

As Drilled

RCVD OCT 4 '07
OIL CONS. DIV.
DIST. 3

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

API Number 30-039-24442		Pool Code 71629	Pool Name Basin Fruitland Coal
Property Code	Property Name Carracas 30 B		Well Number #8
OGRID No. 162928	Operator Name Energen Resources Corporation		Elevation 7205'

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
H	30	32N	4W		2240	North	620	East	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
G	30	32N	4W		1672	North	2614	East	Rio Arriba

Dedicated Acres 310.45 N/2	Joint or Infill	Consolidation Code	Order No.
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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.

5280.00'

2640.00'	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 <i>[Signature]</i> 10/3/2007 Signature Date Nathan Smith Printed Name
	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 September 21, 1988 Date of Survey Signature and Seal of Professional Surveyor Original surface hole location survey recorded and conducted by Edgar L. Risenhover 5979 Certificate Number

Start Latent incut: 2/99/N 883/E
Mc 4075 FV 2 3982



30-039-24442

Energen Resources

Carson Nat'l Forest-S30, T30N, R4W (Carra 30 B #8)

Carracas Mesa

Carracas 30 B #8

Carracas 30 B #8 ST

Survey: EOW Survey ST#1

End of Well Survey

20 September, 2007

RCVD OCT 24 2007

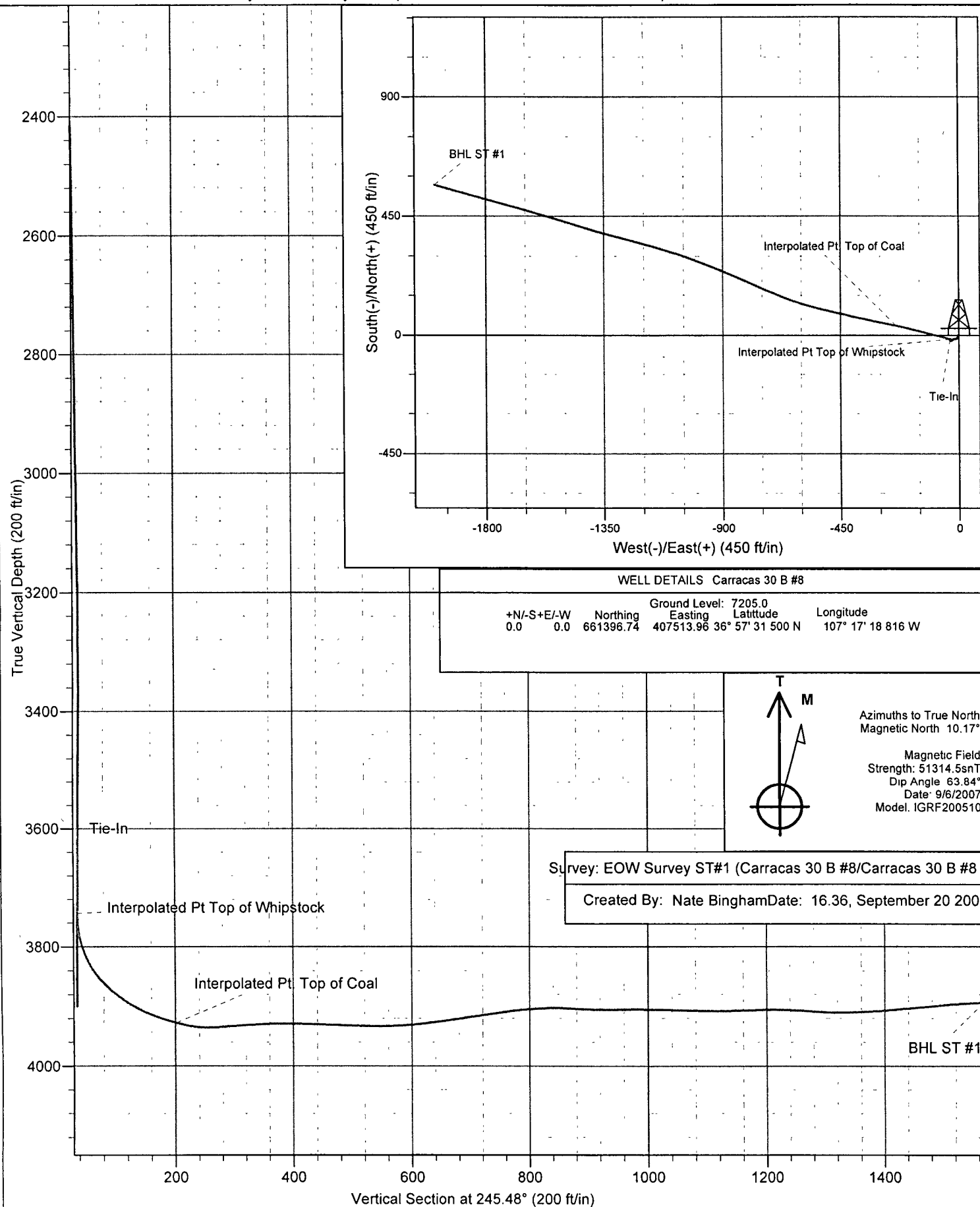
OIL CONS DIV

DIST 3

PATHFINDER
ENERGY SERVICES

ca

Survey: EOW Survey ST#1 (Carracas 30 B #8/Carracas 30 B #8 ST)





Pathfinder Energy Services
End of Well Survey



Company: Energen Resources
Project: Carson Nat'l Forest-S30, T30N, R4W (Carra 30 B
Site: Carracas Mesa
Well: Carracas 30 B #8
Wellbore: Carracas 30 B #8 ST
Design: Carracas 30 B #8 ST

Local Co-ordinate Reference: Well Carracas 30 B #8
TVD Reference: WELL @ 7218 0ft (AWS #580)
MD Reference: WELL @ 7218 0ft (AWS #580)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003 16 Single User Db

Project: Carson Nat'l Forest-S30, T30N, R4W (Carra 30 B #8)

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Central Zone

System Datum: Mean Sea Level

Site: Carracas Mesa

Site Position: Northing: 661,396.74 m Latitude: 36° 57' 31.500 N
From: Lat/Long Easting: 407,513.96 m Longitude: 107° 17' 18.816 W
Position Uncertainty: 0.0 ft Slot Radius: in Grid Convergence: -0.62 °

Well: Carracas 30 B #8

Well Position: +N/-S 0.0 ft Northing: 661,396.74 m Latitude: 36° 57' 31.500 N
+E/-W 0.0 ft Easting: 407,513.96 m Longitude: 107° 17' 18.816 W
Position Uncertainty: 0.0 ft Wellhead Elevation: 7,218.0 ft Ground Level: 7,205.0 ft

Wellbore: Carracas 30 B #8 ST

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	9/6/2007	10.17	63.84	51,314

Design: Carracas 30 B #8 ST

Audit Notes:

Version: 1.0 Phase: ACTUAL Tie On Depth: 0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	245.48

Survey Program: Date 9/20/2007

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
200.0	3,600.1	Gyro Surveys (Carracas 30 B #8 ST)	Pathfinder	Pathfinder MWD
3,744.0	5,890.0	EOW Survey ST#1 (Carracas 30 B #8 ST)	Pathfinder	Pathfinder MWD

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
3,600.1	0.72	21.23	3,599.8	-17.0	-33.6	0.00	37.6
Tie-In							
3,744.0	0.46	29.90	3,743.7	-15.7	-33.0	0.19	36.5
Interpolated Pt Top of Whipstock							
3,823.0	30.62	286.42	3,819.0	-9.6	-52.6	38.90	51.8
3,855.0	42.18	282.66	3,844.7	-4.9	-70.9	36.78	66.6
3,886.0	53.01	283.19	3,865.6	0.2	-93.2	34.96	84.7
3,918.0	59.43	284.73	3,883.3	6.6	-119.0	20.46	105.5
3,949.0	65.11	285.04	3,897.8	13.7	-145.5	18.34	126.7
3,981.0	70.96	284.82	3,909.7	21.3	-174.2	18.29	149.6
4,012.0	74.99	282.88	3,918.8	28.4	-202.9	14.31	172.8



Pathfinder Energy Services
End of Well Survey



Company: Energen Resources
Project: Carson Nat'l Forest-S30, T30N, R4W (Carra 30 B
Site: Carracas Mesa
Well: Carracas 30 B #8
Wellbore: Carracas 30 B #8 ST
Design: Carracas 30 B #8 ST

Local Co-ordinate Reference: Well Carracas 30 B #8
TVD Reference: WELL @ 7218.0ft (AWS #580)
MD Reference: WELL @ 7218.0ft (AWS #580)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
4,044.0	77.76	282.16	3,926.3	35.2	-233.3	8.93	197.7
4,050.0	78.34	281.89	3,927.6	36.4	-239.0	10.70	202.4
Interpolated Pt. Top of Coal							
4,075.0	80.78	280.76	3,932.1	41.2	-263.1	10.70	222.3
4,107.0	87.70	281.41	3,935.3	47.3	-294.4	21.72	248.2
4,137.0	94.20	281.55	3,934.8	53.3	-323.8	21.67	272.4
4,168.0	92.77	282.36	3,932.9	59.7	-354.0	5.30	297.3
4,199.0	93.21	282.53	3,931.3	66.4	-384.3	1.52	322.0
4,230.0	92.33	283.31	3,929.8	73.3	-414.4	3.79	346.6
4,261.0	90.57	282.71	3,929.0	80.3	-444.6	6.00	371.2
4,292.0	89.43	282.82	3,929.0	87.1	-474.9	3.69	395.9
4,324.0	88.72	282.73	3,929.6	94.2	-506.1	2.24	421.3
4,354.0	88.55	283.99	3,930.3	101.1	-535.2	4.24	445.0
4,386.0	88.64	285.61	3,931.1	109.3	-566.2	5.07	469.7
4,417.0	88.29	287.21	3,931.9	118.0	-595.9	5.28	493.2
4,448.0	88.90	288.63	3,932.6	127.6	-625.4	4.98	516.0
4,480.0	89.78	290.24	3,933.0	138.2	-655.6	5.73	539.1
4,511.0	91.63	292.07	3,932.6	149.4	-684.5	8.39	560.7
4,542.0	91.54	292.95	3,931.8	161.3	-713.1	2.85	581.8
4,574.0	93.12	293.57	3,930.5	173.9	-742.5	5.30	603.3
4,605.0	94.18	293.62	3,928.5	186.3	-770.8	3.42	624.0
4,637.0	95.23	293.89	3,925.9	199.1	-800.0	3.39	645.2
4,668.0	95.85	293.77	3,922.9	211.6	-828.2	2.04	665.7
4,700.0	96.29	293.53	3,919.5	224.4	-857.4	1.56	686.9
4,731.0	95.85	292.86	3,916.2	236.5	-885.7	2.58	707.7
4,763.0	94.97	292.05	3,913.2	248.7	-915.2	3.73	729.4
4,794.0	95.50	291.72	3,910.4	260.2	-943.8	2.01	750.7
4,826.0	94.97	290.94	3,907.5	271.8	-973.5	2.94	772.9
4,857.0	93.74	290.46	3,905.1	282.7	-1,002.4	4.26	794.6
4,889.0	92.77	289.83	3,903.3	293.7	-1,032.4	3.61	817.4
4,920.0	90.84	288.73	3,902.3	303.9	-1,061.6	7.17	839.7
4,952.0	87.05	287.20	3,902.9	313.8	-1,092.1	12.77	863.3
4,983.0	87.67	286.99	3,904.3	322.9	-1,121.7	2.11	886.5
5,015.0	89.34	286.86	3,905.2	332.2	-1,152.3	5.23	910.4
5,047.0	90.40	285.40	3,905.2	341.1	-1,183.0	5.64	934.7
5,078.0	90.57	284.73	3,905.0	349.2	-1,212.9	2.23	958.6
5,110.0	90.13	284.69	3,904.8	357.3	-1,243.9	1.38	983.4
5,141.0	88.81	284.61	3,905.1	365.1	-1,273.9	4.27	1,007.4
5,173.0	88.37	284.93	3,905.9	373.3	-1,304.8	1.70	1,032.2
5,204.0	88.55	285.02	3,906.7	381.3	-1,334.7	0.65	1,056.1
5,235.0	89.43	285.33	3,907.2	389.4	-1,364.7	3.01	1,079.9
5,267.0	89.69	286.05	3,907.5	398.1	-1,395.5	2.39	1,104.4
5,299.0	90.84	286.29	3,907.3	407.0	-1,426.2	3.67	1,128.6
5,330.0	91.19	286.49	3,906.8	415.7	-1,455.9	1.30	1,152.1



Pathfinder Energy Services
End of Well Survey



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Wellbore: Carracas 30 B #8 ST
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MD Reference: WELL @ 7218.0ft (AWS #580)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003 16 Single User Db

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
5,362.0	91.71	286.87	3,906.0	424.9	-1,486.6	2.01	1,176.1
5,393.0	90.84	286.97	3,905.3	433.9	-1,516.2	2.82	1,199.4
5,425.0	88.99	287.02	3,905.3	443.3	-1,546.8	5.78	1,223.3
5,456.0	87.58	286.10	3,906.3	452.1	-1,576.5	5.43	1,246.7
5,488.0	87.23	285.20	3,907.7	460.7	-1,607.3	3.01	1,271.1
5,519.0	87.05	284.97	3,909.3	468.8	-1,637.2	0.94	1,295.0
5,550.0	89.60	285.66	3,910.2	477.0	-1,667.1	8.52	1,318.8
5,582.0	91.28	285.55	3,909.9	485.6	-1,697.9	5.26	1,343.2
5,614.0	92.51	285.21	3,908.9	494.1	-1,728.7	3.99	1,367.8
5,645.0	93.03	285.85	3,907.4	502.3	-1,758.6	2.66	1,391.5
5,675.0	93.56	285.70	3,905.6	510.5	-1,787.4	1.84	1,414.3
5,709.0	94.00	285.64	3,903.4	519.6	-1,820.1	1.31	1,440.2
5,740.0	94.35	285.22	3,901.1	527.9	-1,849.9	1.76	1,463.9
5,772.0	94.35	285.32	3,898.7	536.3	-1,880.6	0.31	1,488.4
5,803.0	94.18	284.98	3,896.4	544.4	-1,910.5	1.22	1,512.2
5,822.0	92.33	285.87	3,895.3	549.4	-1,928.8	10.80	1,526.8
5,890.0	92.33	285.87	3,892.6	568.0	-1,994.1	0.00	1,578.5

BHL ST #1

Targets

Target Name

hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (m)	Easting (m)	Latitude	Longitude
TD Lateral	0.00	0.00	3,940.0	598.2	-2,017.0	661,585.76	406,901.20	36° 57' 37.414 N	107° 17' 43.667 W
- survey misses by 60.7ft at 5890.0ft MD (3892.6 TVD, 568.0 N, -1994.1 E)									
- Point									
KOP	0.00	0.00	3,742.7	-15.7	-33.0	661,392.07	407,503.85	36° 57' 31.345 N	107° 17' 19.223 W
- survey hits target									
- Point									
Land Curve	0.00	0.00	3,940.0	44.0	-221.0	661,410.89	407,446.75	36° 57' 31.935 N	107° 17' 21.539 W
- survey misses by 19.2ft at 4037.4ft MD (3924.9 TVD, 33.8 N, -227.0 E)									
- Point									

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
3,600.1	3,599.8	-17.0	-33.6	Tie-In
3,744.0	3,743.7	-15.7	-33.0	Interpolated Pt Top of Whipstock
4,050.0	3,927.6	36.4	-239.0	Interpolated Pt. Top of Coal
5,890.0	3,892.6	568.0	-1,994.1	BHL ST #1

Checked By: _____

Approved By: _____

Date: _____