

Murchison Oil & Gas

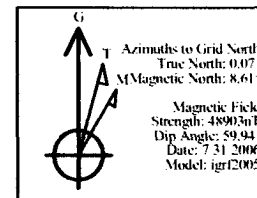
Field: Eddy County, NM NAD-2011
 Site: Bobcat Federal #1
 Well: Bobcat Federal #1
 Wellpath: Bobcat Federal #1
 Plan: Plan #6 8-23-06



WELL DETAILS							
Name	N-S	E-W	Northing	Easting	Latitude	Longitude	Site
Bobcat Federal #1	0.00	0.00	364158.69	457347.47	32.0001000N	103.2815333W	N/A

TARGET DETAILS				
Name	TVD	N-S	E-W	Shape
Target 330'	5000.00	223.00	33.60	Point
Target 660'	7500.00	553.00	83.32	Point
PBHL	10500.00	895.75	134.96	Point

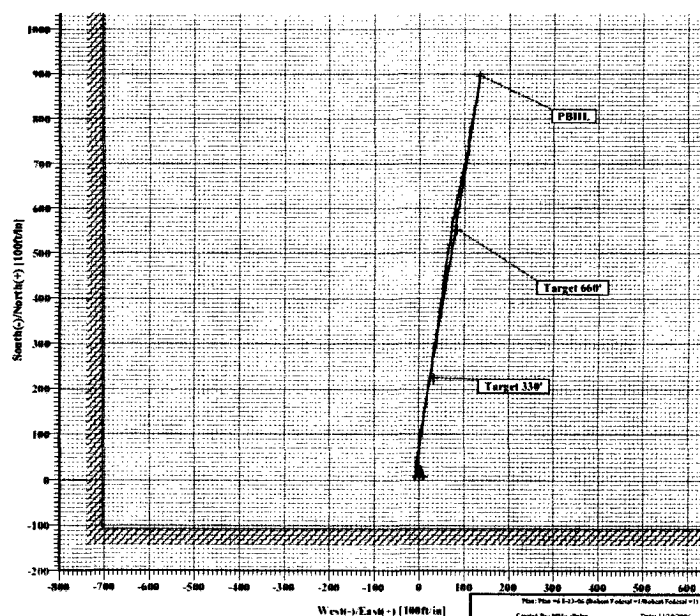
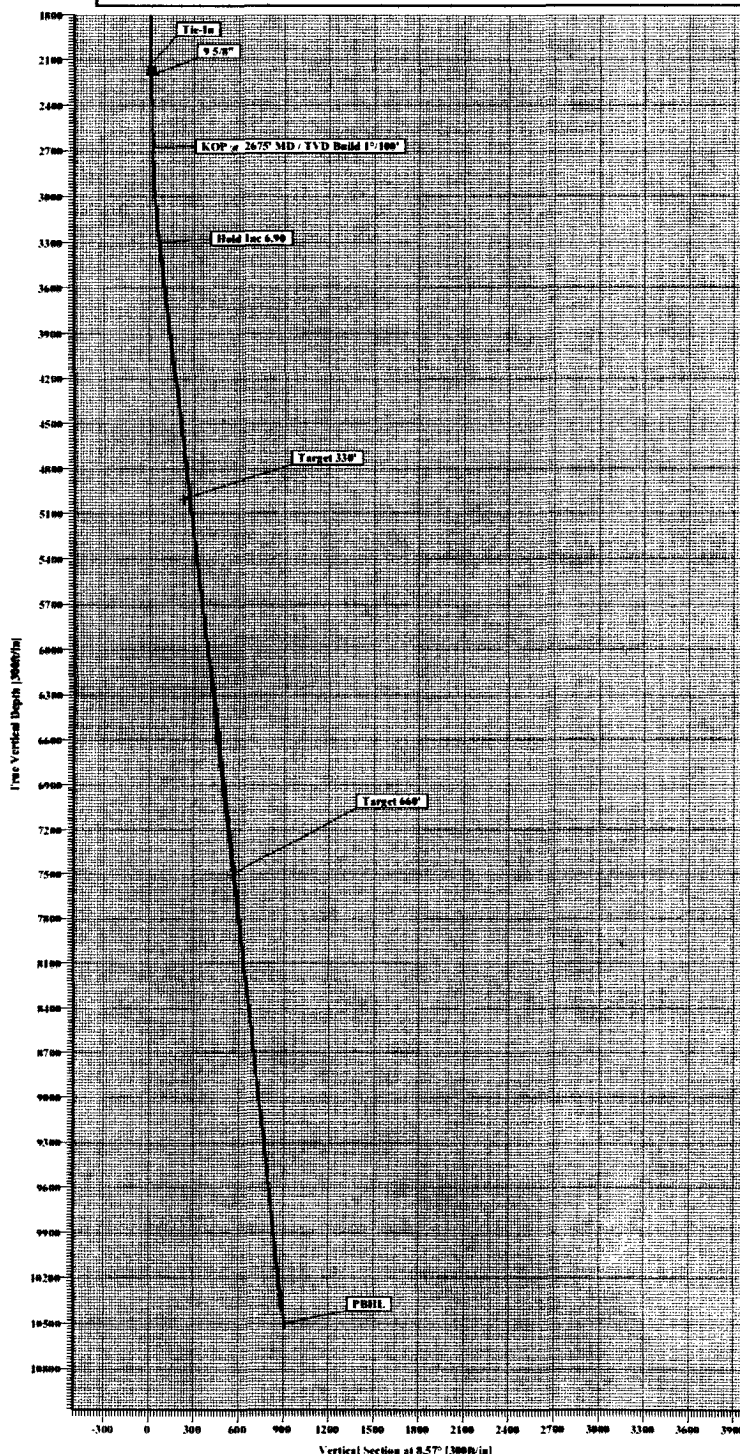
Plan: Plan #6 8-23-06 (Bobcat Federal #1 Bobcat Federal #1)									
No	MD	Inc	Az	TVD	N-S	E-W	DLeg	TFace	VSec
87	10550.96	6.44	9.16	10500.00	895.75	134.96	0.01	-174.49	905.86



SITE DETAILS	
Bobcat Federal #1	
S11: T17S; R28E	
Site Centre Northing: 364158.69	
Easting: 457347.47	
Ground Level: 3678.00	
Positional Uncertainty: 0.00	
Convergence: -0.07	

FIELD DETAILS	
Eddy County, NM NAD-27	
S.11: T17S; R28E; Eddy County NM	
USA	
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: Grid North	

ANNOTATIONS			
No.	TVD	MD	Annotation
1	2675.00	2675.16	KOP or 2675' MD TVD Build 1" 100'
2	3290.03	3300.87	Hold Inc 6.90
3	2126.91	2127.00	Tie-In



Pathfinder Energy

Survey Report

Company: Murchison Oil & Gas		Date: 9/21/2006	Time: 09:37:16	Page: 1
Field: Eddy County, NM NAD-27		Co-ordinate(NE) Reference: Well: Bobcat Federal #1, Grid North		
Site: Bobcat Federal #1		Vertical (TVD) Reference: SITE 3678.0		
Well: Bobcat Federal #1		Section (VS) Reference: Well (0.00N,0.00E,8.57Azi)		
Wellpath: Bobcat Federal #1		Survey Calculation Method: Minimum Curvature		Db: Sybase

Field: Eddy County, NM NAD-27 S,11; T17S; R28E Eddy County NM USA		Map Zone: New Mexico, Eastern Zone
Map System: US State Plane Coordinate System 1927		Coordinate System: Well Centre
Geo Datum: NAD27 (Clarke 1866)		Geomagnetic Model: igrf2005
Sys Datum: Mean Sea Level		

Site: Bobcat Federal #1			
S11; T17S; R28E			
Site Position:	Northing: 364158.69 ft	Latitude: 32 0 4.000 N	
From: Map	Easting: 457347.47 ft	Longitude: 104 28 15.334 W	
Position Uncertainty: 0.00 ft		North Reference: Grid	
Ground Level: 3678.00 ft		Grid Convergence: -0.07 deg	

Well: Bobcat Federal #1		Slot Name:	
Well Position: +N/-S 0.00 ft	Northing: 364158.69 ft	Latitude: 32 0 4.000 N	
+E/-W 0.00 ft	Easting: 457347.47 ft	Longitude: 104 28 15.334 W	
Position Uncertainty: 0.00 ft			

Wellpath: Bobcat Federal #1		Drilled From: Surface
Current Datum: SITE	Height: 3678.00 ft	Tie-on Depth: 0.00 ft
Magnetic Data: 7/31/2006		Above System Datum: Mean Sea Level
Field Strength: 48903 nT		Declination: 8.54 deg
Vertical Section: Depth From (TVD)	+N/-S	Mag Dip Angle: 59.94 deg
ft	ft	+E/-W
		ft
		Direction
		deg
0.00	0.00	0.00
		8.57

Survey: Pathfinder MWD Surveys	Start Date: 8/29/2006
Company: Pathfinder Energy	Engineer: Midwellplan
Tool:	Tied-to: From: Definitive Path

Survey: Pathfinder MWD Surveys										
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
2127.00	0.90	327.81	2126.91	16.12	-1.14	15.77	0.00	0.00	0.00	
2635.00	1.49	356.04	2634.80	26.09	-3.72	25.24	0.16	0.12	5.56	
2664.00	1.58	357.54	2663.79	26.86	-3.76	26.00	0.34	0.31	5.17	
2759.00	2.02	0.70	2758.74	29.85	-3.80	28.95	0.47	0.46	3.33	
2822.00	2.20	1.75	2821.70	32.17	-3.75	31.25	0.29	0.29	1.67	
2885.00	2.73	2.81	2884.64	34.87	-3.64	33.94	0.84	0.84	1.68	
2949.00	3.61	7.73	2948.54	38.39	-3.29	37.47	1.44	1.37	7.69	
3011.00	4.48	7.64	3010.39	42.73	-2.71	41.84	1.40	1.40	-0.15	
3074.00	4.75	7.29	3073.18	47.75	-2.05	46.91	0.43	0.43	-0.56	
3137.00	4.92	7.99	3135.96	53.01	-1.34	52.22	0.29	0.27	1.11	
3200.00	5.72	7.20	3198.69	58.80	-0.57	58.06	1.28	1.27	-1.25	
3263.00	6.42	7.47	3261.33	65.41	0.28	64.72	1.11	1.11	0.43	
3326.00	7.12	7.29	3323.89	72.78	1.23	72.15	1.11	1.11	-0.29	
3358.00	7.21	6.85	3355.64	76.74	1.72	76.14	0.33	0.28	-1.37	
3421.00	7.21	11.60	3418.15	84.54	2.99	84.04	0.95	0.00	7.54	
3484.00	7.03	10.46	3480.66	92.20	4.48	91.84	0.36	-0.29	-1.81	
3548.00	6.95	9.05	3544.19	99.87	5.80	99.62	0.30	-0.12	-2.20	
3643.00	6.86	8.96	3638.50	111.16	7.59	111.05	0.10	-0.09	-0.09	
3706.00	6.86	8.08	3701.05	118.60	8.71	118.57	0.17	0.00	-1.40	
3770.00	6.86	8.00	3764.59	126.17	9.77	126.21	0.01	0.00	-0.12	
3834.00	6.86	7.20	3828.13	133.74	10.79	133.86	0.15	0.00	-1.25	
3897.00	7.03	7.64	3890.67	141.30	11.77	141.47	0.28	0.27	0.70	
3960.00	7.03	7.91	3953.19	148.94	12.81	149.18	0.05	0.00	0.43	
4024.00	7.03	8.79	4016.71	156.69	13.95	157.02	0.17	0.00	1.37	

Pathfinder Energy

Survey Report

Company: Murchison Oil & Gas
 Field: Eddy County, NM NAD-27
 Site: Bobcat Federal #1
 Well: Bobcat Federal #1
 Wellpath: Bobcat Federal #1

Date: 9/21/2006 Time: 09:37:16 Page: 2
 Co-ordinate(NE) Reference: Well: Bobcat Federal #1, Grid North
 Vertical (TVD) Reference: SITE 3678.0
 Section (VS) Reference: Well (0.00N,0.00E,8.57Azi)
 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: Pathfinder MWD Surveys

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
4087.00	7.12	8.79	4079.23	164.35	15.14	164.78	0.14	0.14	0.00	
4149.00	7.03	9.66	4140.76	171.89	16.36	172.41	0.23	-0.15	1.40	
4212.00	6.77	9.05	4203.30	179.36	17.59	179.98	0.43	-0.41	-0.97	
4276.00	6.68	8.52	4266.86	186.77	18.74	187.47	0.17	-0.14	-0.83	
4339.00	6.60	9.23	4329.44	193.96	19.86	194.76	0.18	-0.13	1.13	
4402.00	6.51	8.87	4392.03	201.07	20.99	201.95	0.16	-0.14	-0.57	
4465.00	6.60	9.40	4454.62	208.17	22.13	209.14	0.17	0.14	0.84	
4529.00	6.60	10.28	4518.19	215.41	23.39	216.49	0.16	0.00	1.37	
4592.00	6.68	8.52	4580.77	222.60	24.58	223.78	0.35	0.13	-2.79	
4656.00	6.68	7.73	4644.34	229.97	25.63	231.22	0.14	0.00	-1.23	
4719.00	6.77	8.08	4706.90	237.28	26.65	238.60	0.16	0.14	0.56	
4782.00	6.77	8.35	4769.46	244.63	27.71	246.03	0.05	0.00	0.43	
4846.00	6.77	9.05	4833.02	252.09	28.85	253.57	0.13	0.00	1.09	
4909.00	6.77	9.05	4895.58	259.42	30.02	261.00	0.00	0.00	0.00	
4973.00	6.68	9.75	4959.14	266.81	31.24	268.49	0.19	-0.14	1.09	
5036.00	6.60	7.20	5021.72	274.02	32.31	275.77	0.48	-0.13	-4.05	
5100.00	6.51	7.64	5085.30	281.26	33.26	283.08	0.16	-0.14	0.69	
5163.00	6.42	8.52	5147.90	288.29	34.25	290.17	0.21	-0.14	1.40	
5226.00	6.42	8.70	5210.50	295.25	35.31	297.22	0.03	0.00	0.29	
5290.00	6.51	9.31	5274.09	302.37	36.44	304.42	0.18	0.14	0.95	
5352.00	6.60	9.31	5335.69	309.35	37.58	311.50	0.15	0.15	0.00	
5415.00	6.60	10.02	5398.27	316.49	38.80	318.74	0.13	0.00	1.13	
5478.00	6.68	8.79	5460.85	323.68	39.99	326.02	0.26	0.13	-1.95	
5548.00	6.68	8.70	5530.37	331.72	41.23	334.16	0.01	0.00	-0.13	
5611.00	6.77	9.58	5592.94	339.01	42.40	341.54	0.22	0.14	1.40	
5675.00	6.77	10.54	5656.49	346.44	43.72	349.08	0.18	0.00	1.50	
5737.00	6.68	10.98	5718.07	353.57	45.07	356.34	0.17	-0.15	0.71	
5832.00	7.74	2.98	5812.32	365.38	46.46	368.23	1.53	1.12	-8.42	
5896.00	7.65	2.19	5875.74	373.94	46.84	376.75	0.22	-0.14	-1.23	
5958.00	7.56	7.38	5937.20	382.11	47.52	384.93	1.12	-0.15	8.37	
5990.00	7.39	8.26	5968.92	386.24	48.09	389.09	0.64	-0.53	2.75	
6053.00	7.47	8.96	6031.40	394.29	49.31	397.24	0.19	0.13	1.11	
6116.00	7.56	9.49	6093.85	402.42	50.63	405.48	0.18	0.14	0.84	
6180.00	7.56	9.23	6157.30	410.73	52.00	413.89	0.05	0.00	-0.41	
6243.00	7.65	10.19	6219.74	418.95	53.41	422.23	0.25	0.14	1.52	
6307.00	8.00	5.88	6283.15	427.57	54.62	430.94	1.07	0.55	-6.73	
6369.00	7.56	4.66	6344.58	435.93	55.39	439.32	0.76	-0.71	-1.97	
6433.00	7.65	5.53	6408.01	444.37	56.14	447.77	0.23	0.14	1.36	
6496.00	6.95	7.03	6470.50	452.32	57.01	455.77	1.15	-1.11	2.38	
6557.00	6.68	5.97	6531.07	459.51	57.83	463.00	0.49	-0.44	-1.74	
6620.00	6.68	6.41	6593.64	466.80	58.62	470.32	0.08	0.00	0.70	
6684.00	6.68	6.41	6657.21	474.20	59.46	477.76	0.00	0.00	0.00	
6747.00	6.86	7.64	6719.77	481.57	60.37	485.19	0.37	0.29	1.95	
6810.00	6.68	9.23	6782.33	488.91	61.45	492.61	0.41	-0.29	2.52	
6873.00	6.68	9.58	6844.90	496.14	62.65	499.94	0.06	0.00	0.56	
6936.00	6.86	10.28	6907.46	503.46	63.93	507.36	0.31	0.29	1.11	
7000.00	6.68	10.46	6971.02	510.88	65.29	514.91	0.28	-0.28	0.28	
7063.00	6.77	12.04	7033.59	518.12	66.73	522.27	0.33	0.14	2.51	
7126.00	6.51	8.87	7096.16	525.28	68.05	529.55	0.71	-0.41	-5.03	
7189.00	6.60	9.23	7158.75	532.38	69.19	536.74	0.16	0.14	0.57	
7253.00	6.16	7.12	7222.35	539.42	70.20	543.85	0.78	-0.69	-3.30	
7317.00	6.24	5.18	7285.98	546.29	70.94	550.76	0.35	0.12	-3.03	
7380.00	5.98	8.17	7348.62	552.95	71.72	557.46	0.65	-0.41	4.75	

Pathfinder Energy

Survey Report

Company: Murchison Oil & Gas
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 Site: Bobcat Federal #1
 Well: Bobcat Federal #1
 Wellpath: Bobcat Federal #1

Date: 9/21/2006 Time: 09:37:16 Page: 3
 Co-ordinate(NE) Reference: Well: Bobcat Federal #1, Grid North
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 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: Pathfinder MWD Surveys

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
7443.00	5.80	8.70	7411.29	559.34	72.66	563.92	0.30	-0.29	0.84	
7506.00	5.63	7.91	7473.98	565.55	73.57	570.20	0.30	-0.27	-1.25	
7569.00	6.33	7.20	7536.63	572.05	74.43	576.76	1.12	1.11	-1.13	
7632.00	6.33	13.00	7599.25	578.88	75.65	583.69	1.01	0.00	9.21	
7696.00	6.51	13.62	7662.85	585.85	77.30	590.83	0.30	0.28	0.97	
7759.00	6.60	10.81	7725.44	592.88	78.82	598.00	0.53	0.14	-4.46	
7822.00	5.63	4.83	7788.08	599.51	79.76	604.70	1.84	-1.54	-9.49	
7885.00	5.19	6.50	7850.80	605.42	80.34	610.63	0.74	-0.70	2.65	
7948.00	5.72	18.37	7913.51	611.23	81.65	616.58	1.97	0.84	18.84	
7980.00	5.72	20.21	7945.35	614.24	82.70	619.71	0.57	0.00	5.75	
8044.00	5.98	11.25	8009.02	620.51	84.46	626.16	1.48	0.41	-14.00	
8076.00	6.07	8.17	8040.85	623.81	85.02	629.52	1.05	0.28	-9.62	
8139.00	6.07	9.49	8103.49	630.40	86.04	636.18	0.22	0.00	2.10	
8202.00	6.24	12.13	8166.13	637.03	87.31	642.93	0.52	0.27	4.19	
8265.00	5.80	11.07	8228.78	643.50	88.64	649.53	0.72	-0.70	-1.68	
8328.00	6.86	9.49	8291.40	650.34	89.88	656.47	1.70	1.68	-2.51	
8392.00	7.12	8.17	8354.92	658.03	91.07	664.26	0.48	0.41	-2.06	
8455.00	6.77	15.20	8417.46	665.48	92.60	671.85	1.46	-0.56	11.16	
8518.00	5.98	14.06	8480.07	672.25	94.37	678.80	1.27	-1.25	-1.81	
8582.00	5.98	11.07	8543.72	678.75	95.82	685.45	0.49	0.00	-4.67	
8614.00	5.98	9.84	8575.55	682.03	96.42	688.79	0.40	0.00	-3.84	
8677.00	5.89	11.07	8638.21	688.44	97.61	695.30	0.25	-0.14	1.95	
8709.00	5.54	12.21	8670.05	691.56	98.25	698.48	1.15	-1.09	3.56	
8804.00	6.33	15.29	8764.54	701.09	100.60	708.26	0.90	0.83	3.24	
8867.00	6.16	15.55	8827.17	707.70	102.42	715.06	0.27	-0.27	0.41	
8930.00	7.03	15.99	8889.75	714.66	104.39	722.24	1.38	1.38	0.70	
8993.00	7.56	8.43	8952.24	722.47	106.06	730.21	1.74	0.84	-12.00	
9025.00	7.65	6.85	8983.96	726.66	106.62	734.44	0.71	0.28	-4.94	
9088.00	7.47	9.14	9046.41	734.87	107.77	742.73	0.56	-0.29	3.63	
9151.00	7.47	9.49	9108.88	742.95	109.10	750.92	0.07	0.00	0.56	
9215.00	6.86	9.14	9172.38	750.83	110.39	758.90	0.96	-0.95	-0.55	
9278.00	6.77	9.93	9234.93	758.20	111.63	766.37	0.21	-0.14	1.25	
9340.00	6.60	9.93	9296.51	765.31	112.87	773.59	0.27	-0.27	0.00	
9403.00	6.33	10.19	9359.11	772.30	114.11	780.68	0.43	-0.43	0.41	
9466.00	6.07	10.28	9421.74	778.99	115.32	787.48	0.41	-0.41	0.14	
9529.00	5.80	10.02	9484.40	785.40	116.47	793.99	0.43	-0.43	-0.41	
9593.00	5.72	11.25	9548.08	791.72	117.65	800.41	0.23	-0.12	1.92	
9656.00	6.16	8.96	9610.74	798.14	118.79	806.93	0.79	0.70	-3.63	
9718.00	6.16	9.31	9672.38	804.70	119.85	813.58	0.06	0.00	0.56	
9781.00	5.80	9.75	9735.04	811.18	120.93	820.14	0.58	-0.57	0.70	
9845.00	5.98	9.23	9798.70	817.65	122.02	826.71	0.29	0.28	-0.81	
9908.00	5.72	11.60	9861.38	823.97	123.17	833.12	0.56	-0.41	3.76	
9971.00	5.45	11.60	9924.08	829.98	124.41	839.25	0.43	-0.43	0.00	
10034.00	5.98	11.33	9986.76	836.12	125.65	845.51	0.84	0.84	-0.43	
10098.00	6.24	9.75	10050.40	842.82	126.90	852.32	0.48	0.41	-2.47	
10161.00	5.98	10.19	10113.04	849.43	128.06	859.02	0.42	-0.41	0.70	
10224.00	5.63	8.17	10175.72	855.71	129.08	865.39	0.64	-0.56	-3.21	
10320.00	4.84	8.52	10271.32	864.38	130.35	874.15	0.82	-0.82	0.36	
10400.00	3.87	6.59	10351.09	870.40	131.16	880.23	1.23	-1.21	-2.41	
10441.00	3.87	6.59	10391.99	873.15	131.47	882.99	0.00	0.00	0.00	