

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 October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies
AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-27269	² Pool Code 71629	³ Pool Name Basin Fruitland Coal
⁴ Property Code 21996	⁵ Property Name San Juan 32-5 Unit	⁶ Well Number #103S
⁷ OGRID No. 162928	⁸ Operator Name ENERGEN RESOURCES CORPORATION	⁹ Elevation 6307'

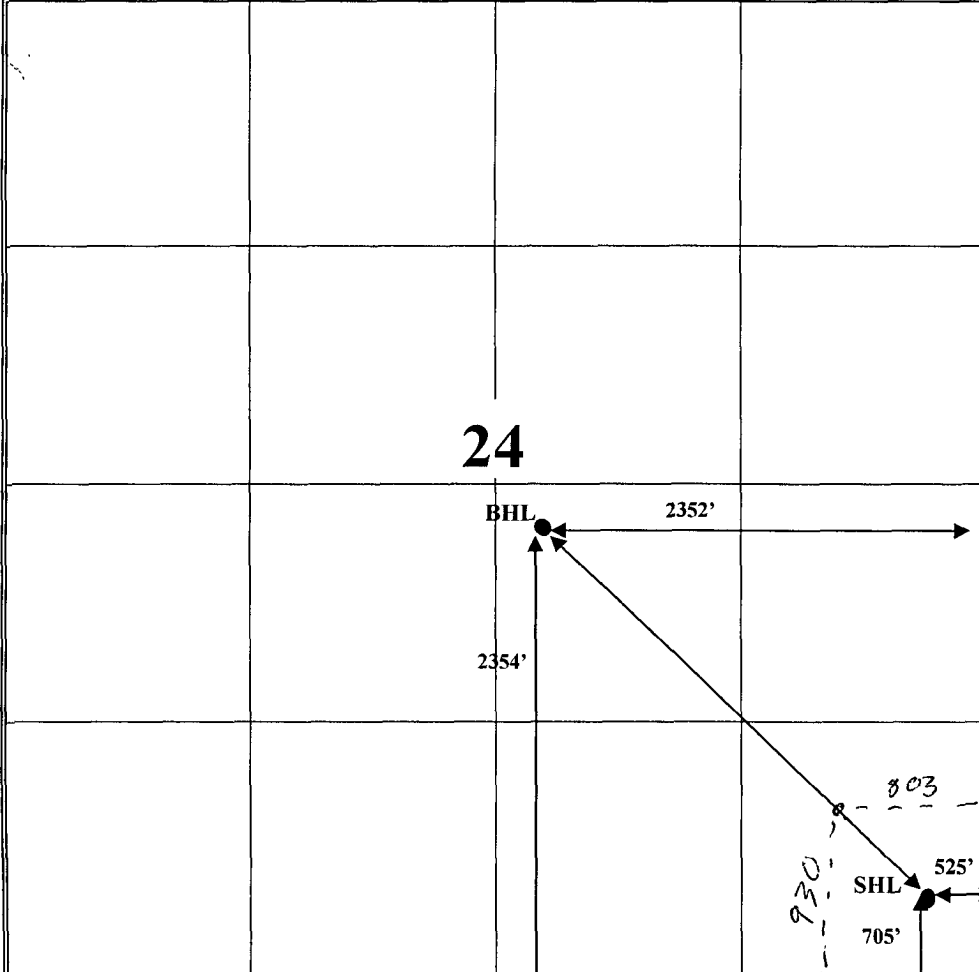
¹⁰ Surface Location									
UL or lot no. P	Section 24	Township 32N	Range 06W	Lot Idn	Feet from the 705'	North/South line South	Feet from the 525'	East/West line East	County RIO ARriba

¹¹ Bottom Hole Location If Different From Surface									
UL or lot no. J	Section 24	Township 32N	Range 06W	Lot Idn	Feet from the 2352'	North/South line South	Feet from the 2354'	East/West line East	County RIO ARriba

¹² Dedicated Acres 320 E 1/2	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--	-------------------------------	----------------------------------	-------------------------

RCVD JUL 23 '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.

	¹⁷ OPERATOR CERTIFICATION <i>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</i> Signature: <u>Vicki Donaghey</u> Date: <u>07/21/10</u> Printed Name: <u>Vicki Donaghey</u>
	¹⁸ SURVEYOR CERTIFICATION <i>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.</i> Date of Survey: <u>July 21, 1988</u> Original Survey Conducted and Recorded By: <u>Neale C Edwards</u> Certificate Number: <u>6857</u>



RCVD JUL 23 '10
OIL CONS. DIV.

DIST. 3

Energen Resources

Rio Arriba County

Eul Canyon

San Juan 32-5 Unit #103 Sidetrack

ST01

Survey: MWD #1 W/ GYRO

Energen EOW

02 June, 2010

PATHFINDER

Company: Energen Resources
 Project: Rio Arriba County
 Site: Eul Canyon
 Well: San Juan 32-5 Unit #103 Sidetrack
 Wellbore: ST01
 Design: ST01

Local Co-ordinate Reference: Well San Juan 32-5 Unit #103 Sidetrack
 TVD Reference: WELL @ 6321.00ft (14' KB Correction)
 MD Reference: WELL @ 6321.00ft (14' KB Correction)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: Midland Database

Project	Rio Arriba County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site	Eul Canyon		
Site Position:		Northing:	2,173,184.728 ft
From:	Lat/Long	Easting:	1,296,505.935 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	36° 57' 59.000 N
		Longitude:	107° 25' 38.000 W
		Grid Convergence:	-0.71 °

Well	San Juan 32-5 Unit #103 Sidetrack		
Well Position	+N-S	0.00 ft	Northing: 2,170,990.479 ft
	+E-W	0.00 ft	Easting: 1,303,897.831 ft
Position Uncertainty	0.00 ft	Wellhead Elevation:	6,307.00 ft
		Latitude:	36° 57' 38.200 N
		Longitude:	107° 24' 6.600 W
		Ground Level:	6,307.00 ft

Wellbore	ST01		
Magnetics	Model Name	Sample Date	Declination
	IGRF200510	05/10/2010	9.89
			(°)
		Dip Angle	Field Strength
		63.76	51,051
		(°)	(nT)

Design	ST01		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
		Direction	(°)
		312.27	

Survey Program	Date 06/02/2010		
From	To	Survey (Wellbore)	Tool Name
(ft)	(ft)		
100.00	5,262.00	MWD #1 W/ GYRO (ST01)	MWD
			Description
			MWD - Standard

Survey								
MD	Inc	Azi	TVD	N/S	E/W	DLeg	V. Sec	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.07	204.08	100.00	-0.06	-0.02	0.07	-0.02	
200.00	0.08	9.81	200.00	-0.04	-0.04	0.15	0.00	
300.00	0.23	338.82	300.00	0.21	-0.10	0.17	0.22	
400.00	0.30	254.17	400.00	0.33	-0.42	0.36	0.53	
500.00	0.26	218.75	500.00	0.08	-0.82	0.17	0.66	
600.00	0.24	202.23	600.00	-0.29	-1.04	0.07	0.57	
700.00	0.29	209.92	700.00	-0.70	-1.24	0.06	0.45	
800.00	0.53	253.81	799.99	-1.05	-1.81	0.38	0.63	
900.00	0.56	266.57	899.99	-1.21	-2.75	0.12	1.22	
1,000.00	0.86	265.48	999.98	-1.30	-3.98	0.30	2.07	
1,100.00	0.77	274.85	1,099.97	-1.30	-5.40	0.16	3.12	

Company: Energen Resources
Project: Rio Arriba County
Site: Eul Canyon
Well: San Juan 32-5 Unit #103 Sidetrack
Wellbore: ST01
Design: ST01

Local Co-ordinate Reference: Well San Juan 32-5 Unit #103 Sidetrack
TVD Reference: WELL @ 6321.00ft (14' KB Correction)
MD Reference: WELL @ 6321.00ft (14' KB Correction)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
1,200.00	1.10	277.24	1,199.96	-1.12	-7.02	0.33	4.44
1,300.00	1.49	265.04	1,299.93	-1.11	-9.27	0.48	6.11
1,400.00	1.39	260.45	1,399.90	-1.43	-11.76	0.15	7.74
1,500.00	1.43	263.35	1,499.87	-1.77	-14.20	0.08	9.31
1,600.00	1.47	260.81	1,599.84	-2.12	-16.70	0.08	10.93
1,700.00	1.51	267.10	1,699.80	-2.39	-19.28	0.17	12.66
1,800.00	1.49	265.93	1,799.77	-2.55	-21.90	0.04	14.49
1,900.00	1.10	261.61	1,899.74	-2.79	-24.14	0.40	15.99
2,000.00	0.92	253.65	1,999.73	-3.15	-25.86	0.23	17.02
2,100.00	1.08	228.68	2,099.71	-4.00	-27.34	0.46	17.54
2,200.00	0.72	237.36	2,199.70	-4.96	-28.58	0.38	17.81
2,300.00	0.75	215.43	2,299.69	-5.83	-29.49	0.28	17.90
2,400.00	0.59	217.24	2,399.69	-6.78	-30.18	0.16	17.77
2,500.00	0.55	180.21	2,499.68	-7.67	-30.49	0.36	17.41
2,600.00	0.35	161.07	2,599.68	-8.44	-30.39	0.25	16.82
2,604.90	0.33	161.45	2,604.58	-8.46	-30.38	0.41	16.79
2,666.70	9.15	317.38	2,666.12	-5.01	-33.66	15.29	21.54
2,698.00	14.60	312.60	2,696.74	-0.50	-38.25	17.68	27.97
2,729.30	20.05	314.37	2,726.61	5.92	-45.00	17.49	37.28
2,760.60	24.97	314.56	2,755.52	14.32	-53.55	15.72	49.25
2,792.00	29.37	311.51	2,783.45	24.08	-64.04	14.69	63.58
2,823.20	34.38	312.49	2,809.94	35.10	-76.27	16.14	80.05
2,854.50	39.22	314.07	2,834.99	47.96	-89.91	15.76	98.79
2,885.50	44.41	314.32	2,858.09	62.37	-104.72	16.75	119.44
2,916.80	49.33	313.95	2,879.48	78.27	-121.11	15.74	142.27
2,948.10	54.34	313.14	2,898.82	95.21	-138.95	16.13	166.86
2,979.20	58.92	312.65	2,915.92	112.88	-157.97	14.79	192.82
3,010.40	63.75	312.66	2,930.88	131.43	-178.10	15.48	220.19
3,041.80	68.85	313.44	2,943.50	151.05	-199.10	16.40	248.93
3,071.00	73.25	314.02	2,952.98	170.14	-219.05	15.19	276.53
3,102.00	75.53	313.57	2,961.32	190.80	-240.60	7.49	306.38
3,133.00	77.65	312.75	2,968.51	211.42	-262.60	7.31	336.53
3,152.00	78.84	313.11	2,972.38	224.09	-276.22	6.51	355.13
Top of Coal - 3152.00'MD,78.84°INC,313.11°AZI,2972.38'TVD							
3,154.00	78.96	313.15	2,972.76	225.44	-277.65	6.51	357.09
3,164.00	79.58	313.34	2,974.63	232.17	-284.80	6.47	366.91
3,195.00	83.27	314.34	2,979.25	253.40	-306.91	12.32	397.55
3,225.00	86.26	315.42	2,981.98	274.47	-328.07	10.59	427.39
3,256.00	89.69	315.72	2,983.08	296.59	-349.76	11.11	458.31
3,287.00	91.10	315.09	2,982.87	318.67	-371.52	4.98	489.26
3,316.00	90.40	314.81	2,982.49	339.15	-392.04	2.60	518.23
3,348.00	89.69	314.75	2,982.46	361.69	-414.76	2.23	550.20
3,379.00	89.16	315.25	2,982.77	383.61	-436.68	2.35	581.16
3,410.00	89.78	315.26	2,983.06	405.63	-458.50	2.00	612.12

Company: Energen Resources
 Project: Rio Arriba County
 Site: Eul Canyon
 Well: San Juan 32-5 Unit #103 Sidetrack
 Wellbore: ST01
 Design: ST01

Local Co-ordinate Reference: Well San Juan 32-5 Unit #103 Sidetrack
 TVD Reference: WELL @ 6321.00ft (14' KB Correction)
 MD Reference: WELL @ 6321.00ft (14' KB Correction)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: Midland Database

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
3,441.00	89.78	315.39	2,983.18	427.67	-480.29	0.42	643.07
3,472.00	89.87	315.11	2,983.27	449.69	-502.12	0.95	674.03
3,503.00	89.25	314.92	2,983.51	471.61	-524.03	2.09	705.00
3,534.00	89.60	315.12	2,983.82	493.54	-545.94	1.30	735.96
3,565.00	90.57	314.78	2,983.78	515.44	-567.88	3.32	766.92
3,596.00	90.66	314.81	2,983.44	537.28	-589.88	0.31	797.89
3,627.00	90.31	314.73	2,983.18	559.11	-611.89	1.16	828.86
3,658.00	90.66	315.15	2,982.92	581.01	-633.83	1.76	859.83
3,689.00	92.07	314.97	2,982.18	602.95	-655.72	4.59	890.78
3,721.00	91.28	314.76	2,981.24	625.51	-678.39	2.55	922.73
3,752.00	91.63	314.00	2,980.46	647.19	-700.54	2.70	953.70
3,784.00	92.33	313.72	2,979.35	669.35	-723.60	2.36	985.67
3,815.00	92.24	313.70	2,978.12	690.75	-745.99	0.30	1,016.64
3,847.00	91.54	313.10	2,977.06	712.72	-769.23	2.88	1,048.61
3,878.00	91.63	311.74	2,976.20	733.63	-792.10	4.40	1,079.60
3,909.00	92.24	312.08	2,975.16	754.32	-815.16	2.25	1,110.58
3,941.00	93.12	312.01	2,973.66	775.73	-838.90	2.76	1,142.55
3,972.00	91.71	311.40	2,972.35	796.33	-862.02	4.96	1,173.52
4,003.00	90.31	311.43	2,971.81	816.84	-885.26	4.52	1,204.51
4,035.00	91.10	311.10	2,971.41	837.94	-909.32	2.68	1,236.50
4,066.00	90.48	310.50	2,970.99	858.20	-932.78	2.78	1,267.49
4,097.00	90.66	310.97	2,970.68	878.42	-956.27	1.62	1,298.47
4,129.00	90.40	310.63	2,970.38	899.33	-980.49	1.34	1,330.46
4,160.00	90.75	311.08	2,970.07	919.61	-1,003.94	1.84	1,361.45
4,192.00	90.84	311.78	2,969.63	940.78	-1,027.93	2.21	1,393.44
4,223.00	91.28	312.59	2,969.05	961.60	-1,050.89	2.97	1,424.44
4,254.00	91.19	311.86	2,968.38	982.42	-1,073.84	2.37	1,455.43
4,285.00	91.63	311.57	2,967.62	1,003.05	-1,096.98	1.70	1,486.42
4,316.00	90.48	310.63	2,967.05	1,023.42	-1,120.33	4.79	1,517.41
4,348.00	90.92	310.22	2,966.66	1,044.17	-1,144.69	1.88	1,549.39
4,379.00	92.33	308.39	2,965.78	1,063.80	-1,168.67	7.45	1,580.33
4,410.00	94.18	307.67	2,964.02	1,082.86	-1,193.05	6.40	1,611.19
4,472.00	91.63	306.09	2,960.88	1,120.02	-1,242.57	4.84	1,672.83
4,504.00	90.57	305.15	2,960.26	1,138.65	-1,268.58	4.43	1,704.61
4,535.00	92.42	304.68	2,959.46	1,156.39	-1,293.99	6.16	1,735.35
4,566.00	92.95	304.17	2,958.00	1,173.89	-1,319.53	2.37	1,766.02
4,597.00	93.30	306.33	2,956.31	1,191.76	-1,344.81	7.05	1,796.74
4,629.00	92.51	307.26	2,954.69	1,210.90	-1,370.40	3.81	1,828.55
4,660.00	92.51	309.42	2,953.33	1,230.11	-1,394.69	6.96	1,859.45
4,691.00	92.59	311.16	2,951.95	1,250.14	-1,418.31	5.61	1,890.40
4,723.00	92.15	313.26	2,950.63	1,271.62	-1,441.99	6.70	1,922.37
4,754.00	92.51	315.32	2,949.37	1,293.24	-1,464.16	6.74	1,953.32
4,785.00	92.15	314.95	2,948.11	1,315.20	-1,486.01	1.66	1,984.26
4,817.00	92.07	314.92	2,946.93	1,337.78	-1,508.65	0.27	2,016.20
4,848.00	92.42	315.02	2,945.72	1,359.68	-1,530.56	1.17	2,047.14

Company: Energen Resources
Project: Rio Arriba County
Site: Eul Canyon
Well: San Juan 32-5 Unit #103 Sidetrack
Wellbore: ST01
Design: ST01

Local Co-ordinate Reference: Well San Juan 32-5 Unit #103 Sidetrack
TVD Reference: WELL @ 6321.00ft (14' KB Correction)
MD Reference: WELL @ 6321 00ft (14' KB Correction)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
4,879.00	91.10	315.28	2,944.77	1,381.64	-1,552.42	4.34	2,078.09
4,911.00	90.84	315.22	2,944.22	1,404.36	-1,574.94	0.83	2,110.04
4,941.00	91.45	315.25	2,943.62	1,425.66	-1,596.06	2.04	2,140.00
4,972.00	91.80	314.30	2,942.75	1,447.49	-1,618.06	3.26	2,170.95
5,004.00	91.98	313.14	2,941.69	1,469.59	-1,641.17	3.67	2,202.92
5,035.00	92.42	312.76	2,940.50	1,490.70	-1,663.85	1.87	2,233.90
5,066.00	92.68	311.99	2,939.12	1,511.57	-1,686.73	2.62	2,264.87
5,097.00	91.10	312.57	2,938.10	1,532.41	-1,709.65	5.43	2,295.85
5,128.00	91.98	312.65	2,937.27	1,553.39	-1,732.46	2.85	2,326.84
5,159.00	91.28	314.51	2,936.38	1,574.75	-1,754.90	6.41	2,357.82
5,191.00	91.28	314.34	2,935.67	1,597.15	-1,777.75	0.53	2,389.79
5,203.00	90.13	314.09	2,935.52	1,605.51	-1,786.35	9.81	2,401.78
5,262.00	90.13	314.09	2,935.39	1,646.56	-1,828.73	0.00	2,460.75

BHL-5262.00°MD,90.13°INC,314.09°AZI, 2935.39°TVD, 2460.75°VS, 1646.56°N, -1828.73°E

Targets
Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
TD Lateral (#103S))	0.00	0.00	2,974.00	1,795.00	-1,975.00	2,172,809.223	1,301,944.675	36° 57' 55.947 N	107° 24' 30.935 W
- survey misses target center by 211.94ft at 5262.00ft MD (2935.39 TVD, 1646.56 N, -1828.73 E)									
- Point									
KOP(#103S)	0.00	0.00	2,662.00	0.00	0.00	2,170,990.479	1,303,897.831	36° 57' 38.200 N	107° 24' 6.600 W
- survey misses target center by 33.59ft at 2661.07ft MD (2660.56 TVD, -5.64 N, -33.08 E)									
- Point									

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
3,152.00	2,972.38	224.09	-276.22	Top of Coal - 3152.00°MD,78.84°INC,313.11°AZI,2972.38°TVD
5,262.00	2,935.39	1,646.56	-1,828.73	BHL-5262.00°MD,90.13°INC,314.09°AZI, 2935.39°TVD, 2460.75°VS, 16

Checked By: _____ Approved By: _____ Date: _____

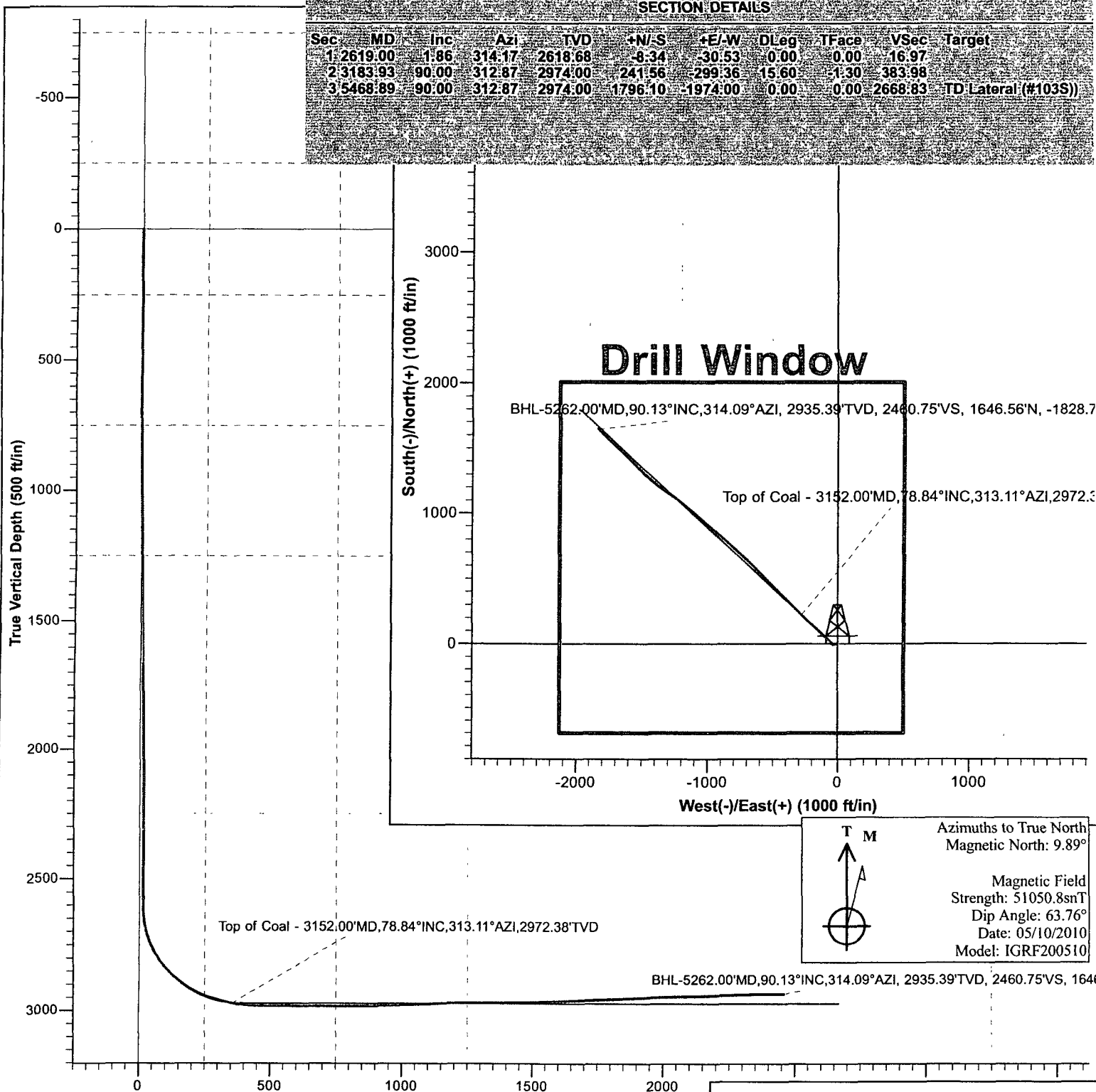
WELL DETAILS: San Juan 32-5 Unit #103 Sidetrack

Ground Elevation: 6307.00
 RKB Elevation: WELL @ 6321.00ft (14' KB Correction)
 Rig Name: 14' KB Correction

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	2170990.479	1303897.831	36° 57' 38.200 N	107° 24' 6.600 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	2619.00	1.86	314.17	2618.68	-8.34	-30.53	0.00	0.00	16.97	
2	3183.93	90.00	312.87	2974.00	241.56	299.36	15.60	-1.30	383.98	
3	5468.89	90.00	312.87	2974.00	1796.10	-1974.00	0.00	0.00	2668.83	TD Lateral (#103S)



Vertical Section at 312.30° (500 ft/in)

Plan: Plan #5 (San Juan 32-5 Unit #103 Sidetrack/ST01)
 Created By: Nate Bingham Date: 9:38, June 02 2010