

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

Form C-102
Revised October 12, 2005

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

"As Drilled" Sidetrack #2

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-30158	² Pool Code 71629	³ Pool Name Basin Fruitland Coal
⁴ Property Code 21994	⁵ Property Name San Juan 30-4 Unit	⁶ Well Number 105
⁷ OGRID No 162928	⁸ Operator Name Energen Resources Corporation	⁹ Elevation 7423'

¹⁰ Surface Location

UL or lot no O	Section 18	Township 30N	Range 04W	Lot. Idn	Feet from the 1180	North/South line South	Feet from the 1965	East/West line West	County Rio Arriba
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no P	Section 18	Township 30N	Range 04W	Lot. Idn	Feet from the 857	North/South line South	Feet from the 940	East/West line East	County Rio Arriba
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¹² Dedicated Acres 820.57 E/2	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No
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RCVD JUL 1 '09
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				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 <u>Vicki Donaghey</u> Date <u>06/29/09</u> Printed Name <u>Vicki Donaghey</u>
				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 <u>June 07, 2006</u> Date of Survey Signature and Seal of Professional Surveyor <u>original survey conducted and recorded by: DAVID A. RUSSELL</u> <u>1025</u> Certificate Number

14884' 1320' 2640' 1

Energen Resources

Rio Arriba County, NM
Sec. 18-T30N-R4W
San Juan 30-4 Unit #105

Sidetrack #2

Design: MWD Survey

Sperry Drilling Services Standard Report

10 June, 2009

Well Coordinates: 2,114,944.40 N, 1,334,252.68 E (36° 48' 27.54" N, 107° 17' 45.06" W)
Ground Level: 7,422.99 ft

Local Coordinate Origin:	Centered on Well San Juan 30-4 Unit #105
Viewing Datum:	RKB 15' @ 7437.99ft (Original Well Elev)
TVDs to System:	N
North Reference:	True
Unit System:	API - US Survey Feet - Custom

Geodetic Scale Factor Applied
Version: 2003.16 Build: 43I

RCVD JUL 1 '09
OIL CONS. DIV.
DIST. 3

RCVD JUL 1 '09
OIL CONS. DIV.
DIST. 3

HALLIBURTON

Design Report for San Juan 30-4 Unit #105 - 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
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00
Tie-On to Existing Wellbore, Assumed Vertical							
556.00	6.90	102.10	555.86	-0.71	3.29	3.36	12.32
First Sperry MWD Survey of Sidetrack #2							
647.00	10.90	105.10	645.75	-4.09	16.95	17.33	4.42
737.00	13.50	104.70	733.71	-8.98	35.33	36.18	2.89
826.00	14.80	99.50	820.01	-13.49	56.59	57.84	2.04
916.00	16.80	100.30	906.61	-17.71	80.73	82.31	2.24
1,007.00	19.80	98.00	993.00	-22.21	108.94	110.86	3.39
1,101.00	21.80	96.30	1,080.87	-26.34	142.06	144.24	2.22
1,196.00	21.60	94.70	1,169.14	-29.71	177.02	179.34	0.66
1,291.00	22.30	94.50	1,257.25	-32.56	212.41	214.82	0.74
1,385.00	22.20	94.10	1,344.25	-35.23	247.90	250.37	0.19
1,480.00	24.10	97.20	1,431.60	-38.94	285.05	287.69	2.38
1,575.00	24.50	96.90	1,518.18	-43.74	323.85	326.78	0.44
1,670.00	24.90	97.40	1,604.49	-48.68	363.24	366.48	0.48
1,765.00	24.30	96.50	1,690.87	-53.47	402.49	406.02	0.74
1,860.00	24.70	97.10	1,777.31	-58.14	441.61	445.42	0.50
1,954.00	25.40	97.20	1,862.47	-63.09	481.10	485.22	0.75
2,049.00	25.70	98.40	1,948.18	-68.65	521.70	526.19	0.63
2,140.00	24.40	99.30	2,030.62	-74.57	559.77	564.70	1.49
2,236.00	24.70	99.10	2,117.94	-80.95	599.14	604.56	0.32
2,330.00	25.00	100.00	2,203.24	-87.51	638.09	644.03	0.51
2,425.00	24.90	96.80	2,289.38	-93.36	677.72	684.08	1.42
2,520.00	24.30	96.20	2,375.75	-97.84	717.01	723.62	0.68
2,615.00	23.20	95.80	2,462.71	-101.84	755.07	761.88	1.17
2,710.00	23.30	96.40	2,549.99	-105.83	792.35	799.37	0.27
2,805.00	25.40	96.50	2,636.54	-110.23	831.27	838.53	2.21
2,837.00	25.30	96.70	2,665.46	-111.80	844.88	852.23	0.41
2,868.00	27.00	96.20	2,693.28	-113.34	858.46	865.89	5.53
2,898.00	28.40	94.80	2,719.84	-114.67	872.34	879.83	5.15
2,930.00	30.50	93.40	2,747.71	-115.79	888.03	895.54	6.91
2,961.00	32.30	92.70	2,774.17	-116.64	904.16	911.65	5.92
2,992.00	34.70	92.10	2,800.02	-117.36	921.25	928.69	7.82
3,024.00	36.40	92.80	2,826.05	-118.15	939.84	947.24	5.46
3,087.00	39.20	94.20	2,875.83	-120.53	978.37	985.76	4.65
3,151.00	38.90	94.70	2,925.53	-123.65	1,018.57	1,026.04	0.68
3,181.00	38.80	94.50	2,948.89	-125.16	1,037.33	1,044.84	0.53
3,212.00	39.10	94.90	2,973.00	-126.76	1,056.75	1,064.30	1.26
3,290.00	40.50	96.10	3,032.93	-131.55	1,106.44	1,114.21	2.05
3,337.00	40.40	96.20	3,068.69	-134.82	1,136.76	1,144.70	0.25
3,368.00	43.20	96.00	3,091.80	-137.01	1,157.31	1,165.35	9.04
3,399.00	44.80	95.80	3,114.10	-139.23	1,178.73	1,186.88	5.18
3,431.00	45.40	97.40	3,136.69	-141.83	1,201.24	1,209.54	4.01
3,462.00	47.00	100.80	3,158.14	-145.38	1,223.32	1,231.90	9.45
3,494.00	48.10	103.80	3,179.75	-150.41	1,246.39	1,255.41	7.72
3,525.00	46.40	107.60	3,200.79	-156.56	1,268.30	1,277.92	10.54
3,557.00	43.60	108.50	3,223.42	-163.57	1,289.81	1,300.14	8.97
3,588.00	41.20	109.70	3,246.31	-170.40	1,309.56	1,320.59	8.17

Design Report for San Juan 30-4 Unit #105 - MWD Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
3,619.00	39.00	110.10	3,270.02	-177.20	1,328.34	1,340.07	7.15
3,651.00	36.80	111.10	3,295.27	-184.11	1,346.74	1,359.19	7.14
3,682.00	35.40	113.60	3,320.32	-191.05	1,363.63	1,376.82	6.55
3,714.00	34.10	116.40	3,346.61	-198.75	1,380.16	1,394.19	6.43
3,746.00	31.90	119.30	3,373.45	-206.87	1,395.57	1,410.49	8.46
3,777.00	30.90	121.60	3,399.91	-215.05	1,409.49	1,425.33	5.03
3,809.00	29.60	123.60	3,427.55	-223.73	1,423.07	1,439.90	5.14
3,841.00	29.30	123.80	3,455.42	-232.46	1,436.16	1,453.98	0.99
3,873.00	28.10	123.60	3,483.49	-240.99	1,448.95	1,467.73	3.76
3,904.00	25.50	122.40	3,511.15	-248.61	1,460.67	1,480.31	8.57
3,938.00	23.40	119.40	3,542.10	-255.84	1,472.73	1,493.18	7.17
3,969.00	21.90	118.40	3,570.71	-261.62	1,483.18	1,504.27	5.00
3,999.00	20.10	115.00	3,598.72	-266.46	1,492.77	1,514.40	7.24
4,031.00	18.40	112.30	3,628.93	-270.70	1,502.43	1,524.51	6.00
4,063.00	18.20	110.90	3,659.31	-274.40	1,511.77	1,534.24	1.51
4,094.00	18.30	110.40	3,688.75	-277.82	1,520.85	1,543.68	0.60
4,126.00	16.50	112.10	3,719.29	-281.28	1,529.77	1,552.97	5.84
4,157.00	15.40	114.50	3,749.09	-284.64	1,537.60	1,561.15	4.14
4,189.00	14.80	122.00	3,779.99	-288.57	1,544.93	1,568.92	6.38
4,221.00	14.90	127.80	3,810.92	-293.26	1,551.65	1,576.17	4.65
4,253.00	14.10	135.20	3,841.91	-298.55	1,557.65	1,582.79	6.30
4,285.00	13.20	144.40	3,873.01	-304.28	1,562.52	1,588.34	7.33
4,316.00	10.30	156.10	3,903.36	-309.70	1,565.71	1,592.18	12.06
4,348.00	6.30	157.20	3,935.02	-313.93	1,567.55	1,594.54	12.51
4,379.00	3.40	194.00	3,965.91	-316.40	1,567.98	1,595.28	13.27
4,410.00	4.80	246.90	3,996.84	-317.80	1,566.57	1,594.05	12.45
4,442.00	6.50	256.40	4,028.68	-318.75	1,563.58	1,591.20	6.05
4,474.00	6.70	258.10	4,060.47	-319.56	1,559.99	1,587.74	0.87
4,505.00	6.30	264.40	4,091.27	-320.10	1,556.53	1,584.37	2.64
4,537.00	3.70	264.00	4,123.15	-320.38	1,553.75	1,581.66	8.13
4,569.00	2.80	255.40	4,155.10	-320.68	1,551.97	1,579.93	3.19
4,600.00	2.90	249.40	4,186.06	-321.15	1,550.50	1,578.53	1.01
4,632.00	2.80	251.40	4,218.02	-321.68	1,549.00	1,577.11	0.44
4,663.00	2.80	254.80	4,248.98	-322.12	1,547.55	1,575.73	0.54
4,694.00	2.70	256.90	4,279.95	-322.49	1,546.11	1,574.34	0.46
Final Sperry MWD Survey of Sidetrack #2							
4,748.00	2.70	256.90	4,333.89	-323.06	1,543.63	1,571.96	0.00

Survey Projection to TD of Sperry Directional Work on Sidetrack #2

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
500.00	500.00	0.00	0.00	Tie-On to Existing Wellbore, Assumed Vertical
556.00	555.86	-0.71	3.29	First Sperry MWD Survey of Sidetrack #2
4,694.00	4,279.95	-322.49	1,546.11	Final Sperry MWD Survey of Sidetrack #2
4,748.00	4,333.89	-323.06	1,543.63	Survey Projection to TD of Sperry Directional Work on Sidetrack #2

Design Report for San Juan 30-4 Unit #105 - MWD Survey

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (ft)	+E/-W (ft)	Start TVD (ft)
User	San Juan 30-4 #58 S #2 Tgt	97.20	Slot	0.00	0.00	0.00

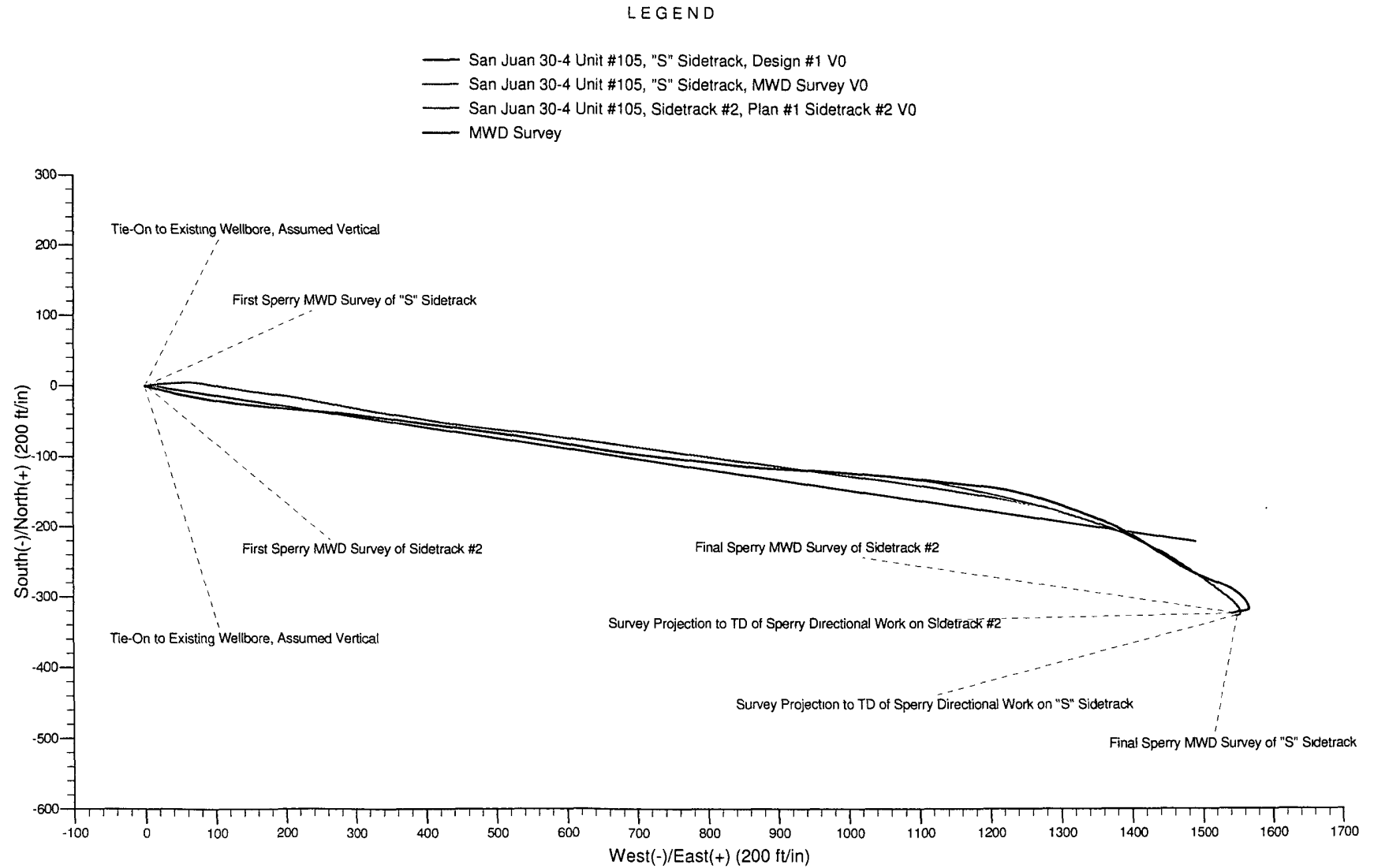
Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
455.00	4,748.00	MWD Surveys	MWD

Project: Rio Arriba County, NM
Site: Sec. 18-T30N-R4W
Well: San Juan 30-4 Unit #105
Wellbore: Sidetrack #2

Energen Resources

HALLIBURTON
Sperry Drilling



Project: Rio Arriba County, NM
Site: Sec. 18-T30N-R4W
Well: San Juan 30-4 Unit #105
Wellbore: Sidetrack #2

Energen Resources

HALLIBURTON

Sperry Drilling

LEGEND

- San Juan 30-4 Unit #105, "S" Sidetrack, Design #1 V0
- San Juan 30-4 Unit #105, "S" Sidetrack, MWD Survey V0
- San Juan 30-4 Unit #105, Sidetrack #2, Plan #1 Sidetrack #2 V0
- MWD Survey

