

PathFinder

Planning Report

Company: Marbob Energy
 Field: Sly Hawk Field
 Site: Sly Hawk #4
 Well: Sly Hawk #4
 Wellpath: Original Hole

Date: 7/19/2005 Time: 10:47:20
 Co-ordinate(NE) Reference: Well: Sly Hawk #4, True North
 Vertical (TVD) Reference: SITE 0:0
 Section (VS) Reference: Well (0.00N,0.00E,267.50Azi)
 Plan: Plan #1:071905

Page: 2

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
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	
4387.50	0.00	0.00	4387.50	0.00	0.00	0.00	0.00	0.00	0.00	KOP @ 4387.5' w/12° Build
4400.00	1.50	267.50	4400.00	-0.01	-0.16	0.16	12.00	12.00	0.00	
4425.00	4.50	267.50	4424.96	-0.06	-1.47	1.47	12.00	12.00	0.00	
4450.00	7.50	267.50	4449.82	-0.18	-4.08	4.08	12.00	12.00	0.00	
4475.00	10.50	267.50	4474.51	-0.35	-7.99	7.99	12.00	12.00	0.00	
4500.00	13.50	267.50	4498.96	-0.58	-13.18	13.19	12.00	12.00	0.00	
4525.00	16.50	267.50	4523.11	-0.86	-19.64	19.66	12.00	12.00	0.00	
4550.00	19.50	267.50	4546.88	-1.19	-27.36	27.38	12.00	12.00	0.00	
4575.00	22.50	267.50	4570.22	-1.59	-36.31	36.34	12.00	12.00	0.00	
4600.00	25.50	267.50	4593.05	-2.03	-46.46	46.51	12.00	12.00	0.00	
4625.00	28.50	267.50	4615.33	-2.52	-57.80	57.86	12.00	12.00	0.00	
4650.00	31.50	267.50	4636.98	-3.07	-70.29	70.35	12.00	12.00	0.00	
4675.00	34.50	267.50	4657.94	-3.66	-83.89	83.97	12.00	12.00	0.00	
4700.00	37.50	267.50	4678.17	-4.30	-98.57	98.66	12.00	12.00	0.00	
4725.00	40.50	267.50	4697.59	-4.99	-114.28	114.39	12.00	12.00	0.00	
4750.00	43.50	267.50	4716.17	-5.72	-130.99	131.12	12.00	12.00	0.00	
4775.00	46.50	267.50	4733.85	-6.49	-148.65	148.79	12.00	12.00	0.00	
4800.00	49.50	267.50	4750.57	-7.30	-167.21	167.37	12.00	12.00	0.00	
4825.00	52.50	267.50	4766.31	-8.15	-186.61	186.79	12.00	12.00	0.00	
4850.00	55.50	267.50	4781.00	-9.03	-206.82	207.01	12.00	12.00	0.00	
4875.00	58.50	267.50	4794.62	-9.94	-227.76	227.98	12.00	12.00	0.00	
4900.00	61.50	267.50	4807.12	-10.89	-249.39	249.62	12.00	12.00	0.00	
4925.00	64.50	267.50	4818.47	-11.86	-271.64	271.90	12.00	12.00	0.00	
4950.00	67.50	267.50	4828.64	-12.86	-294.45	294.73	12.00	12.00	0.00	
4975.00	70.49	267.50	4837.60	-13.87	-317.76	318.07	12.00	12.00	0.00	
5000.00	73.49	267.50	4845.32	-14.91	-341.51	341.84	12.00	12.00	0.00	

PathFinder

Planning Report

Company: Marbob Energy
Field: Sly Hawk Field
Site: Sly Hawk #4
Well: Sly Hawk #4
Wellpath: Original Hole

Date: 7/19/2005 Time: 10:47:20 Page: 3
Co-ordinate(NE) Reference: Well: Sly Hawk #4, True North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well: (0.00N,0.00E,267.50Azi)
Plan: Plan #1 071905

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
5025.00	76.49	267.50	4851.80	-15.96	-365.64	365.98	12.00	12.00	0.00	
5050.00	79.49	267.50	4857.00	-17.03	-390.06	390.43	12.00	12.00	0.00	
5075.00	82.49	267.50	4860.91	-18.11	-414.73	415.12	12.00	12.00	0.00	
5100.00	85.49	267.50	4863.52	-19.19	-439.56	439.98	12.00	12.00	0.00	
5125.00	88.49	267.50	4864.83	-20.28	-464.50	464.95	12.00	12.00	0.00	
5137.56	90.00	267.50	4865.00	-20.83	-477.05	477.50	12.00	12.00	0.00	End of Curve @ 5138' MD /
5200.00	90.00	267.50	4865.00	-23.55	-539.43	539.94	0.00	0.00	0.00	
5300.00	90.00	267.50	4865.00	-27.91	-639.34	639.94	0.00	0.00	0.00	
5400.00	90.00	267.50	4865.00	-32.28	-739.24	739.94	0.00	0.00	0.00	
5500.00	90.00	267.50	4865.00	-36.64	-839.15	839.94	0.00	0.00	0.00	
5600.00	90.00	267.50	4865.00	-41.00	-939.05	939.94	0.00	0.00	0.00	
5700.00	90.00	267.50	4865.00	-45.36	-1038.95	1039.94	0.00	0.00	0.00	
5800.00	90.00	267.50	4865.00	-49.72	-1138.86	1139.94	0.00	0.00	0.00	
5900.00	90.00	267.50	4865.00	-54.09	-1238.76	1239.94	0.00	0.00	0.00	
6000.00	90.00	267.50	4865.00	-58.45	-1338.67	1339.94	0.00	0.00	0.00	
6100.00	90.00	267.50	4865.00	-62.81	-1438.57	1439.94	0.00	0.00	0.00	
6200.00	90.00	267.50	4865.00	-67.17	-1538.48	1539.94	0.00	0.00	0.00	
6300.00	90.00	267.50	4865.00	-71.53	-1638.38	1639.94	0.00	0.00	0.00	
6400.00	90.00	267.50	4865.00	-75.90	-1738.29	1739.94	0.00	0.00	0.00	
6500.00	90.00	267.50	4865.00	-80.26	-1838.19	1839.94	0.00	0.00	0.00	
6600.00	90.00	267.50	4865.00	-84.62	-1938.10	1939.94	0.00	0.00	0.00	
6700.00	90.00	267.50	4865.00	-88.98	-2038.00	2039.94	0.00	0.00	0.00	
6800.00	90.00	267.50	4865.00	-93.34	-2137.91	2139.94	0.00	0.00	0.00	
6900.00	90.00	267.50	4865.00	-97.71	-2237.81	2239.94	0.00	0.00	0.00	
6952.24	90.00	267.50	4865.00	-100.00	-2290.00	2292.18	0.00	0.00	0.00	Sly Hawk State #4 PBHL

Targets

Name	Description Dip. Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec			Longitude Deg Min Sec		
Sly Hawk State #4 PBHL		4865.00	-100.00	-2290.00	-67.15	-2291.20	30	59	23.521 N	105	56	10.439 W

Annotation

MD ft	TVD ft	
4387.50	4387.50	KOP @ 4387.5' w/12° Build Rates
5137.56	4865.00	End of Curve @ 5138' MD / 4865' TVD

PATHFINDER

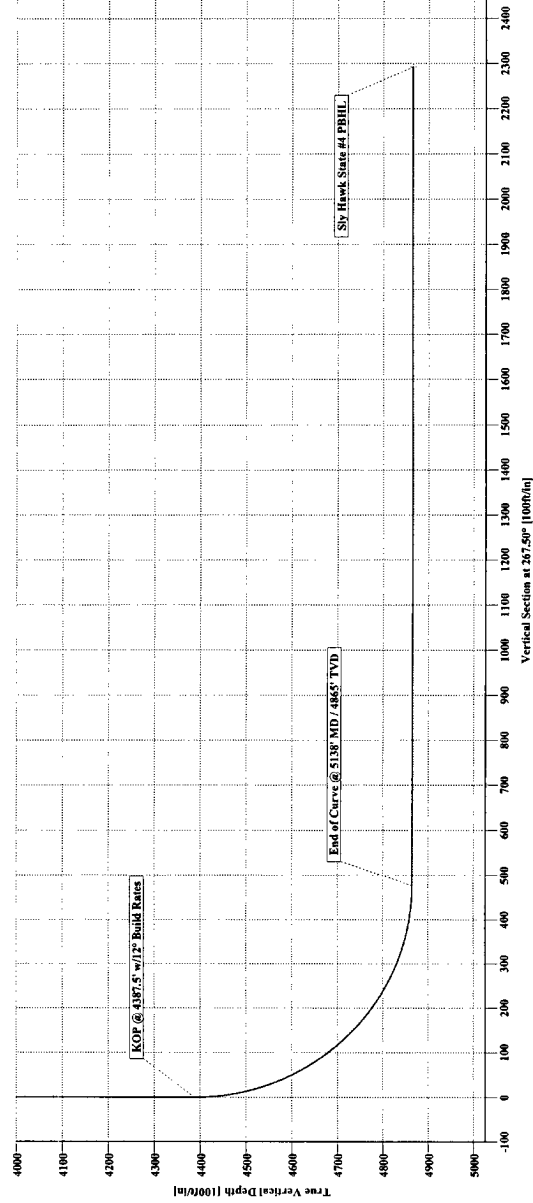
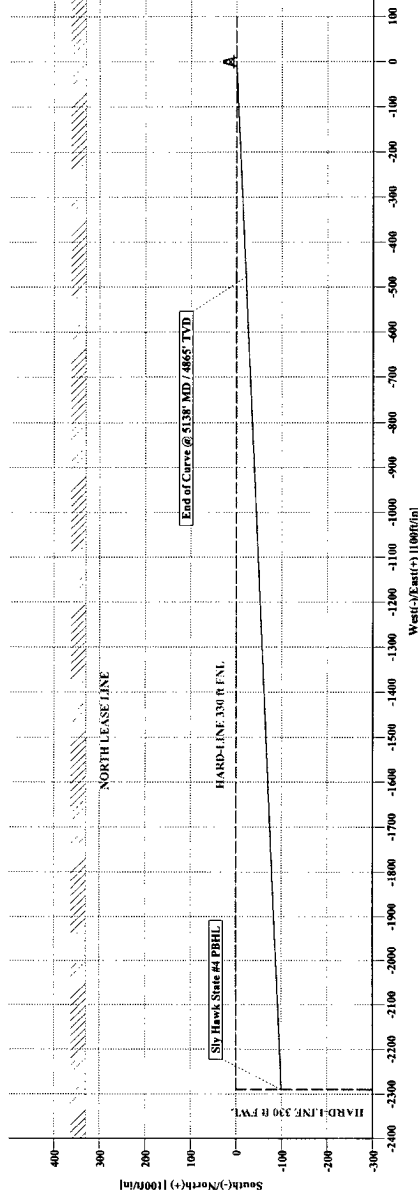
ENERGY SERVICES

COMPANY DETAILS
Marbob Energy
2208 W. Main St.
Anesias, New Mexico

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dl-eg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4387.50	0.00	0.00	4387.50	0.00	0.00	0.00	0.00	0.00	
3	5157.56	90.00	267.50	4865.00	-20.83	-477.05	12.00	267.50	477.50	Sly Fls
4	6952.24	90.00	267.50	4865.00	-100.00	-2290.00	0.00	0.00	2297.18	

Sly Hawk State #4 PBHL

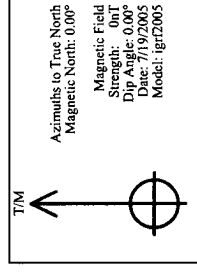


FIELD DETAILS

Sly Hawk Field
Section 3, T7S-S, R28-E
Eddy County, New Mexico

Geodetic System: US State Plane Coordinate System 1927
Ellipsoid: NAD27 (Clarke 1866)
Zone: New Mexico, Eastern Zone
Magnetic Model: igr2005

System Datum: Mean Sea Level
Local North: True North



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
Sly Hawk Static #4 PBHL	4865.00	-100.00	-2290.00	Point

ANNOTATIONS

No.	TVD	MD	Annotation
1	4387.50	4387.50	KOP @ 4387.5' w/12° Build Rates
2	4865.00	5137.56	End of Curve @ 5138' MD / 4865' TVD

PathFinder
Planning Report

Company: Marbob Energy
Field: Sly Hawk Field
Site: Sly Hawk #4
Well: Sly Hawk #4
Wellpath: Original Hole

Date: 7/19/2005
Co-ordinate(NE) Refer
Vertical (TVD) Refere
Section (VS) Referenc
Plan:

Field: Sly Hawk Field
Section 3, T25-S, R28-E
Eddy County, New Mexico

Map System: US State Plane Coordinate System 1927
Geo Datum: NAD27 (Clarke 1866)
Sys Datum: Mean Sea Level

Map Zone:
Coordinate System:
Geomagnetic Model:

Site: Sly Hawk #4

Eddy County, New Mexico

Site Position:		Northing:	ft	Latitude:	
From: Lease Line		Easting:	ft	Longitude:	
Position Uncertainty:	0.00 ft			North Reference:	
Ground Level:	0.00 ft			Grid Convergence:	

Well: Sly Hawk #4

Slot Name:

Well Position:	+N/-S	0.00 ft	Northing:	0.00 ft	Latitude:	
	+E/-W	0.00 ft	Easting :	0.00 ft	Longitude:	1
Position Uncertainty:		0.00 ft				

Wellpath: Original Hole

Current Datum:	SITE	Height	0.00 ft	Drilled From:	
Magnetic Data:	7/19/2005			Tie-on Depth:	
Field Strength:	0 nT			Above System Datum	
Vertical Section:Depth From (TVD)		+N/-S		Declination:	
	ft	ft		Mag Dip Angle:	
	4865.00	0.00		+E/-W	
				ft	
				0.00	

Plan: Plan #1 071905

Date Composed:

Principal: No

Version:

Tied-to:

Plan Section Information

MD	Incl	Azim	TVD	+N/-S	+E/-W	DLS	Build
ft	deg	deg	ft	ft	ft	deg/100ft	deg/100f
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4387.50	0.00	0.00	4387.50	0.00	0.00	0.00	0.00
5137.56	90.00	267.50	4865.00	-20.83	-477.05	12.00	12.00
6952.24	90.00	267.50	4865.00	-100.00	-2290.00	0.00	0.00

Survey

MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS
ft	deg	deg	ft	ft	ft	ft	deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00

200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00
1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00
1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00
1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00
1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00
1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00
2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00
2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00
2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00
2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00
2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00
2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00
2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00
2900.00	0.00	0.00	2900.00	0.00	0.00	0.00	0.00
3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00
3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	0.00
3200.00	0.00	0.00	3200.00	0.00	0.00	0.00	0.00
3300.00	0.00	0.00	3300.00	0.00	0.00	0.00	0.00
3400.00	0.00	0.00	3400.00	0.00	0.00	0.00	0.00
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00
3600.00	0.00	0.00	3600.00	0.00	0.00	0.00	0.00
3700.00	0.00	0.00	3700.00	0.00	0.00	0.00	0.00
3800.00	0.00	0.00	3800.00	0.00	0.00	0.00	0.00
3900.00	0.00	0.00	3900.00	0.00	0.00	0.00	0.00
4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00
4100.00	0.00	0.00	4100.00	0.00	0.00	0.00	0.00
4200.00	0.00	0.00	4200.00	0.00	0.00	0.00	0.00
4300.00	0.00	0.00	4300.00	0.00	0.00	0.00	0.00
4387.50	0.00	0.00	4387.50	0.00	0.00	0.00	0.00
4400.00	1.50	267.50	4400.00	-0.01	-0.16	0.16	12.00
4425.00	4.50	267.50	4424.96	-0.06	-1.47	1.47	12.00
4450.00	7.50	267.50	4449.82	-0.18	-4.08	4.08	12.00
4475.00	10.50	267.50	4474.51	-0.35	-7.99	7.99	12.00
4500.00	13.50	267.50	4498.96	-0.58	-13.18	13.19	12.00
4525.00	16.50	267.50	4523.11	-0.86	-19.64	19.66	12.00
4550.00	19.50	267.50	4546.88	-1.19	-27.36	27.38	12.00

4575.00	22.50	267.50	4570.22	-1.59	-36.31	36.34	12.00
4600.00	25.50	267.50	4593.05	-2.03	-46.46	46.51	12.00
4625.00	28.50	267.50	4615.33	-2.52	-57.80	57.86	12.00
4650.00	31.50	267.50	4636.98	-3.07	-70.29	70.35	12.00
4675.00	34.50	267.50	4657.94	-3.66	-83.89	83.97	12.00
4700.00	37.50	267.50	4678.17	-4.30	-98.57	98.66	12.00
4725.00	40.50	267.50	4697.59	-4.99	-114.28	114.39	12.00
4750.00	43.50	267.50	4716.17	-5.72	-130.99	131.12	12.00
4775.00	46.50	267.50	4733.85	-6.49	-148.65	148.79	12.00
4800.00	49.50	267.50	4750.57	-7.30	-167.21	167.37	12.00
4825.00	52.50	267.50	4766.31	-8.15	-186.61	186.79	12.00
4850.00	55.50	267.50	4781.00	-9.03	-206.82	207.01	12.00
4875.00	58.50	267.50	4794.62	-9.94	-227.76	227.98	12.00
4900.00	61.50	267.50	4807.12	-10.89	-249.39	249.62	12.00
4925.00	64.50	267.50	4818.47	-11.86	-271.64	271.90	12.00
4950.00	67.50	267.50	4828.64	-12.86	-294.45	294.73	12.00
4975.00	70.49	267.50	4837.60	-13.87	-317.76	318.07	12.00
5000.00	73.49	267.50	4845.32	-14.91	-341.51	341.84	12.00
5025.00	76.49	267.50	4851.80	-15.96	-365.64	365.98	12.00
5050.00	79.49	267.50	4857.00	-17.03	-390.06	390.43	12.00
5075.00	82.49	267.50	4860.91	-18.11	-414.73	415.12	12.00
5100.00	85.49	267.50	4863.52	-19.19	-439.56	439.98	12.00
5125.00	88.49	267.50	4864.83	-20.28	-464.50	464.95	12.00
5137.56	90.00	267.50	4865.00	-20.83	-477.05	477.50	12.00
5200.00	90.00	267.50	4865.00	-23.55	-539.43	539.94	0.00
5300.00	90.00	267.50	4865.00	-27.91	-639.34	639.94	0.00
5400.00	90.00	267.50	4865.00	-32.28	-739.24	739.94	0.00
5500.00	90.00	267.50	4865.00	-36.64	-839.15	839.94	0.00
5600.00	90.00	267.50	4865.00	-41.00	-939.05	939.94	0.00
5700.00	90.00	267.50	4865.00	-45.36	-1038.95	1039.94	0.00
5800.00	90.00	267.50	4865.00	-49.72	-1138.86	1139.94	0.00
5900.00	90.00	267.50	4865.00	-54.09	-1238.76	1239.94	0.00
6000.00	90.00	267.50	4865.00	-58.45	-1338.67	1339.94	0.00
6100.00	90.00	267.50	4865.00	-62.81	-1438.57	1439.94	0.00
6200.00	90.00	267.50	4865.00	-67.17	-1538.48	1539.94	0.00
6300.00	90.00	267.50	4865.00	-71.53	-1638.38	1639.94	0.00
6400.00	90.00	267.50	4865.00	-75.90	-1738.29	1739.94	0.00
6500.00	90.00	267.50	4865.00	-80.26	-1838.19	1839.94	0.00
6600.00	90.00	267.50	4865.00	-84.62	-1938.10	1939.94	0.00
6700.00	90.00	267.50	4865.00	-88.98	-2038.00	2039.94	0.00
6800.00	90.00	267.50	4865.00	-93.34	-2137.91	2139.94	0.00
6900.00	90.00	267.50	4865.00	-97.71	-2237.81	2239.94	0.00
6952.24	90.00	267.50	4865.00	-100.00	-2290.00	2292.18	0.00

Targets

Name	Description	TVD	+N/-S	+E/-W	Map	M
	Dip.	Dir.	ft	ft	Northing	Ea
Sly Hawk State #4	PBHL	4865.00	-100.00	-2290.00	-67.15	-2

Annotation

MD	TVD	
ft	ft	
4387.50	4387.50	KOP @ 4387.5' w/12° Build Rates
5137.56	4865.00	End of Curve @ 5138' MD / 4865' TVD