.00	0.00	0.00	
	4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	0.00	0.00	
	4100.00	0.00	0.00	4100.00	0.00	0.00	0.00	0.00	0.00	0.00	
	4200.00	0.00	0.00	4200.00	0.00	0.00	0.00	0.00	0.00	0.00	
	4300.00	0.00	0.00	4300.00	0.00	0.00	0.00	0.00	0.00	0.00	
	4400.00	0.00	0.00	4400.00	0.00	0.00	0.00	0.00	0.00	0.00	
	4500.00	0.00	0.00	4500.00	0.00	0.00	0.00	0.00	0.00	0.00	
	4600.00	0.00	0.00	4600.00	0.00	0.00	0.00	0.00	0.00	0.00	
	4700.00	0.00	0.00	4700.00	0.00	0.00	0.00	0.00	0.00	0.00	
	4800.00	0.00	0.00	4800.00	0.00	0.00	0.00	0.00	0.00	0.00	
	4900.00	0.00	0.00	4900.00	0.00	0.00	0.00	0.00	0.00	0.00	
	5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	0.00	0.00	
	5100.00	0.00	0.00	5100.00	0.00	0.00	0.00	0.00	0.00	0.00	
	5200.00	0.00	0.00	5200.00	0.00	0.00	0.00	0.00	0.00	0.00	
	5300.00	0.00	0.00	5300.00	0.00	0.00	0.00	0.00	0.00	0.00	
	5400.00	0.00	0.00	5400.00	0.00	0.00	0.00	0.00	0.00	0.00	
	5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00	0.00	0.00	
	5600.00	0.00	0.00	5600.00	0.00	0.00	0.00	0.00	0.00	0.00	
	5700.00	0.00	0.00	5700.00	0.00	0.00	0.00	0.00	0.00	0.00	
	5800.00	0.00	0.00	5800.00	0.00	0.00	0.00	0.00	0.00	0.00	
	5900.00	0.00	0.00	5900.00	0.00	0.00	0.00	0.00	0.00	0.00	
	6000.00	0.00	0.00	6000.00	0.00	0.00	0.00	0.00	0.00	0.00	
	6100.00	0.00	0.00	6100.00	0.00	0.00	0.00	0.00	0.00	0.00	
	6200.00	0.00	0.00	6200.00	0.00	0.00	0.00	0.00	0.00	0.00	
	6300.00	0.00	0.00	6300.00	0.00	0.00	0.00	0.00	0.00	0.00	
	6400.00	0.00	0.00	6400.00	0.00	0.00	0.00	0.00	0.00	0.00	
	6500.00	0.00	0.00	6500.00	0.00	0.00	0.00	0.00	0.00	0.00	
	6600.00	0.00	0.00	6600.00	0.00	0.00	0.00	0.00	0.00	0.00	
	6700.00	0.00	0.00	6700.00	0.00	0.00	0.00	0.00	0.00	0.00	
	6800.00	0.00	0.00	6800.00	0.00	0.00	0.00	0.00	0.00	0.00	
	6900.00	0.00	0.00	6900.00	0.00	0.00	0.00	0.00	0.00	0.00	

Pathfinder Energy

Planning Report

Company: Marbob Energy Field: Twizzler State #1 Site: Twizzler State #1 Well: Twizzler State #1 Wellpath: OH	Date: 6/27/2007 Time: 10:45:50 Page: 3 Co-ordinate(NE) Reference: Twizzler State #1, Grid North Vertical (TVD) Reference: SITE 3084.0 Section (VS) Reference: Well (0.00N,0.00E,357.22Azi) Plan: Plan #1 6-27-07
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Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
7000.00	0.00	0.00	7000.00	0.00	0.00	0.00	0.00	0.00	0.00	
7100.00	0.00	0.00	7100.00	0.00	0.00	0.00	0.00	0.00	0.00	
7200.00	0.00	0.00	7200.00	0.00	0.00	0.00	0.00	0.00	0.00	
7300.00	0.00	0.00	7300.00	0.00	0.00	0.00	0.00	0.00	0.00	
7400.00	0.00	0.00	7400.00	0.00	0.00	0.00	0.00	0.00	0.00	
7500.00	0.00	0.00	7500.00	0.00	0.00	0.00	0.00	0.00	0.00	
7600.00	0.00	0.00	7600.00	0.00	0.00	0.00	0.00	0.00	0.00	
7700.00	0.00	0.00	7700.00	0.00	0.00	0.00	0.00	0.00	0.00	
7800.00	0.00	0.00	7800.00	0.00	0.00	0.00	0.00	0.00	0.00	
7900.00	0.00	0.00	7900.00	0.00	0.00	0.00	0.00	0.00	0.00	
8000.00	0.00	0.00	8000.00	0.00	0.00	0.00	0.00	0.00	0.00	
8100.00	0.00	0.00	8100.00	0.00	0.00	0.00	0.00	0.00	0.00	
8200.00	0.00	0.00	8200.00	0.00	0.00	0.00	0.00	0.00	0.00	
8300.00	0.00	0.00	8300.00	0.00	0.00	0.00	0.00	0.00	0.00	
8400.00	0.00	0.00	8400.00	0.00	0.00	0.00	0.00	0.00	0.00	
8500.00	0.00	0.00	8500.00	0.00	0.00	0.00	0.00	0.00	0.00	
8600.00	0.00	0.00	8600.00	0.00	0.00	0.00	0.00	0.00	0.00	
8700.00	0.00	0.00	8700.00	0.00	0.00	0.00	0.00	0.00	0.00	
8800.00	0.00	0.00	8800.00	0.00	0.00	0.00	0.00	0.00	0.00	
8900.00	0.00	0.00	8900.00	0.00	0.00	0.00	0.00	0.00	0.00	
9000.00	0.00	0.00	9000.00	0.00	0.00	0.00	0.00	0.00	0.00	
9100.00	0.00	0.00	9100.00	0.00	0.00	0.00	0.00	0.00	0.00	
9200.00	0.00	0.00	9200.00	0.00	0.00	0.00	0.00	0.00	0.00	
9300.00	0.00	0.00	9300.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP @ 9300' MD/TVD Begn
9400.00	3.00	340.00	9399.95	2.46	-0.90	2.50	3.00	3.00	0.00	
9500.00	6.00	340.00	9499.63	9.83	-3.58	9.99	3.00	3.00	0.00	
9600.00	9.00	340.00	9598.77	22.10	-8.04	22.46	3.00	3.00	0.00	
9700.00	12.00	340.00	9697.08	39.22	-14.27	39.86	3.00	3.00	0.00	
9800.00	15.00	340.00	9794.31	61.15	-22.26	62.16	3.00	3.00	0.00	
9846.67	16.40	340.00	9839.23	73.02	-26.58	74.22	3.00	3.00	0.00	EOB @ 9847' MD, 16.4° Inc
9900.00	16.21	345.66	9890.42	87.31	-31.00	88.71	3.00	-0.35	10.62	
10000.00	16.27	356.40	9986.45	114.82	-35.33	116.40	3.00	0.06	10.74	
10030.69	16.40	359.64	10015.91	123.44	-35.63	125.02	3.00	0.41	10.57	EOT @ 10031' MD, 359.64°
10100.00	16.40	359.64	10082.40	143.01	-35.75	144.57	0.00	0.00	0.00	
10200.00	16.40	359.64	10178.33	171.24	-35.93	172.78	0.00	0.00	0.00	
10300.00	16.40	359.64	10274.26	199.47	-36.10	200.98	0.00	0.00	0.00	
10400.00	16.40	359.64	10370.19	227.70	-36.28	229.19	0.00	0.00	0.00	
10500.00	16.40	359.64	10466.13	255.93	-36.46	257.39	0.00	0.00	0.00	
10600.00	16.40	359.64	10562.06	284.16	-36.63	285.60	0.00	0.00	0.00	
10700.00	16.40	359.64	10657.99	312.39	-36.81	313.80	0.00	0.00	0.00	
10800.00	16.40	359.64	10753.93	340.62	-36.98	342.01	0.00	0.00	0.00	
10900.00	16.40	359.64	10849.86	368.85	-37.16	370.21	0.00	0.00	0.00	
11000.00	16.40	359.64	10945.79	397.08	-37.33	398.42	0.00	0.00	0.00	
11100.00	16.40	359.64	11041.72	425.31	-37.51	426.62	0.00	0.00	0.00	
11200.00	16.40	359.64	11137.66	453.54	-37.69	454.83	0.00	0.00	0.00	
11300.00	16.40	359.64	11233.59	481.77	-37.86	483.03	0.00	0.00	0.00	
11400.00	16.40	359.64	11329.52	510.00	-38.04	511.24	0.00	0.00	0.00	
11500.00	16.40	359.64	11425.45	538.22	-38.21	539.44	0.00	0.00	0.00	
11600.00	16.40	359.64	11521.39	566.45	-38.39	567.65	0.00	0.00	0.00	
11700.00	16.40	359.64	11617.32	594.68	-38.57	595.85	0.00	0.00	0.00	
11800.00	16.40	359.64	11713.25	622.91	-38.74	624.06	0.00	0.00	0.00	
11900.00	16.40	359.64	11809.18	651.14	-38.92	652.26	0.00	0.00	0.00	
12000.00	16.40	359.64	11905.12	679.37	-39.09	680.47	0.00	0.00	0.00	

Pathfinder Energy

Planning Report

Company: Marbob Energy	Date: 6/27/2007	Time: 10 45:50	Page: 4
Field: Twizzler State #1	Co-ordinate(NE) Reference: Twizzler State #1, Grid North		
Site: Twizzler State #1	Vertical (TVD) Reference: SITE 3084 0		
Well: Twizzler State #1	Section (VS) Reference: Well (0.00N,0.00E,357.22Azi)		
Wellpath: OH	Plan: Plan #1 6-27-07		

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
12100.00	16.40	359.64	12001.05	707.60	-39.27	708.67	0.00	0.00	0.00	
12200.00	16.40	359.64	12096.98	735.83	-39.44	736.88	0.00	0.00	0.00	
12300.00	16.40	359.64	12192.91	764.06	-39.62	765.08	0.00	0.00	0.00	
12400.00	16.40	359.64	12288.85	792.29	-39.80	793.29	0.00	0.00	0.00	
12500.00	16.40	359.64	12384.78	820.52	-39.97	821.49	0.00	0.00	0.00	
12515.87	16.40	359.64	12400.00	825.00	-40.00	825.97	0.00	0.00	0.00	PBHL

Targets

Name	Description	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ---->			<---- Longitude ---->				
								Deg	Min	Sec	Deg	Min	Sec		
PBHL -Plan hit target			12400.00	825 00	-40 00	492632.80	560788 00	32	21	15	154 N	104	8	11	326 W

Annotation

MD ft	TVD ft	
9300.00	9300.00	KOP @ 9300' MD/TVD Begin Build @ 3°/100'
9846.67	9839.24	EOB @ 9847' MD, 16 4° Inc, Begin turn @ 3°/100'
10030.69	10015.91	EOT @ 10031' MD, 359.64° AZI, Hold to TD

Marbob Energy

PATHFINDER

Field: Twizzler State #1
Site: Twizzler State #1
Well: Twizzler State #1
Wellpath: OH
Plan: Plan #1 6-27-07

SITE DETAILS

Twizzler State #1
Site Centre Northing 491807 80
Easting 560828 00
Ground Level 3070 00
Positional Uncertainty 0 00
Convergence 0 11

WELLPATH DETAILS

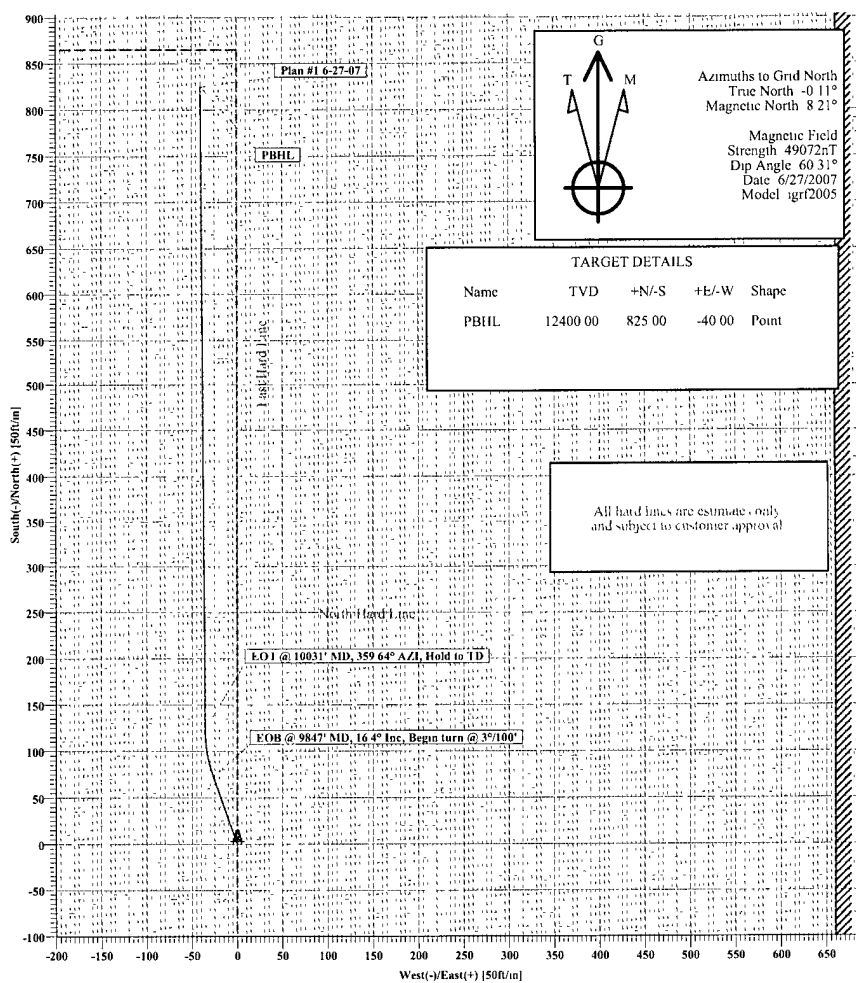
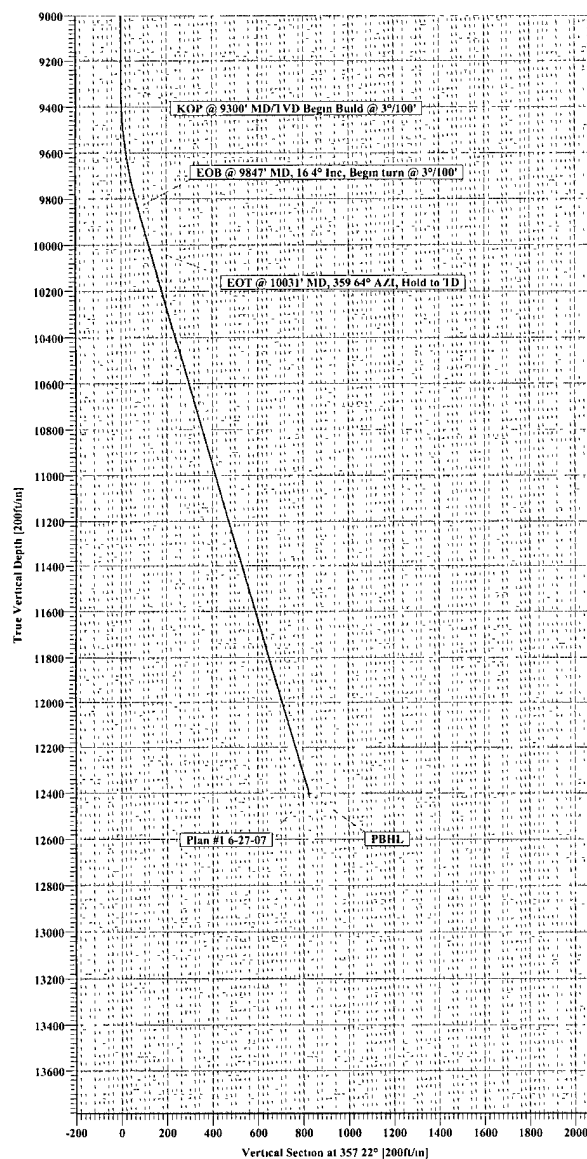
OH
Rig 3084 00ft
Ref Datum SITE
V Section Angle 357 22°
Origin +N/-S 0 00
Origin +E/-W 0 00
Starting From TVD 3084 00

ANNOTATIONS

No	TVD	MD	Annotation
1	9300 00	9300 00	KOP @ 9300' MD/TVD Begin Build @ 3°/100'
2	9839 24	9846 67	EOB @ 9847' MD, 16 4° Inc, Begin turn @ 3°/100'
3	10015 91	10030 69	EOT @ 10031' MD, 359 64° AZI, Hold to TD

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
2	9300 00	0 00	0 00	9300 00	0 00	0 00	0 00	0 00	0 00	
3	9846 67	16 40	340 00	9839 23	73 02	-26 58	3 00	340 00	74 22	
4	10030 69	16 40	359 64	10015 91	123 44	-35 63	3 00	99 45	125 02	
5	12515 87	16 40	359 64	12400 00	825 00	-40 00	0 00	0 00	825 97	PBHL



Azimuths to Grid North
True North -0 11°
Magnetic North 8 21°
Magnetic Field Strength 49072nT
Dip Angle 60 31°
Date 6/27/2007
Model igr2005

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
PBHL	12400 00	825 00	-40 00	Point

All hard lines are estimate only and subject to customer approval