

Pathfinder Energy Planning Report

Company: Marbob Energy Field: Black Velvet Federal #1H Site: Black Velvet Federal #1H Well: Black Velvet Federal #1H Wellpath: OH	Date: 6/4/2007 Co-ordinate(NE) Reference: Site: Black Velvet Federal #1H Vertical (TVD) Reference: RKB 4009.0 Section (VS) Reference: Well (0.00N,0.00E,89.61Azi) Plan: Plan #1 6-4-07	Page: 1
--	---	----------------

Field: Black Velvet Federal #1H	30-cis-35710	
--	--------------	--

Map System: US State Plane Coordinate System 1927 Geo Datum: NAD27 (Clarke 1866) Sys Datum: Mean Sea Level	Map Zone: New Mexico, Eastern Zone Coordinate System: Site Centre Geomagnetic Model: igrf2005
---	--

Site: Black Velvet Federal #1H		
---------------------------------------	--	--

Site Position: From: Map Position Uncertainty: 0.00 ft Ground Level: 3093.00 ft	Northing: 493898.60 ft Easting: 584051.20 ft	Latitude: 32 21 27.176 N Longitude: 104 3 40.085 W North Reference: Grid Grid Convergence: 0.15 deg
--	---	--

Well: Black Velvet Federal #1H	Slot Name:	
---------------------------------------	-------------------	--

Well Position: +N/-S 0.00 ft Position Uncertainty: 0.00 ft	Northing: 493898.60 ft Easting: 584051.20 ft	Latitude: 32 21 27.176 N Longitude: 104 3 40.085 W
---	---	---

Wellpath: OH	Drilled From: Surface Tic-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 8.29 deg Mag Dip Angle: 60 33 deg +E/-W ft Direction deg	Current Datum: RKB Magnetic Data: 6/4/2007 Field Strength: 49090 nT Vertical Section: Depth From (TVD) ft Height 4009.00 ft +N/-S ft
0.00	0.00	0.00

Plan: Plan #1 6-4-07 Principal: No	Date Composed: 6/4/2007 Version: 1 Tied-to: From Surface
---	---

Plan Section Information										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5522.50	0.00	0.00	5522.50	0.00	0.00	0.00	0.00	0.00	0.00	
6272.49	90.00	89.61	5999.96	3.25	477.45	12.00	12.00	11.95	89.61	
9070.71	90.00	89.61	6000.00	22.30	3275.60	0.00	0.00	0.00	0.00	PBHL

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
0.00	0.00	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	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	Top Salt
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1500.00	0.00	0.00	1500.00	0.00	0.00	0.				

Pathfinder Energy

Planning Report

Company:	Marbob Energy	Date:	6/4/2007	Time:	14:08:59	Page:	2
Field:	Black Velvet Federal #1H	Co-ordinate(NE) Reference:	Site: Black Velvet Federal #1H				
Site:	Black Velvet Federal #1H	Vertical (TVD) Reference:	RKB 4009.0				
Well:	Black Velvet Federal #1H	Section (VS) Reference:	Well (0 00N,0.00E,89.61Azi)				
Wellpath:	OH	Plan:	Plan #1 6-4-07				

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
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	
2450.00	0.00	0.00	2450.00	0.00	0.00	0.00	0.00	0.00	0.00	Bottom Salt
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	Delaware
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	
5522.50	0.00	0.00	5522.50	0.00	0.00	0.00	0.00	0.00	0.00	KOP @ 5522.5' MD/TVD, Beg
5600.00	9.30	89.61	5599.66	0.04	6.28	6.28	12.00	12.00	0.00	
5700.00	21.30	89.61	5695.94	0.22	32.61	32.62	12.00	12.00	0.00	
5800.00	33.30	89.61	5784.64	0.53	78.39	78.40	12.00	12.00	0.00	
5900.00	45.30	89.61	5861.88	0.96	141.62	141.62	12.00	12.00	0.00	
6000.00	57.30	89.61	5924.29	1.49	219.51	219.52	12.00	12.00	0.00	
6100.00	69.30	89.61	5969.14	2.10	308.69	308.69	12.00	12.00	0.00	
6200.00	81.30	89.61	5994.47	2.76	405.23	405.24	12.00	12.00	0.00	
6272.49	90.00	89.61	5999.96	3.25	477.45	477.46	12.00	12.00	0.00	EOC @ 6272' MD 6000' TVD
6300.00	90.00	89.61	5999.97	3.44	504.95	504.96	0.00	0.00	0.00	
6400.00	90.00	89.61	5999.97	4.12	604.95	604.96	0.00	0.00	0.00	
6500.00	90.00	89.61	5999.97	4.80	704.95	704.96	0.00	0.00	0.00	
6600.00	90.00	89.61	5999.97	5.48	804.95	804.96	0.00	0.00	0.00	

Pathfinder Energy

Planning Report

Company: Marbob Energy Field: Black Velvet Federal #1H Site: Black Velvet Federal #1H Well: Black Velvet Federal #1H Wellpath: OH	Date: 6/4/2007 Co-ordinate(NE) Reference: Site: Black Velvet-Federal #1H Vertical (TVD) Reference: RKB 4009.0 Section (VS) Reference: Well (0 00N,0.00E,89.61Azi) Plan: Plan #1 6-4-07
--	---

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
6700.00	90.00	89.61	5999.97	6.16	904.94	904.96	0.00	0.00	0.00	
6800.00	90.00	89.61	5999.97	6.84	1004.94	1004.96	0.00	0.00	0.00	
6900.00	90.00	89.61	5999.97	7.52	1104.94	1104.96	0.00	0.00	0.00	
7000.00	90.00	89.61	5999.97	8.20	1204.94	1204.96	0.00	0.00	0.00	
7100.00	90.00	89.61	5999.98	8.88	1304.93	1304.96	0.00	0.00	0.00	
7200.00	90.00	89.61	5999.98	9.56	1404.93	1404.96	0.00	0.00	0.00	
7300.00	90.00	89.61	5999.98	10.25	1504.93	1504.96	0.00	0.00	0.00	
7400.00	90.00	89.61	5999.98	10.93	1604.93	1604.96	0.00	0.00	0.00	
7500.00	90.00	89.61	5999.98	11.61	1704.93	1704.96	0.00	0.00	0.00	
7600.00	90.00	89.61	5999.98	12.29	1804.92	1804.96	0.00	0.00	0.00	
7700.00	90.00	89.61	5999.98	12.97	1904.92	1904.96	0.00	0.00	0.00	
7800.00	90.00	89.61	5999.98	13.65	2004.92	2004.96	0.00	0.00	0.00	
7900.00	90.00	89.61	5999.99	14.33	2104.92	2104.96	0.00	0.00	0.00	
8000.00	90.00	89.61	5999.99	15.01	2204.91	2204.96	0.00	0.00	0.00	
8100.00	90.00	89.61	5999.99	15.69	2304.91	2304.96	0.00	0.00	0.00	
8200.00	90.00	89.61	5999.99	16.37	2404.91	2404.96	0.00	0.00	0.00	
8300.00	90.00	89.61	5999.99	17.05	2504.91	2504.96	0.00	0.00	0.00	
8400.00	90.00	89.61	5999.99	17.73	2604.90	2604.96	0.00	0.00	0.00	
8500.00	90.00	89.61	5999.99	18.41	2704.90	2704.96	0.00	0.00	0.00	
8600.00	90.00	89.61	5999.99	19.10	2804.90	2804.96	0.00	0.00	0.00	
8700.00	90.00	89.61	6000.00	19.78	2904.90	2904.96	0.00	0.00	0.00	
8800.00	90.00	89.61	6000.00	20.46	3004.90	3004.96	0.00	0.00	0.00	
8900.00	90.00	89.61	6000.00	21.14	3104.89	3104.96	0.00	0.00	0.00	
9000.00	90.00	89.61	6000.00	21.82	3204.89	3204.96	0.00	0.00	0.00	
9070.71	90.00	89.61	6000.00	22.30	3275.60	3275.68	0.00	0.00	0.00	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		
PBHL			6000.00	22.30	3275.60	493920.90	587326.80	32	21	27.313 N	104	3	1 896 W

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
400.00	400.00	Top Salt	(none)	0.00	0.00
2450.00	2450.00	Bottom Salt		0.00	0.00
2700.00	2700.00	Delaware		0.00	0.00
	0.00	Bone Springs		0.00	0.00

Annotation

MD ft	TVD ft	
5522.50	5522.50	KOP @ 5522.5' MD/TVD, Begin Build @ 12 DLS
6272.49	5999.96	EOC @ 6272' MD 6000' TVD

PATHFINDER

ENERGY SERVICES

Marbob Energy
2208 W Main St
Artesia New Mexico

Calculation Method	Minimum Curvature
Error System	Systematic Ellipse
Scan Method	Closest Approach 3D
Error Surface	Elliptical Conic
Warning Method	Error Ratio

Black Velvet Federal #111	
Sue Centre Northing	493898 60
Easting	584051 20
Ground Level	3093 00
Positional Uncertainty	0 00
Convergence	0 15



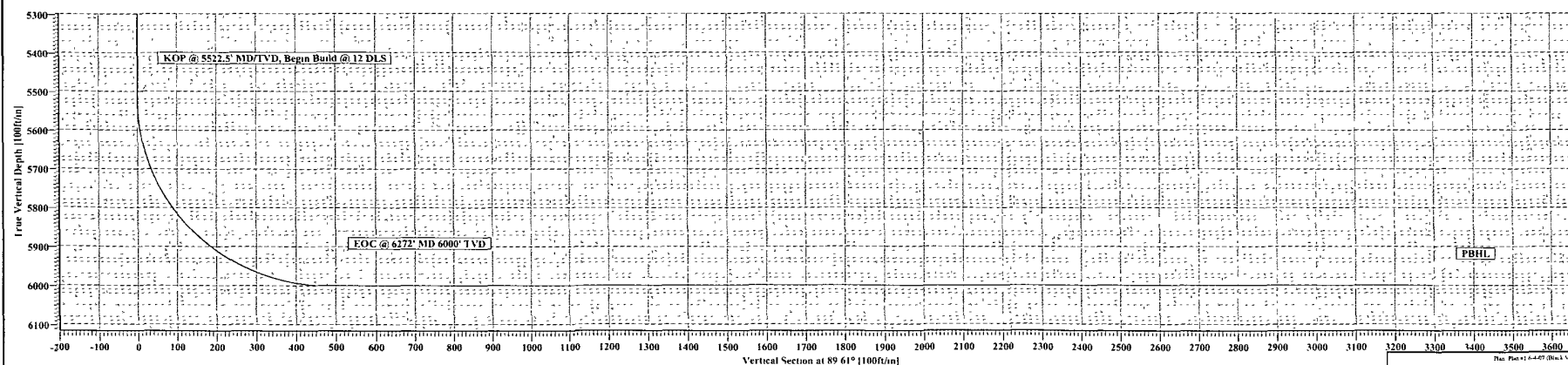
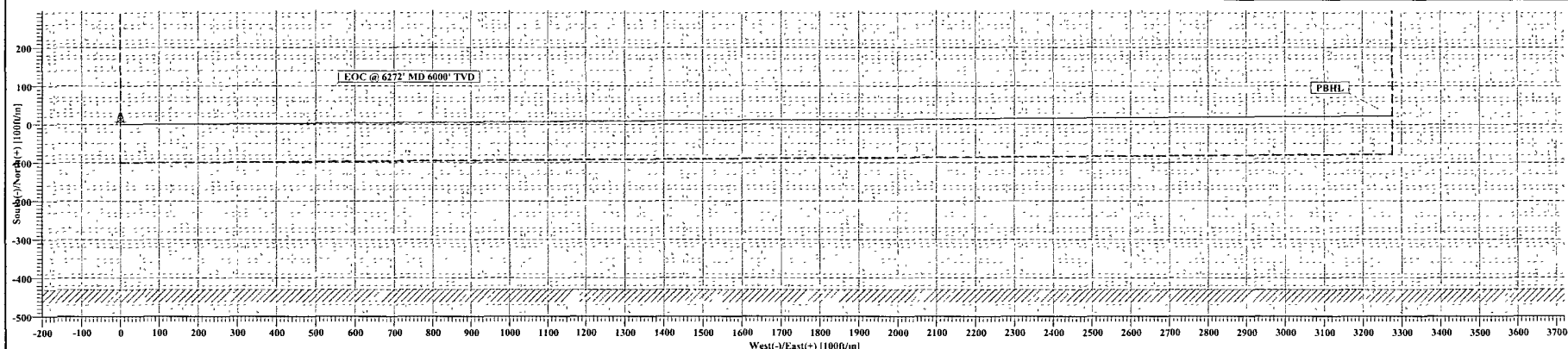
Magnetic Field
Strength 49090nT
Dip Angle 60.33°
Date 6/4/2007
Model igrf2005

Plan #1 6-4-07

Sec	MD	Inc	Az1	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	5522.50	0.00	0.00	5522.50	0.00	0.00	0.00	0.00	0.00	
3	6272.49	90.00	89.61	5999.96	3.25	477.45	12.00	89.61	477.46	
4	9070.71	90.00	89.61	6000.00	22.30	3275.60	0.00	0.00	3275.68	PBHL

Black Velvet Federal #1H

Geodetic System	US State Plane Coordinate System 1927
Ellipsoid	NAD27 (Clarke 1866)
Zone	New Mexico, Eastern Zone
Magnetic Model	igrf2005
System Datum	Mean Sea Level
Local North	Grid North



Plan Plan #1 6-4-07 (Black Velvet Federal) #1 H.O.