

30-045-33460

Energen Resources Corporation

Campbell 30-11-30 #3

Section 30, T30-N, R11-W

San Juan County, New Mexico

Plan #2 112805

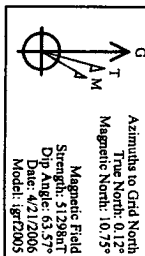
Final MWD Surveys

SITE DETAILS
 Campbell 30-11-30 #3
 San Juan County, New Mexico
 1690' FNL 1900' FNL Sec. 30, T30N, R11W
 Ground Level: 5725.00
 Positional Uncertainty: 0.00
 Convergence: -0.12

Surface: 1510/N 2090/W
 BHZ 1635/W 1646/W
 Tvd - 2181 MD - 2265

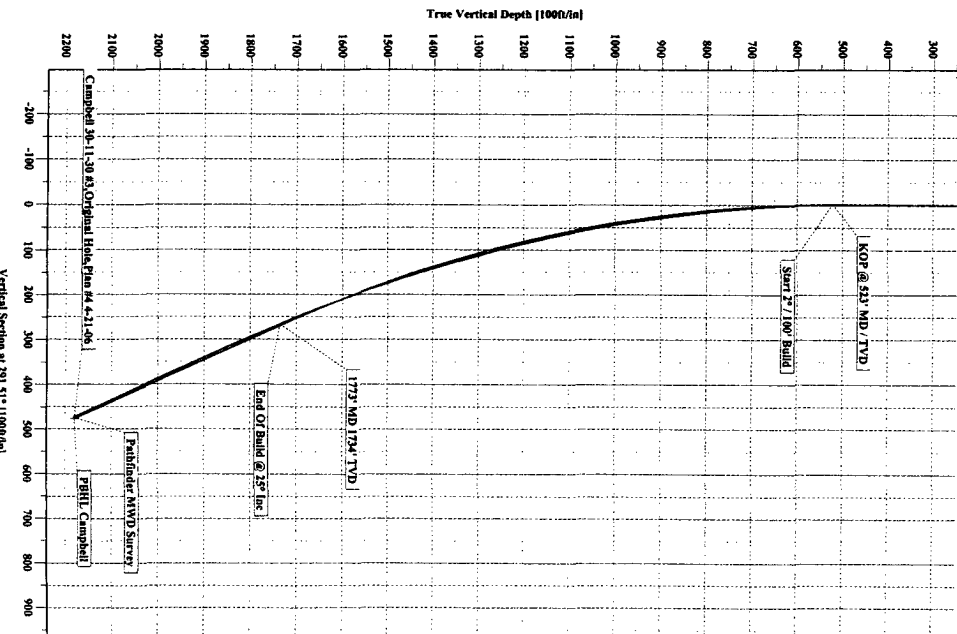
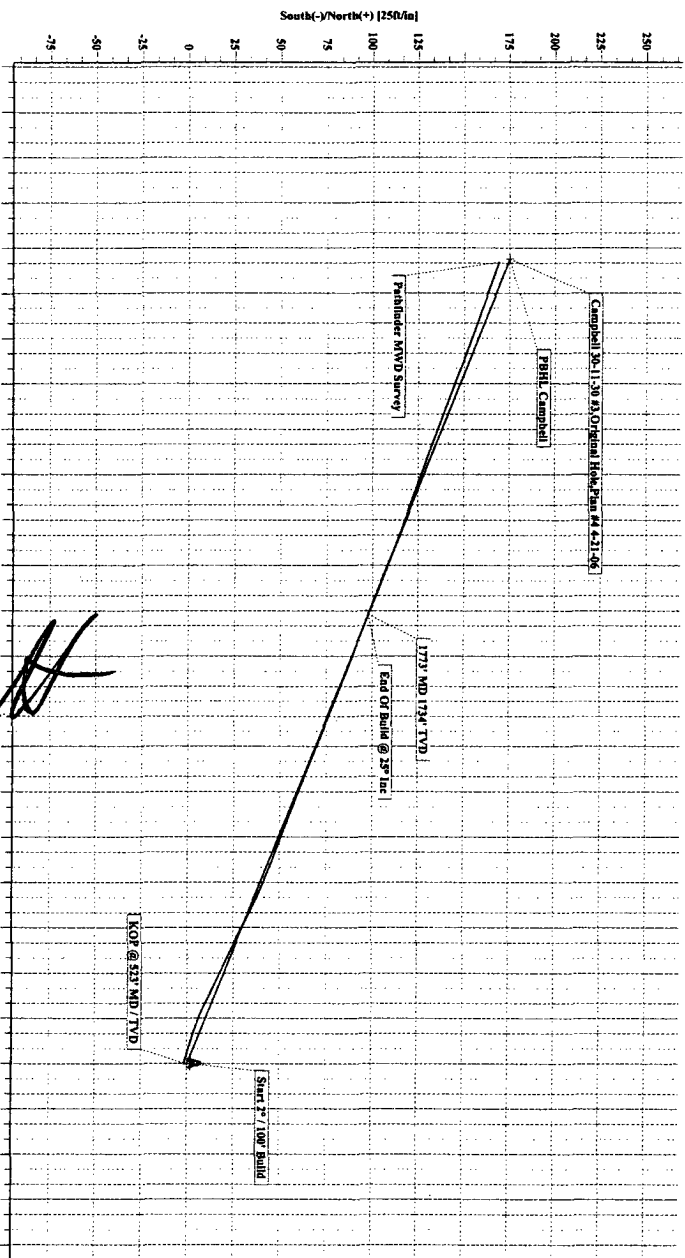
COMPANY DETAILS
 Energen Resources Corporation
 2198 Bloomfield Hwy
 Farmington, NM 87401

Calculation Method: Minimum Curvature
Error System: Systematic Ellipse
Survey Method: Survey Approach 3D
Error Surface: Ellipsoid
Warning Method: Error Ratio



Name	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot
Campbell 30-11-30 #3	0.00	0.00	2105428.81	2664287.93	36°47'09.000N	108°02'03.000W	N/A

No.	TVD	MD	Annotation
1	523.00	523.00	KOP @ 523' MD / TVD
2	523.00	523.00	Start 2° / 100' Build
3	1735.83	1773.00	End Of Build @ 25° Inc
4	1735.83	1773.00	1773 MD 1734' TVD



WELLPATH DETAILS			
Original Hole	Mean Sea Level	Starting	From TVD
Rig:	0.000		
Ref. Datum:			
V. Section	Origin	Origin	Origin
Angle	+N-S	+E-W	From TVD
291.51°	0.00	0.00	0.00

PATHFINDER

Pathfinder Energy

Survey Report - Geographic

Company: Energen Resources Corporation Field: Campbell Site: Campbell 30-11-30 #3 Well: Campbell 30-11-30 #3 Wellpath: Original Hole		Date: 5/18/2006 Co-ordinate(NE) Reference: Well: Campbell 30-11-30 #3, Grid North Vertical (TVD) Reference: System: Mean Sea Level Section (VS) Reference: Well (0.00N,0.00E,291.51Azi) Survey Calculation Method: Minimum Curvature		Time: 16:59:47 Page: 1 Db: Sybase							
Field: Campbell San Juan Cnty; New Mexico											
Map System: US State Plane Coordinate System 1983 Geo Datum: GRS 1980 Sys Datum: Mean Sea Level			Map Zone: New Mexico, Western Zone Coordinate System: Well Centre Geomagnetic Model: igrf2005								
Site: Campbell 30-11-30 #3 San Juan County, New Mexico 1690' FNL 1900' FWL Sec. 30; T30N; R11W											
Site Position: From: Lease Line Position Uncertainty: 0.00 ft Ground Level: 5725.00 ft		Northing: Easting:		Latitude: Longitude: North Reference: Grid Grid Convergence: -0.12 deg							
Well: Campbell 30-11-30 #3											
Slot Name:											
Well Position: +N/-S 0.00 ft +E/-W 0.00 ft Position Uncertainty: 0.00 ft		Northing: 2105428.81 ft Easting: 2664287.93 ft		Latitude: 36 47 9.000 N Longitude: 108 2 3.000 W							
Wellpath: Original Hole											
Current Datum: Mean Sea Level Magnetic Data: 4/21/2006 Field Strength: 51298 nT Vertical Section: Depth From (TVD) ft		Height: 0.00 ft +N/-S ft		Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 10.63 deg Mag Dip Angle: 63.57 deg +E/-W ft Direction: deg							
0.00		0.00		0.00 291.51							
Survey: Pathfinder MWD Survey Company: Pathfinder Energy Tool:			Start Date: 5/18/2006 Engineer: Tied-to: From Surface								
Survey: Pathfinder MWD Survey											
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	← Latitude → Deg Min Sec		← Longitude → Deg Min Sec	
0.00	0.00	0.00	0.00	0.00	0.00	2105428.81	2664287.93	36 47	9.000 N	108 2	3.000 W
471.00	0.35	170.94	471.00	-1.42	0.23	2105427.39	2664288.15	36 47	8.986 N	108 2	2.997 W
501.00	0.18	251.98	501.00	-1.53	0.20	2105427.28	2664288.12	36 47	8.985 N	108 2	2.998 W
523.00	0.60	277.81	523.00	-1.52	0.05	2105427.29	2664287.98	36 47	8.985 N	108 2	2.999 W
563.00	1.41	283.62	562.99	-1.38	-0.64	2105427.43	2664287.29	36 47	8.986 N	108 2	3.008 W
625.00	2.55	285.64	624.95	-0.82	-2.71	2105427.98	2664285.22	36 47	8.992 N	108 2	3.033 W
688.00	4.04	285.73	687.85	0.15	-6.19	2105428.96	2664281.73	36 47	9.001 N	108 2	3.076 W
749.00	5.28	286.08	748.64	1.51	-10.96	2105430.32	2664276.97	36 47	9.015 N	108 2	3.135 W
811.00	6.33	288.72	810.32	3.40	-16.94	2105432.21	2664270.99	36 47	9.033 N	108 2	3.208 W
873.00	7.74	289.24	871.86	5.87	-24.12	2105434.68	2664263.81	36 47	9.058 N	108 2	3.297 W
936.00	8.44	296.54	934.23	9.34	-32.26	2105438.15	2664255.67	36 47	9.092 N	108 2	3.397 W
995.00	9.85	293.99	992.48	13.33	-40.74	2105442.13	2664247.18	36 47	9.131 N	108 2	3.501 W
1058.00	10.82	294.96	1054.46	18.01	-51.03	2105446.82	2664236.90	36 47	9.177 N	108 2	3.628 W
1118.00	11.96	295.48	1113.27	23.06	-61.75	2105451.87	2664226.18	36 47	9.227 N	108 2	3.760 W
1180.00	13.54	296.98	1173.74	29.12	-74.01	2105457.93	2664213.91	36 47	9.286 N	108 2	3.911 W
1241.00	14.77	295.40	1232.89	35.69	-87.40	2105464.50	2664200.53	36 47	9.351 N	108 2	4.075 W
1302.00	15.65	291.53	1291.75	42.05	-102.08	2105470.86	2664185.85	36 47	9.414 N	108 2	4.256 W
1363.00	16.53	290.12	1350.36	48.05	-117.88	2105476.86	2664170.05	36 47	9.473 N	108 2	4.450 W
1426.00	17.50	290.39	1410.61	54.44	-135.18	2105483.25	2664152.75	36 47	9.536 N	108 2	4.663 W
1489.00	18.20	290.65	1470.57	61.21	-153.26	2105490.02	2664134.67	36 47	9.602 N	108 2	4.886 W
1550.00	19.26	291.53	1528.34	68.26	-171.54	2105497.07	2664116.39	36 47	9.671 N	108 2	5.111 W
1613.00	20.14	291.44	1587.65	76.04	-191.30	2105504.85	2664096.63	36 47	9.748 N	108 2	5.354 W
1675.00	21.72	291.00	1645.56	84.05	-211.94	2105512.86	2664075.98	36 47	9.827 N	108 2	5.608 W

Pathfinder Energy

Survey Report - Geographic

Company: Energen Resources Corporation
Field: Campbell
Site: Campbell 30-11-30 #3
Well: Campbell 30-11-30 #3
Wellpath: Original Hole

Date: 5/18/2006 **Time:** 16:59:47 **Page:** 2
Co-ordinate(NE) Reference: Well: Campbell 30-11-30 #3, Grid North
Vertical (TVD) Reference: System: Mean Sea Level
Section (VS) Reference: Well (0.00N,0.00E,291.51Azi)
Survey Calculation Method: Minimum Curvature **Db:** Sybase

Survey: Pathfinder MWD Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	← Latitude → Deg Min Sec			← Longitude → Deg Min Sec		
1737.00	23.39	290.56	1702.82	92.48	-234.18	2105521.29	2664053.75	36	47	9.910 N	108	2	5.881 W
1773.00	23.59	290.82	1735.83	97.55	-247.60	2105526.36	2664040.33	36	47	9.960 N	108	2	6.047 W
1799.00	23.74	291.00	1759.65	101.28	-257.35	2105530.09	2664030.58	36	47	9.996 N	108	2	6.166 W
1860.00	24.01	291.97	1815.43	110.32	-280.32	2105539.13	2664007.60	36	47	10.085 N	108	2	6.449 W
1922.00	25.15	289.60	1871.81	119.46	-304.44	2105548.27	2663983.49	36	47	10.175 N	108	2	6.746 W
1983.00	25.06	289.68	1927.05	128.16	-328.81	2105556.97	2663959.12	36	47	10.260 N	108	2	7.046 W
2044.00	25.15	290.10	1982.28	136.97	-353.15	2105565.77	2663934.78	36	47	10.347 N	108	2	7.345 W
2108.00	25.76	290.56	2040.07	146.52	-378.94	2105575.33	2663908.99	36	47	10.441 N	108	2	7.662 W
2169.00	25.59	289.77	2095.05	155.63	-403.75	2105584.44	2663884.18	36	47	10.531 N	108	2	7.968 W
2216.00	24.89	289.51	2137.56	162.37	-422.62	2105591.18	2663865.30	36	47	10.597 N	108	2	8.200 W
2263.89	24.89	289.51	2181.00	169.10	-441.62	2105597.91	2663846.31	36	47	10.663 N	108	2	8.434 W
2265.00	24.89	289.51	2182.01	169.26	-442.06	2105598.07	2663845.86	36	47	10.665 N	108	2	8.439 W

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 Campbell			2181.00	175.00	-444.00	2105603.81	2663843.93	36	47	10.721 N	108	2	8.463 W

Annotation

MD ft	TVD ft	
523.00	523.00	KOP @ 523' MD / TVD
523.00	523.00	Start 2° / 100' Build
1773.00	1735.83	End Of Build @ 25° Inc
1773.00	1735.83	1773' MD 1734' TVD