

AS DRILLED

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico

Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised July 16, 2010

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-30553	² Pool Code 72319	³ Pool Name Blanco Mesaverde
⁴ Property Code 21996	⁵ Property Name San Juan 32-5 Unit	⁶ Well Number 12 H
⁷ OGRID No. 162928	⁸ Operator Name Energen Resources Corporation	⁹ Elevation 6438'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	24	32N	6W		1593'	North	866'	West	Rio Arriba

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	19	32N	5W	2	1365'	North	945'	West	Rio Arriba

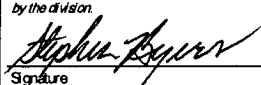
¹² Dedicated Acres 995.25	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R2319
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RCVD SEP 29 '10

OIL CONS. DIV.

DIST. 3

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

¹⁶ Producing Interval: From Intermediate Casing Point @ 1594'FNL, 1874'FWL in Sec. 24, T32N-R06W; To BHL in Sec. 19, T32N-R05W				¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.  Signature _____ Date 9-24-2010 Stephen Byers Printed Name sbyers@energen.com E-mail Address	
¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. May 29, 2008 Date of Survey Signature and Seal of Professional Surveyor: David Russell Certificate Number 10201				1471.80' 5280' 198' (M)	
2689.83' 1593' 1594' 2624.82' 866' SHL 1874' Entry Point 1874' 1365' 945' BHL 2670.88' 2638.46' 2660.62' 1468.50'				1 2 18 3 4 1 2 3 4 19	

RCVD SEP 29 '10
OIL CONS. DIV.

DIST. 3

Energen Resources

Rio Arriba County, NM

Sec. 24-T32N-R6W

San Juan 32-5 Unit #12H

Plan #1

Design: Pathfinder MWD and Sperry MWD Survey

Sperry Drilling Services

Standard Report

25 June, 2010

Well Coordinates: 2,174,025.92 N, 1,300,090.39 E (36° 58' 07.75" N, 107° 24' 53.96" W)
Ground Level: 6,438.00 ft

Local Coordinate Origin:	Centered on Well San Juan 32-5 Unit #12H
Viewing Datum:	KB @ 6450.00ft (D&J 2)
TVDs to System:	N
North Reference:	True
Unit System:	API - US Survey Feet - Custom

Geodetic Scale Factor Applied
Version: 2003.16 Build: 43I

HALLIBURTON

Design Report for San Juan 32-5 Unit #12H - Pathfinder MWD and Sperry MWD Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
497.00	2.73	109.60	496.81	-3.97	11.15	11.16	0.55
Surveys from 497.00ft to 5309.00ft are Pathfinder MWD Surveys							
979.00	1.49	109.24	978.48	-9.89	27.88	27.89	0.26
1,435.00	0.88	136.22	1,434.38	-14.37	35.90	35.92	0.18
1,882.00	0.53	154.56	1,881.35	-18.71	39.17	39.18	0.09
2,325.00	1.06	237.57	2,324.31	-22.76	36.59	36.61	0.25
2,771.00	0.79	260.67	2,770.26	-25.47	30.07	30.09	0.10
3,211.00	0.79	249.86	3,210.21	-27.01	24.23	24.25	0.03
3,405.00	0.35	264.40	3,404.20	-27.53	22.39	22.41	0.24
3,437.00	0.35	274.12	3,436.20	-27.53	22.19	22.21	0.19
3,469.00	0.70	297.24	3,468.20	-27.43	21.92	21.94	1.26
3,501.00	1.49	302.91	3,500.20	-27.12	21.40	21.42	2.49
3,533.00	2.73	302.70	3,532.17	-26.48	20.41	20.43	3.88
3,565.00	3.52	310.19	3,564.13	-25.43	19.01	19.04	2.77
3,596.00	3.61	325.98	3,595.07	-24.01	17.74	17.76	3.17
3,628.00	3.87	345.53	3,627.00	-22.13	16.91	16.93	4.05
3,659.00	4.04	6.44	3,657.93	-20.03	16.77	16.79	4.66
3,692.00	4.13	24.75	3,690.84	-17.80	17.40	17.41	3.95
3,723.00	4.22	42.12	3,721.76	-15.94	18.63	18.64	4.07
3,755.00	4.40	59.29	3,753.67	-14.44	20.47	20.49	4.06
3,787.00	4.40	76.03	3,785.58	-13.51	22.72	22.73	4.00
3,818.00	4.66	90.22	3,816.49	-13.23	25.13	25.15	3.70
3,850.00	5.45	96.52	3,848.36	-13.41	27.94	27.96	3.01
3,882.00	6.68	96.24	3,880.18	-13.78	31.30	31.32	3.84
3,914.00	8.79	94.46	3,911.89	-14.18	35.59	35.60	6.64
3,945.00	10.73	91.18	3,942.44	-14.42	40.84	40.85	6.51
3,977.00	11.78	85.56	3,973.82	-14.23	47.07	47.09	4.74
4,009.00	13.01	80.11	4,005.08	-13.36	53.88	53.89	5.30
4,041.00	14.07	76.79	4,036.19	-11.85	61.22	61.23	4.11
4,073.00	14.68	77.62	4,067.19	-10.09	68.96	68.97	2.01
4,105.00	15.12	79.08	4,098.11	-8.43	77.02	77.03	1.81
4,137.00	16.62	80.83	4,128.89	-6.91	85.64	85.64	4.92
4,169.00	18.73	82.71	4,159.38	-5.53	95.25	95.26	6.83
4,201.00	20.84	84.22	4,189.49	-4.31	106.01	106.02	6.78
4,232.00	22.42	85.36	4,218.30	-3.27	117.39	117.40	5.27
4,264.00	23.57	86.50	4,247.76	-2.39	129.86	129.86	3.85
4,297.00	25.06	88.11	4,277.83	-1.75	143.43	143.43	4.94
4,329.00	27.00	88.75	4,306.59	-1.37	157.47	157.47	6.13
4,360.00	28.93	88.69	4,333.97	-1.05	172.00	172.00	6.23
4,390.00	30.95	87.96	4,359.96	-0.61	186.97	186.97	6.84
4,423.00	33.59	88.05	4,387.86	0.01	204.57	204.57	8.00
4,455.00	35.96	87.46	4,414.14	0.72	222.81	222.81	7.48
4,486.00	37.99	87.85	4,438.91	1.49	241.44	241.44	6.59
4,518.00	40.01	88.72	4,463.78	2.08	261.57	261.57	6.54
4,550.00	41.86	89.79	4,487.95	2.35	282.53	282.53	6.18
4,582.00	43.70	90.84	4,511.44	2.23	304.26	304.26	6.17
4,614.00	45.81	91.44	4,534.16	1.78	326.79	326.79	6.72
4,646.00	47.66	92.21	4,556.09	1.04	350.08	350.07	6.04
4,678.00	49.33	92.99	4,577.30	-0.05	374.01	374.01	5.53

Design Report for San Juan 32-5 Unit #12H - Pathfinder MWD and Sperry MWD Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
4,710.00	51.18	92.67	4,597.75	-1.27	398.59	398.59	5.83
4,742.00	52.94	92.55	4,617.43	-2.42	423.80	423.80	5.51
4,773.00	54.69	93.05	4,635.73	-3.64	448.79	448.79	5.79
4,806.00	56.98	92.59	4,654.26	-4.98	476.06	476.06	7.03
4,837.00	58.92	91.85	4,670.71	-6.00	502.31	502.32	6.58
4,868.00	60.59	91.54	4,686.32	-6.79	529.08	529.08	5.46
4,899.00	62.26	90.69	4,701.15	-7.32	556.30	556.30	5.90
4,931.00	63.93	90.50	4,715.63	-7.61	584.83	584.84	5.25
4,963.00	66.13	90.41	4,729.14	-7.84	613.84	613.84	6.88
4,994.00	67.97	89.84	4,741.23	-7.90	642.38	642.39	6.17
5,026.00	69.91	89.46	4,752.73	-7.72	672.24	672.25	6.16
5,059.00	72.11	88.62	4,763.46	-7.20	703.44	703.44	7.09
5,090.00	74.04	88.57	4,772.49	-6.47	733.09	733.09	6.23
5,122.00	75.97	88.00	4,780.77	-5.54	763.98	763.99	6.27
5,154.00	76.94	87.86	4,788.26	-4.42	795.07	795.07	3.06
5,186.00	78.08	87.89	4,795.18	-3.26	826.29	826.29	3.56
5,218.00	80.28	88.20	4,801.19	-2.19	857.70	857.70	6.94
5,250.00	81.95	88.81	4,806.13	-1.37	889.31	889.31	5.55
5,282.00	83.45	89.64	4,810.20	-0.94	921.04	921.04	5.35
Top of Otero Target							
5,309.00	85.38	89.67	4,812.82	-0.77	947.91	947.91	7.15
Tie-On to Pathfinder MWD Survey							
5,369.00	88.66	90.46	4,815.95	-0.84	1,007.82	1,007.82	5.62
7" Casing Point (Interpolated Point - Not a Survey Station)							
5,389.00	89.75	90.72	4,816.22	-1.05	1,027.82	1,027.82	5.62
First Sperry MWD Survey							
5,416.00	89.94	91.26	4,816.30	-1.51	1,054.81	1,054.82	2.12
5,446.00	90.00	91.21	4,816.31	-2.16	1,084.81	1,084.81	0.26
5,477.00	89.88	91.25	4,816.34	-2.83	1,115.80	1,115.80	0.41
5,507.00	90.00	91.30	4,816.38	-3.49	1,145.79	1,145.80	0.43
5,538.00	89.44	90.83	4,816.53	-4.07	1,176.79	1,176.79	2.36
5,567.00	88.64	90.37	4,817.01	-4.37	1,205.78	1,205.78	3.18
5,598.00	89.14	90.45	4,817.61	-4.60	1,236.77	1,236.78	1.63
5,628.00	89.88	90.42	4,817.87	-4.82	1,266.77	1,266.78	2.47
5,659.00	89.69	89.99	4,817.99	-4.93	1,297.77	1,297.78	1.52
5,690.00	90.12	89.85	4,818.04	-4.89	1,328.77	1,328.78	1.46
5,719.00	89.88	88.96	4,818.04	-4.59	1,357.77	1,357.77	3.18
5,750.00	90.00	87.23	4,818.07	-3.56	1,388.75	1,388.75	5.59
5,780.00	89.63	85.65	4,818.17	-1.70	1,418.69	1,418.69	5.41
5,811.00	90.00	85.57	4,818.27	0.68	1,449.60	1,449.60	1.22
5,841.00	90.56	85.80	4,818.12	2.93	1,479.52	1,479.51	2.02
5,871.00	89.38	85.28	4,818.14	5.27	1,509.42	1,509.42	4.30
5,902.00	88.58	85.75	4,818.69	7.69	1,540.32	1,540.32	2.99
5,931.00	88.02	86.46	4,819.55	9.66	1,569.24	1,569.24	3.12
5,961.00	88.02	87.01	4,820.59	11.37	1,599.18	1,599.17	1.83
5,992.00	88.33	87.92	4,821.57	12.74	1,630.13	1,630.12	3.10
6,023.00	89.51	88.98	4,822.16	13.58	1,661.11	1,661.10	5.12
6,052.00	89.57	88.07	4,822.39	14.32	1,690.10	1,690.09	3.14
6,083.00	90.00	88.27	4,822.51	15.31	1,721.09	1,721.07	1.53
6,114.00	91.23	87.91	4,822.17	16.35	1,752.07	1,752.05	4.13
6,145.00	91.05	87.42	4,821.56	17.61	1,783.03	1,783.02	1.68

Design Report for San Juan 32-5 Unit #12H - Pathfinder MWD and Sperry MWD Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
6,176.00	89.44	86.04	4,821.42	19.38	1,813.98	1,813.96	6.84
6,207.00	89.81	87.52	4,821.63	21.12	1,844.93	1,844.91	4.92
6,238.00	90.12	88.10	4,821.65	22.30	1,875.91	1,875.89	2.12
6,269.00	89.51	87.31	4,821.75	23.54	1,906.88	1,906.86	3.22
6,300.00	90.31	88.12	4,821.79	24.78	1,937.86	1,937.84	3.67
6,330.00	89.94	86.52	4,821.73	26.18	1,967.82	1,967.80	5.47
6,361.00	89.88	85.37	4,821.78	28.37	1,998.75	1,998.72	3.71
6,391.00	89.81	84.91	4,821.86	30.92	2,028.64	2,028.61	1.55
6,421.00	90.12	85.01	4,821.88	33.55	2,058.52	2,058.49	1.09
6,452.00	89.88	84.33	4,821.88	36.43	2,089.39	2,089.36	2.33
6,482.00	89.63	84.28	4,822.01	39.41	2,119.24	2,119.20	0.85
6,512.00	90.00	86.12	4,822.10	41.92	2,149.13	2,149.10	6.26
6,541.00	90.25	87.48	4,822.04	43.54	2,178.09	2,178.05	4.77
6,572.00	89.57	86.83	4,822.09	45.08	2,209.05	2,209.01	3.03
6,602.00	89.88	87.45	4,822.23	46.57	2,239.01	2,238.97	2.31
6,633.00	89.88	87.30	4,822.30	47.99	2,269.98	2,269.94	0.48
6,664.00	90.00	87.06	4,822.33	49.52	2,300.94	2,300.90	0.87
6,694.00	90.06	86.99	4,822.31	51.07	2,330.90	2,330.85	0.31
6,723.00	89.75	86.53	4,822.36	52.71	2,359.85	2,359.81	1.91
6,754.00	89.57	85.85	4,822.55	54.77	2,390.78	2,390.74	2.27
6,783.00	90.19	86.71	4,822.61	56.65	2,419.72	2,419.67	3.66
6,814.00	89.75	85.90	4,822.62	58.65	2,450.66	2,450.61	2.97
6,845.00	90.25	87.04	4,822.62	60.56	2,481.60	2,481.54	4.02
6,876.00	90.86	87.66	4,822.32	61.99	2,512.56	2,512.51	2.81
6,906.00	91.61	89.74	4,821.68	62.67	2,542.55	2,542.49	7.37
6,937.00	90.68	91.16	4,821.06	62.43	2,573.54	2,573.48	5.47
6,968.00	89.63	91.81	4,820.97	61.63	2,604.53	2,604.47	3.98
6,999.00	89.88	92.26	4,821.10	60.53	2,635.51	2,635.45	1.66
7,030.00	90.19	92.58	4,821.09	59.22	2,666.48	2,666.43	1.44
7,061.00	90.00	92.21	4,821.03	57.92	2,697.45	2,697.40	1.34
7,092.00	89.51	91.44	4,821.17	56.94	2,728.44	2,728.39	2.94
7,123.00	89.57	92.26	4,821.42	55.93	2,759.42	2,759.37	2.65
7,154.00	89.75	92.45	4,821.60	54.66	2,790.39	2,790.34	0.84
7,185.00	90.00	92.92	4,821.67	53.21	2,821.36	2,821.31	1.72
7,216.00	90.12	93.61	4,821.63	51.44	2,852.31	2,852.26	2.26
7,245.00	89.57	94.42	4,821.71	49.41	2,881.24	2,881.19	3.38
7,277.00	90.06	94.51	4,821.82	46.92	2,913.14	2,913.10	1.56
7,315.00	90.56	94.20	4,821.61	44.04	2,951.03	2,950.99	1.55
7,341.00	90.19	93.82	4,821.44	42.22	2,976.96	2,976.93	2.04
7,373.00	89.88	93.07	4,821.42	40.29	3,008.91	3,008.87	2.54
7,404.00	89.26	93.38	4,821.65	38.55	3,039.86	3,039.82	2.24
7,435.00	90.25	94.43	4,821.79	36.44	3,070.78	3,070.75	4.66
7,466.00	91.17	94.61	4,821.40	34.00	3,101.68	3,101.65	3.02
7,498.00	91.67	93.88	4,820.61	31.63	3,133.58	3,133.56	2.76
7,529.00	91.30	92.71	4,819.81	29.85	3,164.52	3,164.50	3.96
7,569.00	90.56	91.36	4,819.16	28.43	3,204.49	3,204.47	3.85
7,604.00	90.49	89.17	4,818.84	28.27	3,239.49	3,239.46	6.26
7,637.00	90.74	90.25	4,818.48	28.43	3,272.48	3,272.46	3.36
7,668.00	90.06	91.16	4,818.27	28.05	3,303.48	3,303.46	3.66
7,698.00	89.32	91.92	4,818.43	27.25	3,333.47	3,333.44	3.54
7,729.00	89.32	91.83	4,818.80	26.23	3,364.45	3,364.43	0.29

Design Report for San Juan 32-5 Unit #12H - Pathfinder MWD and Sperry MWD Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
7,760.00	88.95	91.35	4,819.26	25.37	3,395.43	3,395.41	1.95
7,791.00	89.20	91.37	4,819.76	24.64	3,426.42	3,426.40	0.81
7,822.00	89.07	91.02	4,820.23	23.99	3,457.41	3,457.39	1.20
7,853.00	89.81	90.97	4,820.53	23.45	3,488.40	3,488.38	2.39
7,884.00	90.12	91.19	4,820.55	22.87	3,519.40	3,519.38	1.23
7,915.00	89.88	91.28	4,820.55	22.20	3,550.39	3,550.37	0.83
7,946.00	90.06	90.64	4,820.57	21.68	3,581.39	3,581.37	2.14
7,978.00	90.19	90.53	4,820.50	21.35	3,613.39	3,613.37	0.53
8,009.00	90.25	89.98	4,820.38	21.21	3,644.39	3,644.37	1.78
8,040.00	90.19	89.72	4,820.26	21.30	3,675.38	3,675.37	0.86
8,071.00	89.94	89.85	4,820.23	21.41	3,706.38	3,706.36	0.91
8,103.00	90.56	90.14	4,820.09	21.41	3,738.38	3,738.36	2.14
8,134.00	90.99	90.02	4,819.67	21.37	3,769.38	3,769.36	1.44
8,165.00	90.31	90.22	4,819.32	21.31	3,800.38	3,800.36	2.29
8,196.00	90.62	90.83	4,819.06	21.02	3,831.38	3,831.36	2.21
8,228.00	88.33	90.30	4,819.36	20.71	3,863.37	3,863.35	7.35
8,250.00	87.96	90.48	4,820.07	20.56	3,885.36	3,885.34	1.87
8,281.00	88.02	90.72	4,821.16	20.23	3,916.34	3,916.32	0.80
8,312.00	88.03	90.29	4,822.23	19.96	3,947.32	3,947.30	1.39
8,342.00	87.90	90.45	4,823.29	19.77	3,977.30	3,977.28	0.69
8,373.00	88.70	91.93	4,824.21	19.12	4,008.28	4,008.26	5.43
8,405.00	90.37	93.86	4,824.47	17.51	4,040.23	4,040.22	7.98
8,436.00	91.98	95.04	4,823.83	15.10	4,071.13	4,071.12	6.44
8,467.00	92.10	96.28	4,822.73	12.05	4,101.96	4,101.95	4.02
8,484.00	91.98	95.13	4,822.13	10.36	4,118.87	4,118.85	6.80
8,515.00	91.48	93.65	4,821.19	7.99	4,149.76	4,149.75	5.04
8,546.00	89.57	90.64	4,820.91	6.83	4,180.73	4,180.72	11.50
8,578.00	90.37	88.63	4,820.92	7.03	4,212.73	4,212.72	6.76
8,609.00	90.19	86.38	4,820.77	8.38	4,243.70	4,243.69	7.28
8,640.00	90.19	83.79	4,820.67	11.03	4,274.58	4,274.57	8.35
8,671.00	90.31	81.24	4,820.53	15.07	4,305.31	4,305.30	8.23
8,703.00	89.81	79.71	4,820.50	20.37	4,336.87	4,336.85	5.03
8,734.00	89.88	80.73	4,820.58	25.63	4,367.42	4,367.40	3.30
8,765.00	90.56	80.32	4,820.46	30.74	4,398.00	4,397.97	2.56
8,797.00	90.19	82.88	4,820.26	35.41	4,429.65	4,429.62	8.08
8,828.00	90.19	85.65	4,820.15	38.51	4,460.49	4,460.46	8.94
8,859.00	90.43	88.02	4,819.98	40.22	4,491.44	4,491.41	7.68
8,890.00	89.94	91.34	4,819.88	40.39	4,522.44	4,522.40	10.83
8,921.00	91.05	93.04	4,819.62	39.21	4,553.41	4,553.38	6.55
8,952.00	89.57	91.53	4,819.45	37.97	4,584.38	4,584.35	6.82
8,983.00	89.20	90.26	4,819.78	37.49	4,615.38	4,615.34	4.27
9,014.00	89.94	89.70	4,820.01	37.50	4,646.38	4,646.34	2.99
9,045.00	90.12	90.18	4,820.00	37.53	4,677.38	4,677.34	1.65
9,076.00	90.00	91.16	4,819.97	37.17	4,708.37	4,708.34	3.18
9,108.00	90.06	92.84	4,819.95	36.05	4,740.35	4,740.32	5.25
9,139.00	90.19	93.40	4,819.88	34.37	4,771.31	4,771.28	1.85
9,171.00	90.74	93.14	4,819.62	32.54	4,803.25	4,803.22	1.90
9,202.00	91.36	92.60	4,819.05	30.99	4,834.21	4,834.18	2.65
9,233.00	91.92	91.14	4,818.17	29.98	4,865.18	4,865.15	5.04
9,265.00	90.43	89.82	4,817.51	29.71	4,897.17	4,897.14	6.22
9,296.00	90.43	89.66	4,817.28	29.85	4,928.17	4,928.14	0.52

Design Report for San Juan 32-5 Unit #12H - Pathfinder MWD and Sperry MWD Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
Final Sperry MWD Survey							
9,375.00	90.43	89.66	4,816.68	30.32	5,007.17	5,007.14	0.00
Survey Projection to TD							

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
497.00	496.81	-3.97	11.15	Surveys from 497.00ft to 5309.00ft are Pathfinder MWD Surveys
5,282.00	4,810.20	-0.94	921.04	Top of Otero Target
5,309.00	4,812.82	-0.77	947.91	Tie-On to Pathfinder MWD Survey
5,369.00	4,815.95	-0.84	1,007.82	7" Casing Point (Interpolated Point - Not a Survey Station)
5,389.00	4,816.22	-1.05	1,027.82	First Sperry MWD Survey
9,296.00	4,817.28	29.85	4,928.17	Final Sperry MWD Survey
9,375.00	4,816.68	30.32	5,007.17	Survey Projection to TD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	San Juan 32-5 Unit #12H_BHL Tgt	90.05	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
497.00	5,309.00	Pathfinder MWD Surveys	MWD
5,389.00	9,375.00	Sperry MWD Surveys	MWD

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
San Juan 32-5 Unit	0.00	0.00	4,830.00	-4.47	5,192.74	2,173,957.95	1,305,282.86	36° 58' 7.703 N	107° 23' 49.977 W
- actual wellpath misses target center by 189.28ft at 9375.00ft MD (4816.68 TVD, 30.32 N, 5007.17 E)									
- Point									

North Reference Sheet for Sec. 24-T32N-R6W - San Juan 32-5 Unit #12H - Plan #1

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.

Vertical Depths are relative to KB @ 6450.00ft (D&J 2). Northing and Easting are relative to San Juan 32-5 Unit #12H

Coordinate System is US State Plane 1983, New Mexico Central Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is 106° 15' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:0° 0' 0.000 N°

False Easting: 1,640,416.67ft, False Northing: 0.00ft, Scale Reduction: 1.00003250

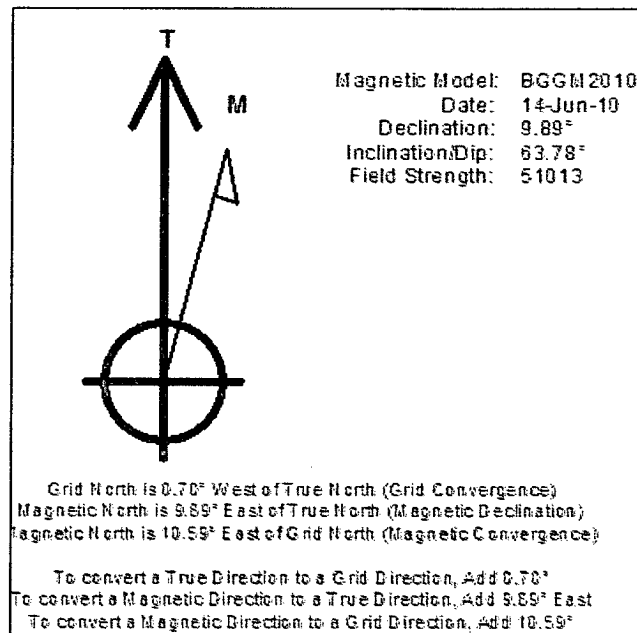
Grid Coordinates of Well: 2,174,025.92 ft N, 1,300,090.39 ft E

Geographical Coordinates of Well: 36° 58' 07.75" N, 107° 24' 53.96" W

Grid Convergence at Surface is: -0.70°

Based upon Minimum Curvature type calculations, at a Measured Depth of 9,375.00ft
the Bottom Hole Displacement is 5,007.26ft in the Direction of 89.65° (True).

Magnetic Convergence at surface is: -10.59° (14 June 2010, , BGGM2010)



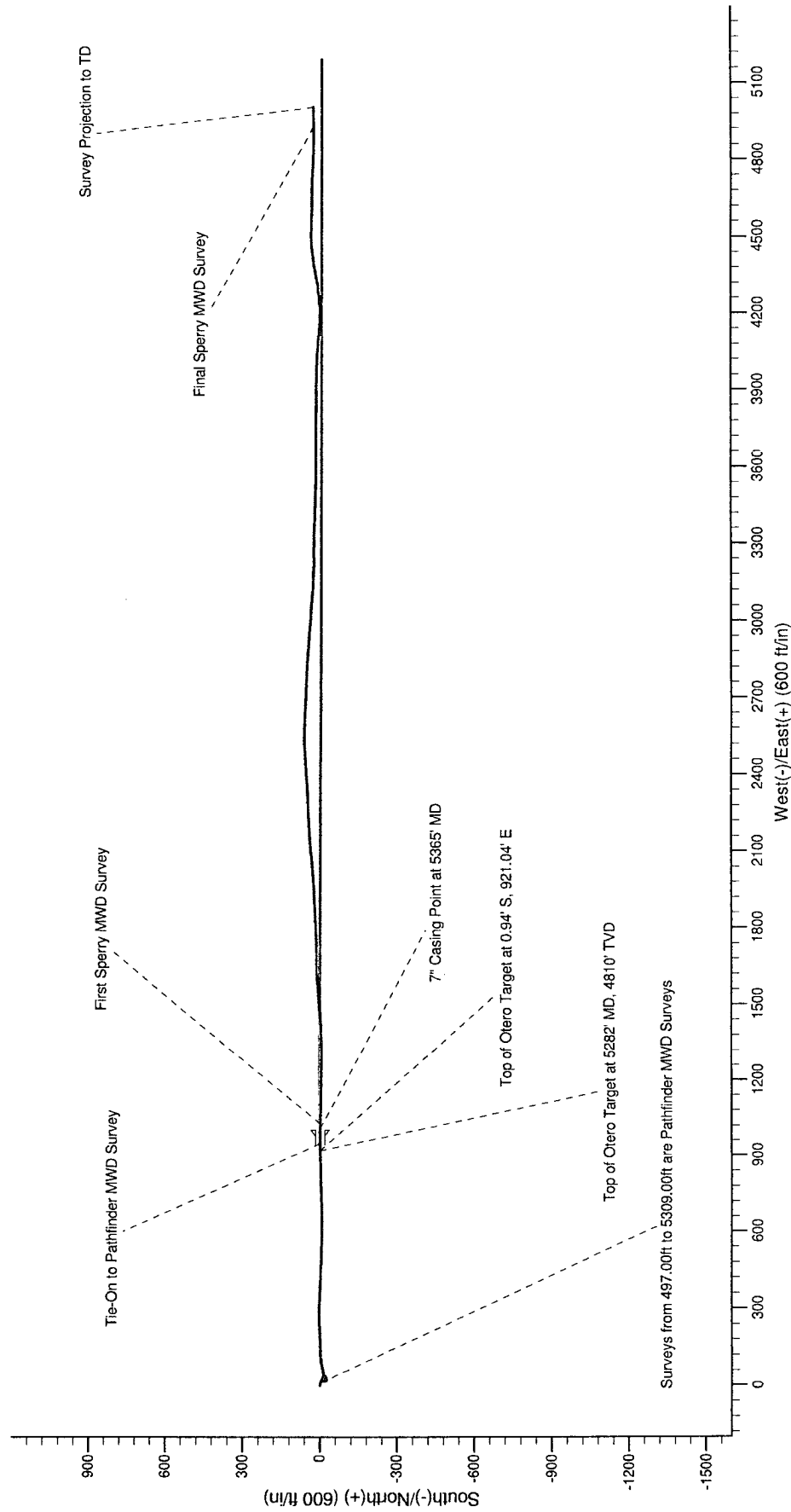
Project: Rio Arriba County, NM
 Site: Sec. 24-T32N-R6W
 Well: San Juan 32-5 Unit #12H

Energen Resources

HALIBURTON
 Sperry Drilling

LEGEND

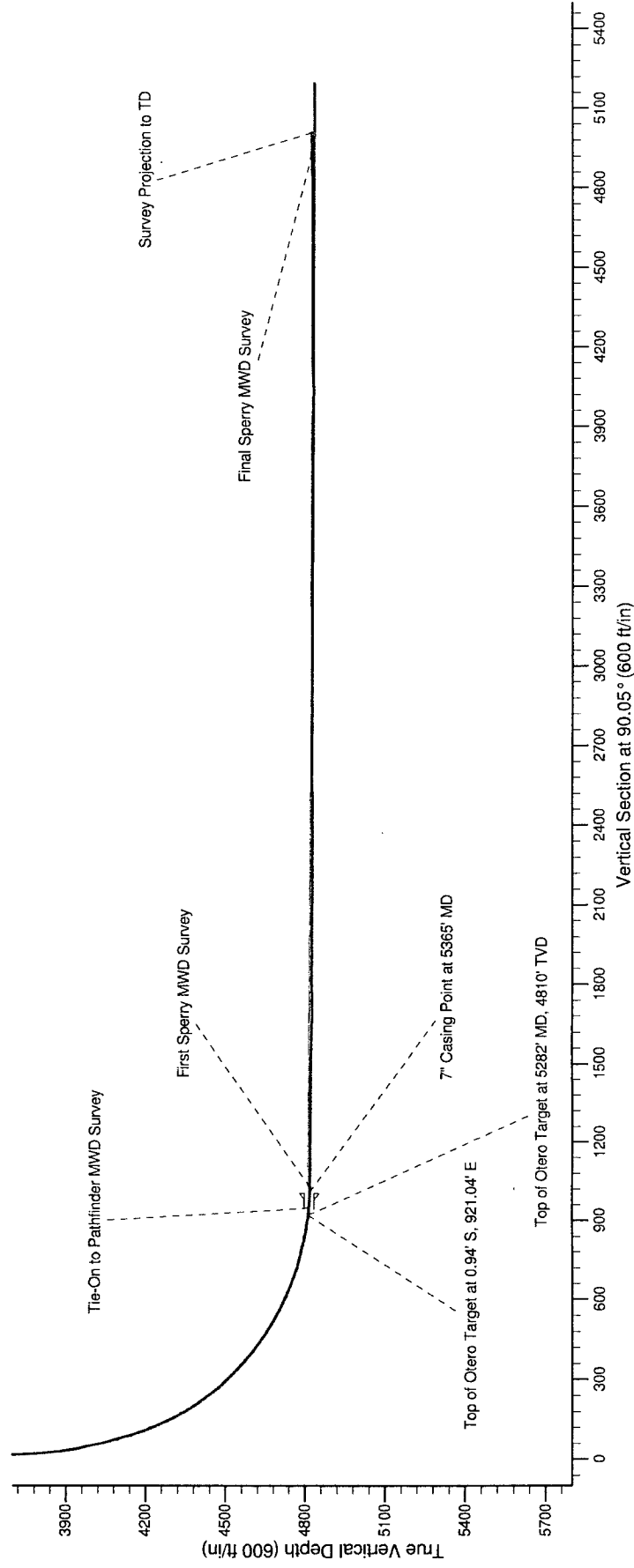
- San Juan 32-5 Unit #12H, Plan #1, Plan #1 - Rev 1 Proposal V0
- Pathfinder MWD and Sperry MWD Survey



Energen Resources

Project: Rio Arriba County, NM
Site: Sec. 24-T32N-R6W
Well: San Juan 32-5 Unit #12H

HALLIBURTON
Sperry Drilling



LEGEND

- San Juan 32-5 Unit #12H, Plan #1, Plan #1 - Rev 1 Proposal V0
- Pathfinder MWD and Sperry MWD Survey