

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-30674		² Pool Code 71629	³ Pool Name Basin Fruitland Coal
⁴ Property Code 35648	⁵ Property Name Carracas 36A		⁶ Well Number 13
⁷ OGRID No 162928	⁸ Operator Name Energen Resources Corporation		⁹ Elevation 6957'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot 1dn	Feet from the	North/South line	Feet from the	East/West line	County
D	36	32N	05W		1275	North	980	West	Rio Arriba

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot 1dn	Feet from the	North/South line	Feet from the	East/West line	County
M	36	32N	05W		604	South	1003	West	Rio Arriba

¹² Dedicated Acres 320 W/2	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.	RCVD JUN 8 '09 OIL CONS. DIV.
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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

	<p>¹⁷ OPERATOR CERTIFICATION</p> <p>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</p> <p><i>Vicki Donaghey</i> 06/05/09 Signature Date</p> <p>Vicki Donaghey Printed Name</p>
	<p>¹⁸ SURVEYOR CERTIFICATION</p> <p>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</p> <p>09/06/2006 Date of Survey</p> <p>Signature and Seal of Professional Surveyer original survey conducted and recorded by: DAVID B. RUSSELL</p> <p>10201 Certificate Number</p>



RCVD JUN 8 2009
OIL CONS. DIV.

DIST. 3

Energen Resources

Rio Arriba County, NM

Carracas

Carracas 36A #13

OH

Survey: Survey #1

Energen Report

02 June, 2009



WELL DETAILS: Carracas 36A #13

Ground Elevation: 6957.00
 RKB Elevation: WELL @ 6972.00ft (Original Well Elev)
 Rig Name: Original Well Elev

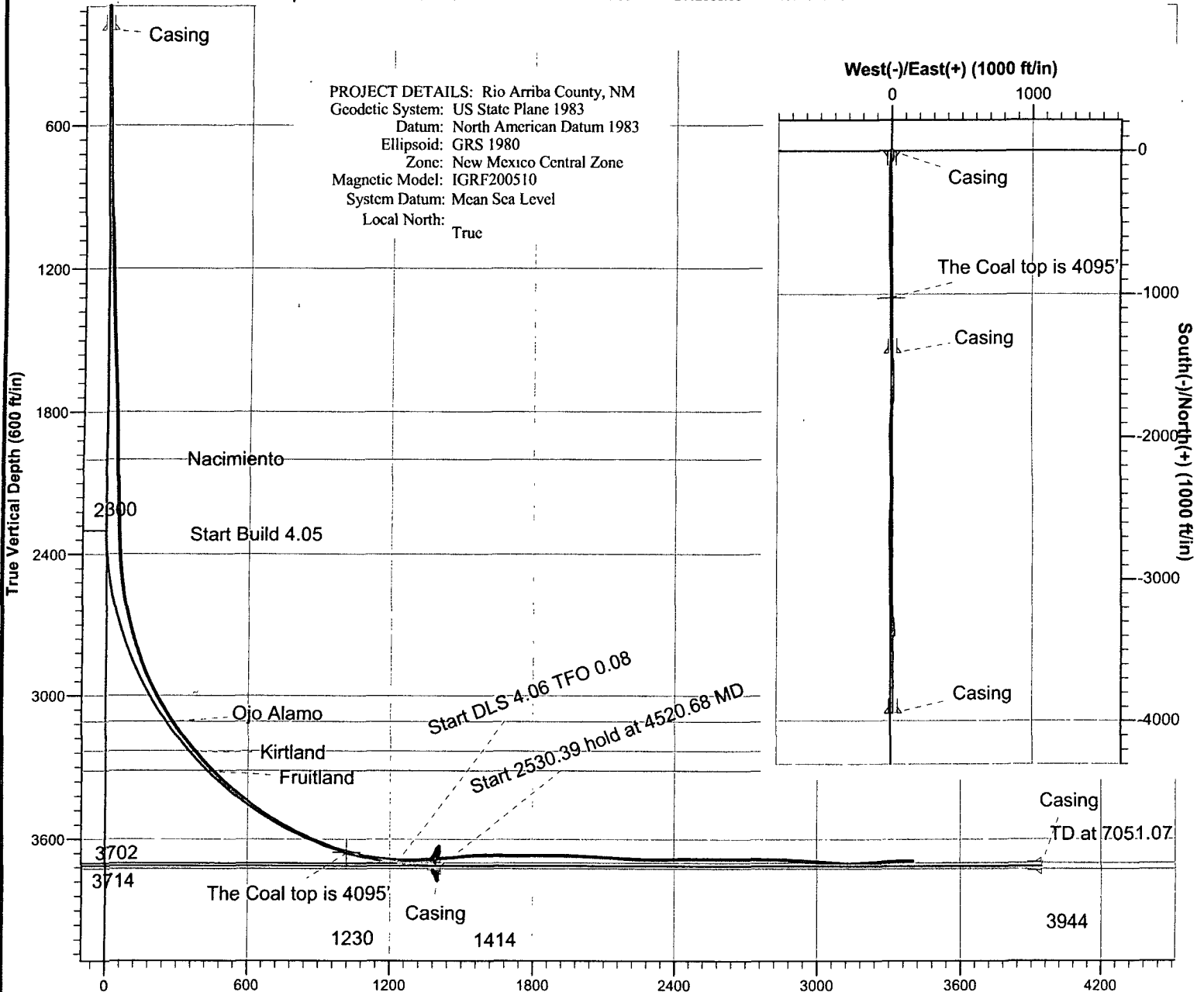
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	2163390.79	1327952.79	36° 56' 25.83600 N	107° 19' 9.19199 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00	0.00	
3	4336.80	82.53	179.70	3702.03	-1230.18	6.44	4.05	179.70	1230.20	
4	4520.68	90.00	179.71	3714.00	-1413.54	7.39	4.06	0.08	1413.56	
5	7051.07	90.00	179.71	3714.00	-3943.90	20.19	0.00	0.00	3943.95	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
The Coal top is 4095'	3657.00	-1022.18	-1.05	2162368.68	1327940.28	36° 56' 15.72925 N	107° 19' 9.20492 W



Vertical Section at 179.71° (600 ft/in)

Company: Energen Resources
Project: Rio Arriba County, NM
Site: Carracas
Well: Carracas 36A #13
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well Carracas 36A #13
TVD Reference: WELL @ 6972.00ft (Original Well Elev)
MD Reference: WELL @ 6972.00ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: 1 Landmark Network DB

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

Site	Carracas				
Site Position:	Northing:	2,163,390.79ft	Latitude:	36° 56' 25.83600 N	
From: Map	Easting:	1,327,952.79ft	Longitude:	107° 19' 9.19199 W	
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	-0.64 °

Well	Carracas 36A #13					
Well Position	+N/-S	0.00 ft	Northing:	2,163,390.79 ft	Latitude:	36° 56' 25.83600 N
	+E/-W	0.00 ft	Easting:	1,327,952.79 ft	Longitude:	107° 19' 9.19199 W
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,957.00 ft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF200510	6/2/2009	(°) 9.96	(°) 63.78	(nT) 51,135

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	179.71	

Survey Program	Date 6/2/2009			
From	To	Survey (Wellbore)	Tool Name	Description
(ft) 433.00	(ft) 6,481.00	Survey #1 (OH)	MWD	MWD - Standard

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)
0.00	0.00	0.00	0.00	-6,972.00	0.00	0.00	0.00
433.00	0.44	150.83	433.00	-6,539.00	-1.45	0.81	1.46
911.00	1.32	166.27	910.94	-6,061.06	-8.40	3.01	8.42
1,393.00	2.29	174.74	1,392.69	-5,579.31	-23.39	5.21	23.41
1,767.00	1.93	167.15	1,766.44	-5,205.56	-36.97	7.30	37.00
1,977.00	1.58	184.16	1,976.34	-4,995.66	-43.30	7.87	43.34
2,008.00	1.41	182.08	2,007.33	-4,964.67	-44.11	7.83	44.15
2,039.00	1.41	188.45	2,038.32	-4,933.68	-44.87	7.76	44.91
2,069.00	1.49	180.56	2,068.31	-4,903.69	-45.62	7.70	45.66
2,100.00	1.49	179.45	2,099.30	-4,872.70	-46.43	7.70	46.47
2,131.00	1.67	176.07	2,130.29	-4,841.71	-47.28	7.74	47.32
2,161.00	1.76	179.67	2,160.27	-4,811.73	-48.18	7.77	48.22

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Wellbore: OH
Design: OH

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North Reference: True
Survey Calculation Method: Minimum Curvature
Database: 1 Landmark Network DB

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)
2,191.00	2.02	177.35	2,190.26	-4,781.74	-49.17	7.80	49.21
2,222.00	1.93	186.25	2,221.24	-4,750.76	-50.23	7.76	50.27
2,253.00	1.93	188.76	2,252.22	-4,719.78	-51.27	7.63	51.31
2,283.00	2.02	191.64	2,282.20	-4,689.80	-52.28	7.44	52.32
2,314.00	2.20	189.46	2,313.18	-4,658.82	-53.41	7.24	53.44
2,345.00	2.20	194.39	2,344.16	-4,627.84	-54.57	6.99	54.60
2,376.00	2.55	198.32	2,375.13	-4,596.87	-55.80	6.63	55.83
2,407.00	3.52	200.57	2,406.09	-4,565.91	-57.35	6.08	57.38
2,438.00	4.57	204.64	2,437.01	-4,534.99	-59.36	5.23	59.39
2,469.00	5.63	205.49	2,467.89	-4,504.11	-61.86	4.06	61.88
2,500.00	6.86	205.70	2,498.71	-4,473.29	-64.90	2.60	64.91
2,531.00	7.83	203.23	2,529.45	-4,442.55	-68.50	0.96	68.51
2,562.00	9.06	200.98	2,560.11	-4,411.89	-72.72	-0.74	72.72
2,593.00	10.38	195.55	2,590.67	-4,381.33	-77.69	-2.37	77.68
2,625.00	11.96	192.49	2,622.06	-4,349.94	-83.71	-3.86	83.69
2,656.00	13.10	190.41	2,652.32	-4,319.68	-90.30	-5.19	90.27
2,687.00	13.72	186.90	2,682.48	-4,289.52	-97.41	-6.26	97.37
2,718.00	14.51	183.92	2,712.54	-4,259.46	-104.93	-6.97	104.89
2,749.00	15.39	182.79	2,742.49	-4,229.51	-112.91	-7.44	112.87
2,780.00	17.06	181.98	2,772.26	-4,199.74	-121.57	-7.79	121.53
2,811.00	18.29	180.95	2,801.79	-4,170.21	-130.98	-8.03	130.93
2,842.00	19.17	181.27	2,831.15	-4,140.85	-140.93	-8.22	140.88
2,873.00	20.49	181.13	2,860.31	-4,111.69	-151.44	-8.44	151.40
2,904.00	22.25	180.94	2,889.18	-4,082.82	-162.74	-8.65	162.69
2,935.00	23.74	180.11	2,917.72	-4,054.28	-174.84	-8.76	174.80
2,966.00	25.06	179.50	2,945.95	-4,026.05	-187.65	-8.71	187.60
2,998.00	26.64	179.36	2,974.74	-3,997.26	-201.60	-8.57	201.56
3,029.00	28.40	179.09	3,002.24	-3,969.76	-215.92	-8.38	215.88
3,059.00	30.16	178.14	3,028.40	-3,943.60	-230.59	-8.02	230.55
3,091.00	31.22	178.29	3,055.92	-3,916.08	-246.91	-7.51	246.87
3,122.00	32.27	179.26	3,082.28	-3,889.72	-263.22	-7.16	263.18
3,152.00	33.68	179.55	3,107.45	-3,864.55	-279.55	-6.99	279.51
3,183.00	35.09	179.27	3,133.03	-3,838.97	-297.05	-6.81	297.02
3,215.00	36.40	180.61	3,159.00	-3,813.00	-315.75	-6.80	315.71
3,246.00	38.08	180.75	3,183.68	-3,788.32	-334.50	-7.02	334.46
3,276.00	39.48	180.58	3,207.07	-3,764.93	-353.29	-7.24	353.25
3,307.00	40.71	181.26	3,230.78	-3,741.22	-373.25	-7.56	373.21
3,338.00	41.59	180.89	3,254.12	-3,717.88	-393.65	-7.94	393.60
3,368.00	42.38	181.49	3,276.42	-3,695.58	-413.71	-8.36	413.67
3,397.00	43.62	181.23	3,297.63	-3,674.37	-433.49	-8.83	433.43
3,427.00	45.11	180.35	3,319.08	-3,652.92	-454.46	-9.12	454.41
3,459.00	46.25	181.04	3,341.44	-3,630.56	-477.35	-9.39	477.30
3,490.00	47.57	181.06	3,362.61	-3,609.39	-499.99	-9.81	499.93
3,520.00	48.89	181.08	3,382.60	-3,589.40	-522.36	-10.23	522.30

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3,582.00	51.09	180.25	3,422.46	-3,549.54	-569.84	-10.77	569.77
3,612.00	52.06	180.11	3,441.10	-3,530.90	-593.34	-10.85	593.28
3,644.00	53.64	179.50	3,460.42	-3,511.58	-618.84	-10.76	618.78
3,675.00	55.49	178.84	3,478.40	-3,493.60	-644.10	-10.39	644.04
3,706.00	57.07	178.15	3,495.61	-3,476.39	-669.87	-9.71	669.81
3,737.00	58.74	178.05	3,512.08	-3,459.92	-696.12	-8.84	696.07
3,768.00	60.41	177.33	3,527.77	-3,444.23	-722.83	-7.76	722.78
3,799.00	61.82	176.56	3,542.75	-3,429.25	-749.93	-6.31	749.89
3,830.00	62.70	177.18	3,557.18	-3,414.82	-777.33	-4.82	777.29
3,862.00	63.40	177.18	3,571.68	-3,400.32	-805.82	-3.41	805.79
3,893.00	64.37	177.49	3,585.33	-3,386.67	-833.62	-2.12	833.60
3,924.00	66.13	178.24	3,598.30	-3,373.70	-861.75	-1.07	861.74
3,956.00	67.36	178.94	3,610.94	-3,361.06	-891.14	-0.35	891.13
3,987.00	68.68	179.69	3,622.54	-3,349.46	-919.89	-0.01	919.88
4,018.00	70.08	180.26	3,633.46	-3,338.54	-948.90	0.01	948.89
4,050.00	71.75	180.89	3,643.92	-3,328.08	-979.14	-0.30	979.12
4,081.00	73.69	181.09	3,653.13	-3,318.87	-1,008.73	-0.81	1,008.72
4,112.00	74.74	180.74	3,661.56	-3,310.44	-1,038.56	-1.29	1,038.54
4,144.00	76.85	180.01	3,669.41	-3,302.59	-1,069.58	-1.49	1,069.56
4,175.00	79.05	180.22	3,675.89	-3,296.11	-1,099.89	-1.55	1,099.87
4,207.00	81.43	180.21	3,681.31	-3,290.69	-1,131.43	-1.67	1,131.41
4,238.00	83.19	179.67	3,685.46	-3,286.54	-1,162.15	-1.64	1,162.13
4,270.00	85.12	179.90	3,688.72	-3,283.28	-1,193.98	-1.52	1,193.96
4,301.00	87.23	179.48	3,690.78	-3,281.22	-1,224.91	-1.35	1,224.89
4,335.00	88.90	179.15	3,691.93	-3,280.07	-1,258.89	-0.94	1,258.87
4,366.00	90.92	178.77	3,691.98	-3,280.02	-1,289.88	-0.38	1,289.86
4,397.00	93.03	178.40	3,690.91	-3,281.09	-1,320.85	0.38	1,320.83
4,428.00	93.56	177.82	3,689.13	-3,282.87	-1,351.78	1.41	1,351.77
4,460.00	94.26	177.58	3,686.95	-3,285.05	-1,383.68	2.69	1,383.68
4,491.00	95.23	177.67	3,684.38	-3,287.62	-1,414.55	3.97	1,414.55
<u>4,520.00</u>	95.41	<u>177.33</u>	<u>3,681.70</u>	-3,290.30	<u>-1,443.40</u>	<u>5.23</u>	1,443.40
4,551.00	95.76	176.99	3,678.68	-3,293.32	-1,474.21	6.75	1,474.23
4,594.00	94.87	178.30	3,674.70	-3,297.30	-1,516.99	8.51	1,517.01
4,632.00	94.09	179.45	3,671.73	-3,300.27	-1,554.86	9.26	1,554.89
4,663.00	91.63	179.72	3,670.18	-3,301.82	-1,585.82	9.48	1,585.85
4,693.00	88.46	179.71	3,670.16	-3,301.84	-1,615.82	9.63	1,615.85
4,724.00	87.67	179.84	3,671.20	-3,300.80	-1,646.80	9.75	1,646.83
4,755.00	88.29	180.79	3,672.30	-3,299.70	-1,677.78	9.58	1,677.81
4,784.00	89.25	181.23	3,672.92	-3,299.08	-1,706.77	9.07	1,706.79
4,815.00	90.75	181.69	3,672.92	-3,299.08	-1,737.76	8.28	1,737.78
4,846.00	91.54	182.63	3,672.30	-3,299.70	-1,768.73	7.11	1,768.74
4,877.00	91.01	183.21	3,671.61	-3,300.39	-1,799.68	5.53	1,799.68
4,907.00	89.78	183.40	3,671.40	-3,300.60	-1,829.63	3.80	1,829.62
4,938.00	89.43	182.77	3,671.62	-3,300.38	-1,860.58	2.14	1,860.57

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Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)
4,969.00	89.25	182.37	3,671.97	-3,300.03	-1,891.55	0.75	1,891.53
4,999.00	89.52	182.45	3,672.30	-3,299.70	-1,921.52	-0.51	1,921.49
5,030.00	88.37	181.77	3,672.87	-3,299.13	-1,952.49	-1.66	1,952.46
5,061.00	87.58	180.15	3,673.96	-3,298.04	-1,983.47	-2.18	1,983.43
5,092.00	87.58	178.17	3,675.27	-3,296.73	-2,014.44	-1.72	2,014.40
5,121.00	87.93	177.52	3,676.41	-3,295.59	-2,043.39	-0.63	2,043.36
5,152.00	87.58	177.00	3,677.62	-3,294.38	-2,074.33	0.85	2,074.31
5,182.00	87.41	176.70	3,678.93	-3,293.07	-2,104.26	2.50	2,104.25
5,213.00	86.70	177.36	3,680.52	-3,291.48	-2,135.18	4.10	2,135.17
5,243.00	85.82	177.75	3,682.48	-3,289.52	-2,165.09	5.38	2,165.09
5,274.00	86.44	177.58	3,684.57	-3,287.43	-2,195.99	6.64	2,195.99
5,305.00	87.05	177.79	3,686.33	-3,285.67	-2,226.91	7.89	2,226.92
5,336.00	87.85	177.59	3,687.71	-3,284.29	-2,257.86	9.14	2,257.87
5,367.00	88.46	178.54	3,688.71	-3,283.29	-2,288.82	10.18	2,288.85
5,398.00	89.87	179.61	3,689.16	-3,282.84	-2,319.81	10.68	2,319.84
5,430.00	91.28	181.03	3,688.84	-3,283.16	-2,351.81	10.50	2,351.83
5,462.00	92.15	182.91	3,687.88	-3,284.12	-2,383.78	9.40	2,383.79
5,494.00	91.63	184.42	3,686.83	-3,285.17	-2,415.69	7.36	2,415.70
5,525.00	90.92	183.92	3,686.14	-3,285.86	-2,446.60	5.11	2,446.60
5,556.00	89.78	182.79	3,685.95	-3,286.05	-2,477.55	3.29	2,477.53
5,588.00	89.87	182.16	3,686.05	-3,285.95	-2,509.52	1.91	2,509.49
5,620.00	89.96	182.01	3,686.09	-3,285.91	-2,541.50	0.75	2,541.47
5,651.00	89.52	181.25	3,686.24	-3,285.76	-2,572.48	-0.14	2,572.45
5,683.00	90.13	180.97	3,686.33	-3,285.67	-2,604.48	-0.76	2,604.44
5,715.00	90.31	181.28	3,686.21	-3,285.79	-2,636.47	-1.38	2,636.43
5,747.00	89.52	180.24	3,686.26	-3,285.74	-2,668.47	-1.81	2,668.42
5,779.00	89.43	179.36	3,686.55	-3,285.45	-2,700.46	-1.70	2,700.42
5,810.00	89.25	179.07	3,686.91	-3,285.09	-2,731.46	-1.27	2,731.42
5,842.00	88.90	178.76	3,687.42	-3,284.58	-2,763.45	-0.67	2,763.41
5,874.00	88.72	178.16	3,688.09	-3,283.91	-2,795.43	0.19	2,795.40
5,906.00	88.90	178.93	3,688.75	-3,283.25	-2,827.41	1.01	2,827.38
5,938.00	88.02	179.55	3,689.61	-3,282.39	-2,859.40	1.43	2,859.37
5,970.00	86.88	179.53	3,691.04	-3,280.96	-2,891.37	1.69	2,891.34
6,002.00	86.44	179.54	3,692.90	-3,279.10	-2,923.31	1.95	2,923.28
6,034.00	86.26	179.00	3,694.94	-3,277.06	-2,955.24	2.35	2,955.22
6,065.00	86.00	178.46	3,697.03	-3,274.97	-2,986.16	3.04	2,986.14
6,097.00	85.65	178.35	3,699.36	-3,272.64	-3,018.07	3.93	3,018.05
6,129.00	85.56	178.56	3,701.81	-3,270.19	-3,049.96	4.79	3,049.95
6,160.00	86.17	178.65	3,704.05	-3,267.95	-3,080.87	5.54	3,080.86
6,192.00	88.02	177.91	3,705.67	-3,266.33	-3,112.81	6.50	3,112.81
6,224.00	90.31	177.54	3,706.14	-3,265.86	-3,144.78	7.77	3,144.78
6,255.00	92.68	177.37	3,705.33	-3,266.67	-3,175.74	9.15	3,175.75
6,287.00	94.00	177.15	3,703.46	-3,268.54	-3,207.65	10.67	3,207.66
6,319.00	93.65	176.81	3,701.33	-3,270.67	-3,239.53	12.35	3,239.55
6,351.00	93.03	176.58	3,699.46	-3,272.54	-3,271.42	14.20	3,271.45

Company: Energen Resources
Project: Rio Arriba County, NM
Site: Carracas
Well: Carracas 36A #13
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well Carracas 36A #13
TVD Reference: WELL @ 6972.00ft (Original Well Elev)
MD Reference: WELL @ 6972.00ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: 1 Landmark Network DB

Survey								
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	
6,383.00	92.77	176.14	3,697.85	-3,274.15	-3,303.32	16.23	3,303.36	
6,415.00	92.51	176.12	3,696.37	-3,275.63	-3,335.21	18.38	3,335.26	
6,481.00	92.51	176.12	3,693.48	-3,278.52	-3,401.00	22.84	3,401.07	

Checked By: _____ Approved By: _____ Date: _____