

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 30-039-24295	² Pool Code 71629	³ Pool Name Basin Fruitland Coal
⁴ Property Code 22045	⁵ Property Name San Juan 32-5 Unit NP	⁶ Well Number #102
⁷ OGRID No. 162928	⁸ Operator Name ENERGEN RESOURCES CORPORATION	⁹ Elevation 6370'

¹⁰ Surface Location

UL or lot no. K	Section 24	Township 32N	Range 06W	Lot Idn	Feet from the 1820	North/South line South	Feet from the 1635	East/West line West	County RIO ARRIBA
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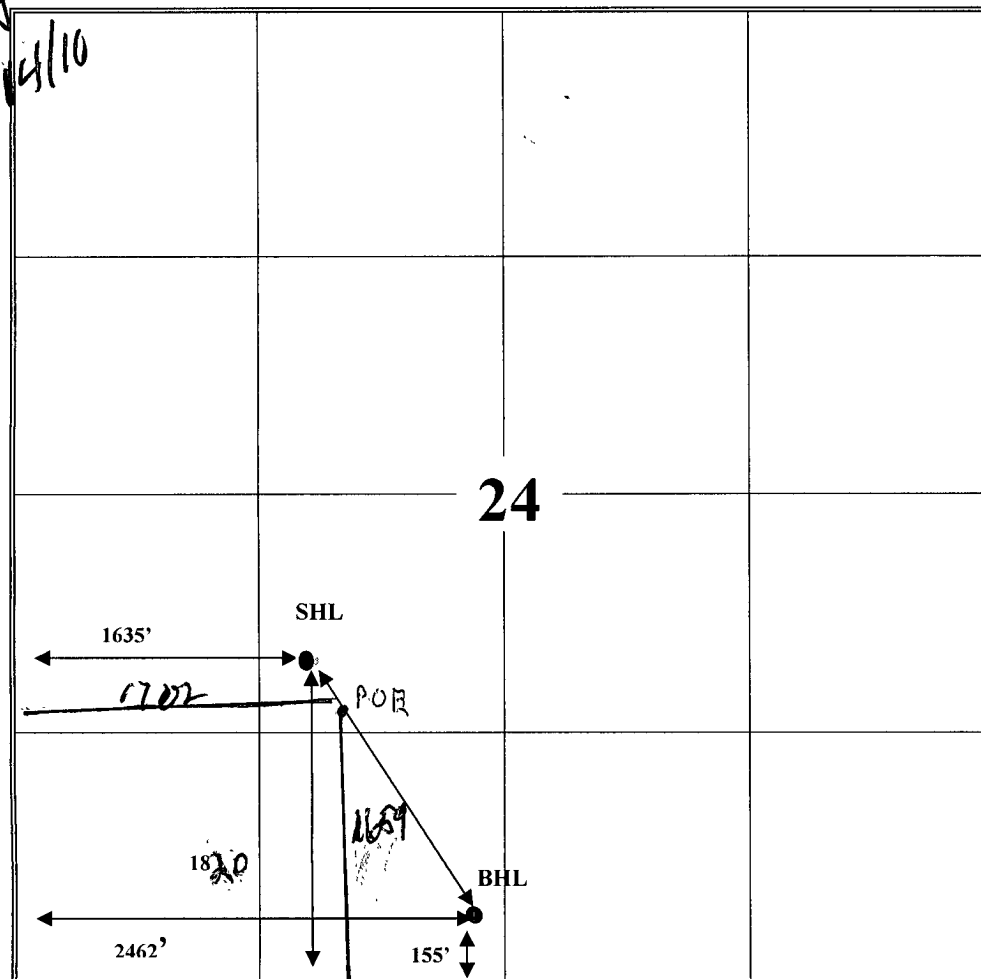
¹¹ Bottom Hole Location If Different From Surface

UL or lot no. N	Section 24	Township 32N	Range 06W	Lot Idn	Feet from the 155	North/South line South	Feet from the 2462	East/West line South	County RIO ARRIBA
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¹² Dedicated Acres 320 W/2	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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RCVD JUL 12 '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> <i>Vicki Donaghey</i> 06/07/2010 Signature Date Vicki Donaghey Printed Name
	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> July 21, 1988 Date of Survey Original Survey Conducted and Recorded By Neale C Edwards 6857 Certificate Number

ENERGEN

R E S O U R C E S

Energen Resources

Rio Arriba County

Eul Canyon

San Juan 32-5 Unit #102 Sidetrack

ST01

Survey: GYRO W/ MWD Survey

Energen EOW

17 May, 2010



DIST. 3

OIL CONS. DIV.

RCVD JUL 9/10

PATHFINDER

Company: Energen Resources
Project: Rio Arriba County
Site: Eul Canyon
Well: San Juan 32-5 Unit #102 Sidetrack
Wellbore: ST01
Design: ST01

Local Co-ordinate Reference: Well San Juan 32-5 Unit #102 Sidetrack
TVD Reference: WELL1 @ 6371.00ft (14' KB Correction)
MD Reference: WELL1 @ 6371.00ft (14' KB Correction)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Midland Database

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

System Datum: Mean Sea Level

Site: Eul Canyon

Site Position:
From: Lat/Long
Position Uncertainty: 0.00 ft

Northing: 2,173,184.728 ft
Easting: 1,296,505.935 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 #102 Sidetrack

Well Position **+N/-S** 0.00 ft **Northing:** 2,172,172.710 ft **Latitude:** 36° 57' 49.536 N
+E/-W 0.00 ft **Easting:** 1,300,964.790 ft **Longitude:** 107° 24' 42.912 W
Position Uncertainty 0.00 ft **Wellhead Elevation:** ft **Ground Level:** 6,357.00 ft

Wellbore: ST01

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	04/07/2010	9.90	63.76	51,059

Design: ST01

Audit Notes:

Version: 1.0 **Phase:** ACTUAL **Tie On Depth:** 0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	153.30

Survey Program Date: 05/17/2010

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
100.00	2,700.00	GYRO W/ MWD Survey (ST01)	MWD	MWD - Standard
2,765.33	4,762.00	MWD #1 (ST01)	MWD	MWD - Standard

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V-Sec (ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.57	181.77	100.00	-0.50	-0.02	0.57	0.44
200.00	0.19	159.44	200.00	-1.15	0.03	0.40	1.04
300.00	0.38	150.61	299.99	-1.59	0.25	0.19	1.54
400.00	0.66	171.45	399.99	-2.45	0.50	0.33	2.41
500.00	0.67	184.06	499.98	-3.61	0.54	0.15	3.46
600.00	0.62	198.80	599.98	-4.70	0.33	0.17	4.35
700.00	0.62	202.49	699.97	-5.71	-0.06	0.04	5.08
800.00	0.75	213.63	799.96	-6.76	-0.63	0.19	5.76
900.00	0.63	211.58	899.96	-7.77	-1.28	0.12	6.37
1,000.00	0.75	205.60	999.95	-8.83	-1.85	0.14	7.06

Company: Energen Resources
Project: Rio Arriba County
Site: Eul Canyon
Well: San Juan 32-5 Unit #102 Sidetrack
Wellbore: ST01
Design: ST01

Local Co-ordinate Reference: Well San Juan 32-5 Unit #102 Sidetrack
TVD Reference: WELL1 @ 6371.00ft (14' KB Correction)
MD Reference: WELL1 @ 6371.00ft (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)
1,100.00	0.47	234.56	1,099.94	-9.66	-2.46	0.41	7.52
1,200.00	0.52	227.70	1,199.94	-10.20	-3.13	0.08	7.70
1,300.00	0.42	262.89	1,299.94	-10.55	-3.83	0.30	7.70
1,400.00	0.47	307.56	1,399.93	-10.35	-4.52	0.34	7.21
1,500.00	0.54	309.12	1,499.93	-9.80	-5.21	0.07	6.41
1,600.00	0.62	319.52	1,599.93	-9.09	-5.93	0.13	5.46
1,700.00	0.55	312.50	1,699.92	-8.35	-6.63	0.10	4.48
1,800.00	0.42	293.91	1,799.92	-7.88	-7.32	0.20	3.75
1,900.00	0.31	283.08	1,899.92	-7.67	-7.92	0.13	3.29
2,000.00	0.57	260.67	1,999.91	-7.69	-8.68	0.31	2.97
2,100.00	0.44	302.78	2,099.91	-7.56	-9.49	0.38	2.49
2,200.00	0.25	286.51	2,199.91	-7.29	-10.02	0.21	2.01
2,300.00	0.38	274.06	2,299.91	-7.21	-10.56	0.15	1.69
2,400.00	0.48	289.58	2,399.90	-7.04	-11.29	0.15	1.22
2,500.00	0.46	278.67	2,499.90	-6.84	-12.08	0.09	0.69
2,600.00	0.54	237.22	2,599.90	-7.04	-12.87	0.36	0.50
2,700.00	0.55	250.57	2,699.89	-7.45	-13.72	0.13	0.49
2,765.33	0.72	254.14	2,765.22	-7.67	-14.41	0.27	0.38
2,788.00	5.39	155.70	2,787.85	-8.68	-14.11	24.43	1.41
Bridge Plug-2788.00°MD,0.78°INC,255.01°AZI, 2787.89°TVD, 16.61°VS, -7.75°N, -14.70°E							
2,856.80	22.16	150.03	2,854.44	-22.97	-6.24	24.43	17.71
2,888.20	29.63	150.44	2,882.67	-34.86	0.56	23.80	31.40
2,919.60	36.58	151.06	2,908.95	-49.82	8.92	22.16	48.52
2,950.90	44.14	151.59	2,932.79	-67.60	18.63	24.18	68.76
2,982.20	51.70	152.84	2,953.75	-88.14	29.44	24.33	91.97
3,013.60	59.27	153.20	2,971.53	-111.18	41.17	24.13	117.83
3,044.40	67.01	152.65	2,985.43	-135.63	53.67	25.18	145.28
3,062.00	72.27	152.81	2,991.55	-150.29	61.23	29.90	161.77
Top of Coal - 3062.00°MD,72.27°INC,152.81°AZI,2991.55°TVD							
3,075.00	76.15	152.93	2,995.09	-161.42	66.93	29.86	174.28
3,102.00	83.54	155.48	2,999.85	-185.33	78.48	28.90	200.83
3,131.00	88.55	156.72	3,001.85	-211.77	90.20	17.79	229.72
3,162.00	90.75	157.35	3,002.04	-240.32	102.29	7.38	260.65
3,192.00	90.31	157.18	3,001.76	-267.98	113.88	1.57	290.58
3,222.00	89.08	155.75	3,001.92	-295.49	125.86	6.29	320.53
3,253.00	89.78	155.01	3,002.23	-323.67	138.78	3.29	351.51
3,284.00	88.90	153.88	3,002.58	-351.63	152.15	4.62	382.50
3,314.00	89.52	152.80	3,003.00	-378.44	165.61	4.15	412.50
3,346.00	89.96	151.69	3,003.14	-406.76	180.51	3.73	444.49
3,377.00	88.72	150.43	3,003.50	-433.88	195.51	5.70	475.46
3,408.00	88.64	149.40	3,004.21	-460.70	211.04	3.33	506.40
3,439.00	89.60	151.26	3,004.69	-487.63	226.39	6.75	537.35
3,471.00	90.13	154.55	3,004.77	-516.11	240.96	10.41	569.35
3,502.00	89.96	154.57	3,004.74	-544.11	254.27	0.55	600.34
3,533.00	89.60	154.79	3,004.86	-572.13	267.53	1.36	631.33

Company: Energen Resources
Project: Rio Arriba County
Site: Eul Canyon
Well: San Juan 32-5 Unit #102 Sidetrack
Wellbore: ST01
Design: ST01

Local Co-ordinate Reference: Well San Juan 32-5 Unit #102 Sidetrack
TVD Reference: WELL1 @ 6371.00ft (14' KB Correction)
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North Reference: True
Survey Calculation Method: Minimum Curvature
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Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
3,564.00	90.66	155.91	3,004.79	-600.30	280.46	4.97	662.31
3,596.00	89.52	155.46	3,004.74	-629.46	293.64	3.83	694.28
3,627.00	88.81	153.43	3,005.19	-657.43	307.01	6.94	725.27
3,658.00	90.31	152.08	3,005.43	-684.99	321.20	6.51	756.27
3,689.00	91.36	151.66	3,004.98	-712.32	335.81	3.65	787.25
3,721.00	92.07	152.52	3,004.02	-740.58	350.78	3.48	819.23
3,752.00	91.19	152.20	3,003.14	-768.04	365.16	3.02	850.21
3,783.00	90.48	150.93	3,002.69	-795.29	379.92	4.69	881.20
3,814.00	89.87	151.29	3,002.59	-822.43	394.90	2.28	912.17
3,845.00	90.22	151.21	3,002.57	-849.61	409.81	1.16	943.15
3,876.00	90.84	152.42	3,002.28	-876.93	424.45	4.39	974.14
3,907.00	90.40	152.02	3,001.95	-904.36	438.89	1.92	1,005.13
3,939.00	89.60	151.50	3,001.95	-932.55	454.04	2.98	1,037.12
3,970.00	89.78	150.71	3,002.11	-959.69	469.01	2.61	1,068.10
4,001.00	90.22	152.02	3,002.11	-986.90	483.87	4.46	1,099.08
4,032.00	90.22	151.69	3,001.99	-1,014.23	498.49	1.06	1,130.07
4,064.00	89.25	151.30	3,002.14	-1,042.35	513.76	3.27	1,162.05
4,095.00	88.37	150.87	3,002.79	-1,069.48	528.75	3.16	1,193.02
4,126.00	88.90	151.08	3,003.53	-1,096.58	543.79	1.84	1,223.99
4,158.00	89.87	151.04	3,003.87	-1,124.58	559.27	3.03	1,255.96
4,189.00	89.08	150.98	3,004.15	-1,151.70	574.29	2.56	1,286.93
4,220.00	88.72	151.06	3,004.75	-1,178.81	589.31	1.19	1,317.90
4,252.00	89.69	150.98	3,005.19	-1,206.80	604.81	3.04	1,349.88
4,283.00	89.34	151.28	3,005.45	-1,233.95	619.78	1.49	1,380.85
4,314.00	88.11	150.07	3,006.14	-1,260.97	634.96	5.57	1,411.81
4,345.00	88.81	150.05	3,006.98	-1,287.82	650.42	2.26	1,442.75
4,377.00	88.72	151.20	3,007.67	-1,315.70	666.12	3.60	1,474.71
4,408.00	87.85	150.57	3,008.59	-1,342.77	681.19	3.46	1,505.67
4,438.00	90.04	151.33	3,009.15	-1,368.99	695.76	7.73	1,535.63
4,470.00	91.36	152.92	3,008.76	-1,397.27	710.72	6.46	1,567.62
4,501.00	90.40	155.76	3,008.28	-1,425.21	724.14	9.67	1,598.61
4,532.00	89.87	156.51	3,008.21	-1,453.56	736.68	2.96	1,629.57
4,564.00	89.25	156.68	3,008.45	-1,482.92	749.39	2.01	1,661.52
4,595.00	89.34	156.37	3,008.83	-1,511.36	761.74	1.04	1,692.47
4,627.00	89.25	156.15	3,009.23	-1,540.65	774.62	0.74	1,724.42
4,657.00	88.90	156.97	3,009.71	-1,568.17	786.55	2.97	1,754.37
4,689.00	89.43	157.14	3,010.18	-1,597.63	799.03	1.74	1,786.30
4,762.00	89.43	157.14	3,010.90	-1,664.89	827.38	0.00	1,859.13

BHL-4762.00'MD,89.43°INC,157.14°AZI, 3010.90'TVD, 1859.13'VS, -1664.89'N, 827.38'E

Company: Energen Resources
Project: Rio Arriba County
Site: Eul Canyon
Well: San Juan 32-5 Unit #102 Sidetrack
Wellbore: ST01
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Targets
Target Name

- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
PBHL(#102S)	0.00	0.00	3,007.00	-1,720.00	865.00	2,170,442.289	1,301,808.749	36° 57' 32.530 N	107° 24' 32.255 W
- survey misses target center by 66.83ft at 4762.00ft MD (3010.90 TVD, -1664.89 N, 827.38 E)									
- Point									

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,788.00	2,787.85	-8.68	-14.11	Bridge Plug-2788.00'MD,0.78°INC,255.01°AZI, 2787.89'TVD, 16.61°VS
3,062.00	2,991.55	-150.29	61.23	Top of Coal - 3062.00'MD,72.27°INC,152.81°AZI,2991.55'TVD
4,762.00	3,010.90	-1,664.89	827.38	BHL-4762.00'MD,89.43°INC,157.14°AZI, 3010.90'TVD, 1859.13°VS, -11

Checked By: _____ Approved By: _____ Date: _____