

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB NO. 1004-0137  
Expires March 31, 2007

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

RECEIVED  
JUN 19 2008  
Bureau of Land Management  
Farmington Field Office

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		7. If Unit or CA/Agreement, Name and/or No.
2. Name of Operator Energen Resources Corporation		8. Well Name and No. Carracas 35A # 16
3a. Address 2010 Afton Place, Farmington, NM 87401	3b. Phone No. (include area code) 505.325.6800	9. API Well No. 30-039-30138
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 1590' FNL, 910' FEL Sec. 35, T32N, R05W, N.M.P.M. SE/NE (H)		10. Field and Pool, or Exploratory Area Basin Fruitland Coal
		11. County or Parish, State Rio Arriba NM

## 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

RCVD JUN 24 '08  
OIL CONS. DIV.  
DIST. 3

Energen Resources would like to make the following to the Carracas 35 A #16:

-Change the SHL to 1585 fnl, 1010' fel. This footage is the original staked 35 A #6 wellpad onsite the same date as the Carracas 35 A #16. Both the 35 A #6 and 35 A #16 twin the Carracas 35 A #8. The onsite notes recorded by the Carson USFS Jicarilla Ranger District for the 35 A #6 will be used for the 35 A #16. This change is necessary for safety concerns. Currently, a pipeline now exits where the reserve pit for the 35 A #16 was located at the time of original staking.

-Change the setting depth of the 7" intermediate casing to 4350' (MD), new TD of 6162' (MD).

COA's for this change will be given for the Carracas 35 A #16 based on the onsite notes for the Carracas 35 A #6. Verbal approval was given on 6-18-08 by John Reidinger to commence with wellpad construction for the Carracas 35 A #15 based on the onsite approval notes for the Carracas 35 A #6 during a pre-construction meeting held on location.

A revised C-102, operations plan, and directional plan are attached to reflect these changes. The BHL

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Nathan Smith	Title Drilling Engineer
	Date 06/19/08

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by <i>Wayne Townsend</i>	Title Pet. Eng.	Date 6/20/08
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would enable the applicant to conduct operations thereon.	Office FFO	

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, makes it a crime for States any false, fictitious or fraudulent statements or representations as to any matter

NMOC

and willfully to make to any department or agency of the United

**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 &amp; 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

<sup>1</sup> API Number 30-039-30138		<sup>2</sup> Pool Code 71629		<sup>3</sup> Pool Name Basin Fruitland Coal	
<sup>4</sup> Property Code		<sup>5</sup> Property Name Carracas 35 A		<sup>6</sup> Well Number #16	
<sup>7</sup> OGRID No. 162928		<sup>8</sup> Operator Name Energen Resources Corporation		<sup>9</sup> Elevation 6919' GL	

<sup>10</sup> Surface Location

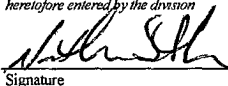
UL or lot no. H	Section 35	Township 32N	Range 5W	Lot Idn	Feet from the 1585	North/South line North	Feet from the 1010	East/West line East	County Rio Arriba
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no. O	Section 35	Township 32N	Range 5W	Lot Idn	Feet from the 760	North/South line South	Feet from the 1880	East/West line East	County Rio Arriba
<sup>12</sup> Dedicated Acres 320.00 E/2		<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> Order No.			

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.

5308.33' (M) 5289 24' (R)

16		5308.33' (M) 5289 24' (R)		17 OPERATOR CERTIFICATION	
5280.00' (R)		1585'		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 Date 6/19/2008	
5273.24' (M)		35		1010' LAT N 36 939722° LONG W 107 32611° Datum (NAD 1983)	
5280.00' (R)		1880'		18 SURVEYOR CERTIFICATION	
5280.00' (R)		1880'		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.	
				October 06, 2005 Date of Survey Signature and Seal of Professional Surveyor: Original Survey Conducted and Recorded By: David R. Russell	
5280.00' (R)		760'		10201	
5280.00' (R)		760'		Certificate Number	

**Operations Plan**  
Revised June 19, 2008

**Carracas 35 A #16**

**General Information**

Location	1585' fnl, 1010' fel at surface 760' fsl, 1880' fel at bottom swse S35, T32N, R5W Rio Arriba County, New Mexico
Elevations	6919' GL
Total Depth	6162' (MD), 3671' (TVD)
Formation Objective	Basin Fruitland Coal

**Formation Tops**

San Jose	Surface
Nacimiento	1914' (TVD), 1914' (MD)
Ojo Alamo Ss	3037' (TVD), 3072' (MD)
Kirtland Sh	3166' (TVD), 3229' (MD)
Fruitland Fm	3221' (TVD), 3301' (MD)
Top Coal	3647' (TVD), 4220' (MD)
Bottom Coal	3671' (TVD)
<b>Total Depth</b>	<b>3671' (TVD), 6162' (MD)</b>

**Drilling**

The 12 1/4" wellbore will be drilled with a fresh water mud system.

The 8 3/4" wellbore will be drilled with a low solids fresh water/polymer mud system. Weighting materials will be drill cuttings and if needed barite. Mud density is expected to range from 8.9 ppg to 9.5 ppg.

**Projected KOP is 2360' TVD with 4.41°/100' doglegs.**

The 6 1/4" wellbore will be drilled with a fresh water or brine water system depending on reservoir characteristics. Anticipated BHP can be as high as 1100 psi.

**Blowout Control Specifications:**

A 3000 psi minimum double ram or annulus BOP stack will be used following nipple up of casing head. A 2" nominal, 2000 psi minimum choke manifold will also be used. An upper Kelly Cock valve handle and drill string valve should be available to fit each drill string and be available on the rig floor during drilling operations. BOP will be tested to 250 psi for 15 min and 1500 psi for 15 min. The choke manifold will be tested to 1500 psi for 30 min.

**Logging Program:**

Open hole logs: None

Mud logs: From 3221' (TVD), 3301' (MD) to TD.

Surveys: Surface to KOP every 500' and a minimum of every 250' for directional.

## Tubulars

### Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt	Grade
Surface	0'-200'	12 1/4"	9 5/8"	32.3 ppf	H-40 ST&C
Intermediate	0'-3658' (TVD) 4350' (MD)	8 3/4"	7"	23.0 ppf	J-55 LT&C
Production	3647'-3671' (TVD) 4300'-6160' (MD)	6 1/4"	4 1/2"	11.6 ppf	J-55 LT&C
Tubing	0'-4250' (MD)		2 3/8"	4.7 ppf	J-55

### Casing Equipment:

Surface Casing: a Texas Pattern Guide Shoe on bottom. Casing centralization with standard bow spring centralizers to achieve optimal standoff, minimum of three (3).

Intermediate Casing: a self fill float shoe on the bottom of the first joint with self fill insert float collar on top of the first joint and casing centralization with double bow spring centralizers to optimize standoff. Two turbolating centralizers at the base of the Ojo Alamo are recommended.

Liner: Bull nose guide shoe on bottom of first joint, H-Latch liner drop off tool on top of last joint.

## Wellhead

3000 psi 11" x 9 5/8" slip/weld on casing head. 9 5/8" x 7"x 2 3/8" 3000 psi Flanged Wellhead .

## Cementing

Surface Casing: 125 sks Std (class B) with 2.0 % CaCl<sub>2</sub> and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft<sup>3</sup>/sk 148 ft<sup>3</sup> of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 750 psi for 30 min. Test BOP as outlined in drilling section above.

Intermediate Casing: Before cementing, circulate hole at least 1 1/2 hole volumes of mud and reduce funnel viscosity to minimum to aide in hole cleanout. Depending on wellbore conditions, cement may consist of 600 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl<sub>2</sub>, 10 #/sk Gilsonite, and 1/2 #/sk Flocele (12.3 ppg, 1.93 ft<sup>3</sup>/sk) and a tail of 150 sks Sks Glass G with 1/4 #/sk Flocele (15.6 ppg, 1.18 ft<sup>3</sup>/sk). (1335 ft<sup>3</sup> of slurry, to circulate to surface). WOC 12 hours. Test casing to 1200 psi for 30 min. Test BOP as outlined in drilling section above.

## Other Information

- 1) This well will be an open hole completion lined with an uncemented pre-drilled liner.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. The intermediate string may need to be cemented in multiple stages with a slurry design deviated from that listed above.
- 3) If high reservoir pressures or water flows are encountered slurry design may need to be deviated to from those listed above to satisfy wellbore and formation conditions.
- 4) No abnormal temperatures or pressures are anticipated. This gas is dedicated.

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# **Energen Resources**

**Carson National Forest; S35, T32N, R5W**

**Middle Mesa**

**Carracas 35 A #16**

**Final Plan - Revised**

**Plan: Plan #1**

## **Planned Wellpath**

**19 June, 2008**

**Project: Carson National Forest; S35, T32N, R5W**  
**Site: Middle Mesa**  
**Well: Carracas 35 A #16**  
**Wellbore: Final Plan - Revised**  
**Plan: Plan #1 (Carracas 35 A #16/Final Plan - Revised)**

**PROJECT DETAILS: Carson National Forest; S35, T32N, R5W**

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Western Zone

System Datum: Mean Sea Level

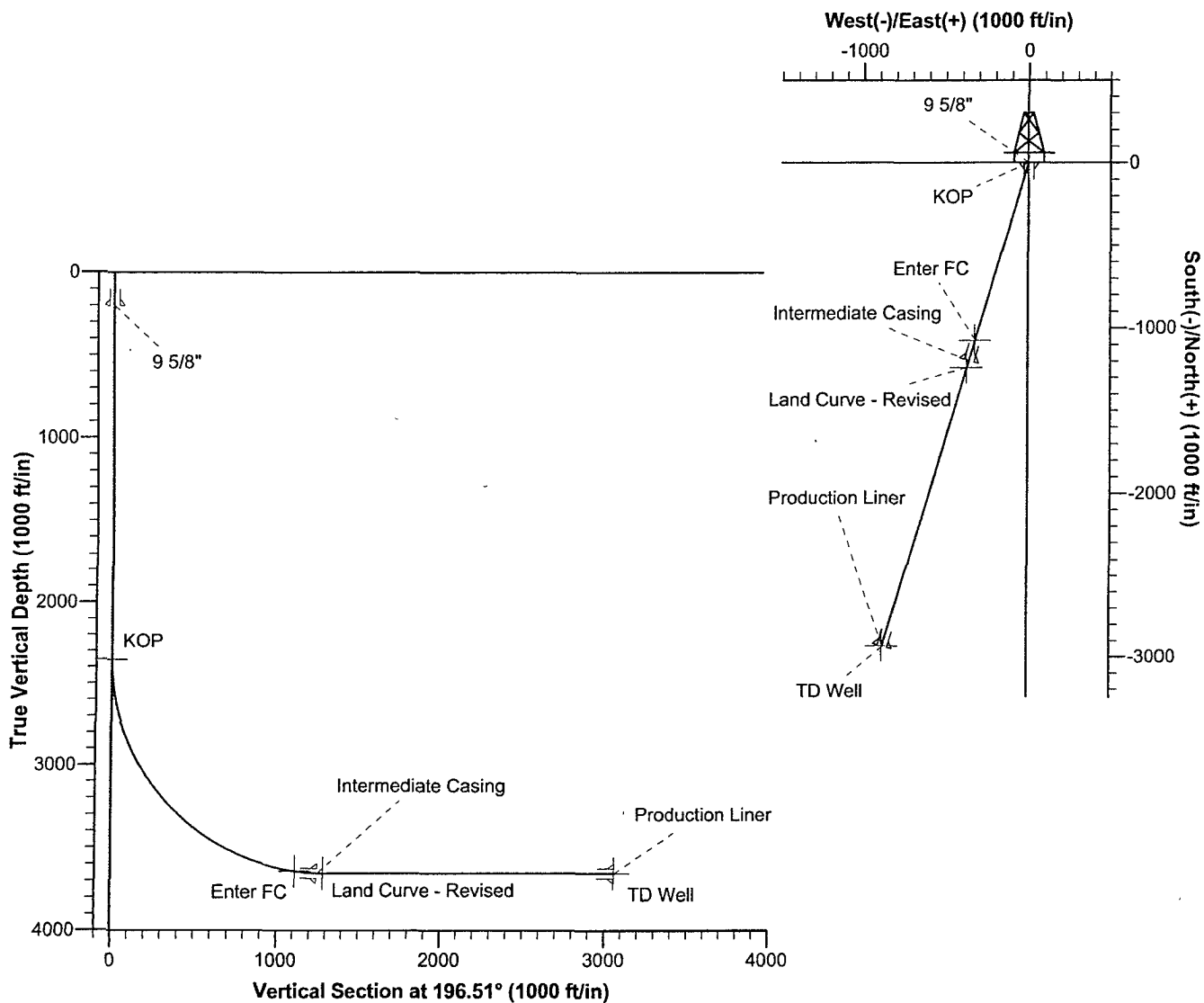


Azimuths to True North  
 Magnetic North: 10.08°

Magnetic Field  
 Strength: 51225.3snT  
 Dip Angle: 63.80°  
 Date: 6/19/2008  
 Model: IGRF200510

**SECTION DETAILS**

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2360.0	0.00	0.00	2360.0	0.0	0.0	0.00	0.00	0.0	KOP
3	4220.0	82.00	196.51	3647.0	-1072.6	-317.9	4.41	196.51	1118.7	Enter FC
4	4392.2	90.01	196.52	3659.0	-1237.2	-366.7	4.65	0.07	1290.4	Land Curve - Revised
5	6162.2	89.99	196.50	3659.0	-2934.2	-869.7	0.00	-125.44	3060.4	TD Well



# Energen

## Planned Wellpath

**Company:** Energen Resources  
**Project:** Carson National Forest; S35, T32N, R5W  
**Site:** Middle Mesa  
**Well:** Carracas 35 A #16  
**Wellbore:** Final Plan - Revised  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Carracas 35 A #16  
**TVD Reference:** KB @ 6934.0ft (L&W #1)  
**MD Reference:** KB @ 6934.0ft (L&W #1)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Single User Db

**Project** Carson National Forest; S35, T32N, R5W

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

**System Datum:** Mean Sea Level

**Site** Middle Mesa

<b>Site Position:</b>		<b>Northing:</b>	658,912.48 m	<b>Latitude:</b>	36° 56' 23.000 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	875,180.71 m	<b>Longitude:</b>	107° 19' 34.000 W
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b>	0.30 °

**Well** Carracas 35 A #16

<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	658,912.48 m	<b>Latitude:</b>	36° 56' 23.000 N
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	875,180.71 m	<b>Longitude:</b>	107° 19' 34.000 W
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	6,919.0 ft	<b>Ground Level:</b>	6,919.0 ft

**Wellbore** Final Plan - Revised

<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	6/19/2008	10.08	63.80	51,225

**Design** Plan #1

**Audit Notes:**

<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	196.51

**Survey Tool Program** Date 6/19/2008

<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	6,162.2	Plan #1 (Final Plan - Revised)	MWD	MWD - Standard

**Planned Survey**

MD (ft)	TVD (ft)	Inc (°)	Azi (°)	Build (°/100ft)	V. Sec (ft)	N/S (ft)	E/W (ft)
0.0	0.0	0.00	0.00	0.00	0.0	0.0	0.0
100.0	100.0	0.00	0.00	0.00	0.0	0.0	0.0
200.0	200.0	0.00	0.00	0.00	0.0	0.0	0.0
300.0	300.0	0.00	0.00	0.00	0.0	0.0	0.0
400.0	400.0	0.00	0.00	0.00	0.0	0.0	0.0
500.0	500.0	0.00	0.00	0.00	0.0	0.0	0.0
600.0	600.0	0.00	0.00	0.00	0.0	0.0	0.0
700.0	700.0	0.00	0.00	0.00	0.0	0.0	0.0
800.0	800.0	0.00	0.00	0.00	0.0	0.0	0.0
900.0	900.0	0.00	0.00	0.00	0.0	0.0	0.0
1,000.0	1,000.0	0.00	0.00	0.00	0.0	0.0	0.0
1,100.0	1,100.0	0.00	0.00	0.00	0.0	0.0	0.0

# Energen

## Planned Wellpath

**Company:** Energen Resources  
**Project:** Carson National Forest; S35, T32N, R5W  
**Site:** Middle Mesa  
**Well:** Carracas 35 A #16  
**Wellbore:** Final Plan - Revised  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Carracas 35 A #16  
**TVD Reference:** KB @ 6934.0ft (L&W #1)  
**MD Reference:** KB @ 6934.0ft (L&W #1)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Single User Db

### Planned Survey

MD (ft)	TVD (ft)	Inc (°)	Azi (°)	Build (°/100ft)	V. Sec (ft)	N/S (ft)	E/W (ft)
1,200.0	1,200.0	0.00	0.00	0.00	0.0	0.0	0.0
1,300.0	1,300.0	0.00	0.00	0.00	0.0	0.0	0.0
1,400.0	1,400.0	0.00	0.00	0.00	0.0	0.0	0.0
1,500.0	1,500.0	0.00	0.00	0.00	0.0	0.0	0.0
1,600.0	1,600.0	0.00	0.00	0.00	0.0	0.0	0.0
1,700.0	1,700.0	0.00	0.00	0.00	0.0	0.0	0.0
1,800.0	1,800.0	0.00	0.00	0.00	0.0	0.0	0.0
1,900.0	1,900.0	0.00	0.00	0.00	0.0	0.0	0.0
2,000.0	2,000.0	0.00	0.00	0.00	0.0	0.0	0.0
2,100.0	2,100.0	0.00	0.00	0.00	0.0	0.0	0.0
2,200.0	2,200.0	0.00	0.00	0.00	0.0	0.0	0.0
2,300.0	2,300.0	0.00	0.00	0.00	0.0	0.0	0.0
2,360.0	2,360.0	0.00	0.00	0.00	0.0	0.0	0.0
<b>KOP</b>							
2,400.0	2,400.0	1.76	196.51	4.41	0.6	-0.6	-0.2
2,500.0	2,499.7	6.17	196.51	4.41	7.5	-7.2	-2.1
2,600.0	2,598.6	10.58	196.51	4.41	22.1	-21.2	-6.3
2,700.0	2,696.1	14.99	196.51	4.41	44.2	-42.4	-12.6
2,800.0	2,791.6	19.40	196.51	4.41	73.8	-70.7	-21.0
2,900.0	2,884.6	23.81	196.51	4.41	110.6	-106.0	-31.4
3,000.0	2,974.4	28.21	196.51	4.41	154.4	-148.1	-43.9
3,100.0	3,060.7	32.62	196.51	4.41	205.0	-196.6	-58.3
3,200.0	3,142.7	37.03	196.51	4.41	262.1	-251.3	-74.5
3,300.0	3,220.2	41.44	196.51	4.41	325.4	-312.0	-92.5
3,400.0	3,292.5	45.85	196.51	4.41	394.4	-378.1	-112.1
3,500.0	3,359.3	50.26	196.51	4.41	468.7	-449.4	-133.2
3,600.0	3,420.3	54.67	196.51	4.41	548.0	-525.4	-155.7
3,700.0	3,474.9	59.07	196.51	4.41	631.7	-605.7	-179.5
3,800.0	3,522.9	63.48	196.51	4.41	719.4	-689.7	-204.4
3,900.0	3,564.1	67.89	196.51	4.41	810.5	-777.1	-230.3
4,000.0	3,598.1	72.30	196.51	4.41	904.5	-867.2	-257.0
4,100.0	3,624.8	76.71	196.51	4.41	1,000.9	-959.6	-284.4
4,200.0	3,644.1	81.12	196.51	4.41	1,099.0	-1,053.7	-312.3
4,220.0	3,647.0	82.00	196.51	4.41	1,118.7	-1,072.6	-317.9
<b>Enter FC</b>							
4,300.0	3,655.6	85.72	196.51	4.65	1,198.3	-1,148.9	-340.5
4,392.2	3,659.0	90.01	196.52	4.65	1,290.4	-1,237.2	-366.7
<b>Land Curve - Revised</b>							
4,400.0	3,659.0	90.01	196.52	0.00	1,298.2	-1,244.7	-368.9
4,500.0	3,659.0	90.01	196.52	0.00	1,398.2	-1,340.5	-397.3
4,600.0	3,659.0	90.00	196.52	0.00	1,498.2	-1,436.4	-425.8
4,700.0	3,659.0	90.00	196.52	0.00	1,598.2	-1,532.3	-454.2
4,800.0	3,659.0	90.00	196.51	0.00	1,698.2	-1,628.2	-482.6
4,900.0	3,659.0	90.00	196.51	0.00	1,798.2	-1,724.0	-511.1
5,000.0	3,659.0	90.00	196.51	0.00	1,898.2	-1,819.9	-539.5



# Energen

## Planned Wellpath

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**Database:** EDM 2003.16 Single User Db

### Planned Survey

MD (ft)	TVD (ft)	Inc (°)	Azi (°)	Build (°/100ft)	V. Sec (ft)	N/S (ft)	E/W (ft)
5,100.0	3,659.0	90.00	196.51	0.00	1,998.2	-1,915.8	-567.9
5,200.0	3,659.0	90.00	196.51	0.00	2,098.2	-2,011.7	-596.3
5,300.0	3,659.0	90.00	196.51	0.00	2,198.2	-2,107.5	-624.7
5,400.0	3,659.0	90.00	196.51	0.00	2,298.2	-2,203.4	-653.2
5,500.0	3,659.0	90.00	196.51	0.00	2,398.2	-2,299.3	-681.6
5,600.0	3,659.0	90.00	196.51	0.00	2,498.2	-2,395.2	-710.0
5,700.0	3,659.0	90.00	196.51	0.00	2,598.2	-2,491.1	-738.4
5,800.0	3,659.0	90.00	196.51	0.00	2,698.2	-2,586.9	-766.8
5,900.0	3,659.0	90.00	196.50	0.00	2,798.2	-2,682.8	-795.2
6,000.0	3,659.0	89.99	196.50	0.00	2,898.2	-2,778.7	-823.6
6,100.0	3,659.0	89.99	196.50	0.00	2,998.2	-2,874.6	-852.0
6,162.2	3,659.0	89.99	196.50	0.00	3,060.4	-2,934.2	-869.7
TD Well							

### 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 Well - plan hits target - Point	0.00	0.00	3,659.0	-2,934.2	-869.7	658,016.74	874,920.39	36° 55' 53.986 N	107° 19' 44.712 W
KOP - plan hits target - Point	0.00	0.00	2,360.0	0.0	0.0	658,912.48	875,180.71	36° 56' 23.000 N	107° 19' 34.000 W
Enter FC - plan hits target - Point	0.00	0.00	3,647.0	-1,072.6	-317.9	658,585.04	875,085.56	36° 56' 12.394 N	107° 19' 37.916 W
Land Curve - Revised - plan hits target - Point	0.00	0.00	3,659.0	-1,237.2	-366.7	658,534.80	875,070.95	36° 56' 10.766 N	107° 19' 38.517 W

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
200.0	200.0	9 5/8"	9.625	12.250
4,350.0	3,658.3	Intermediate Casing	7.000	8.750
6,160.0	3,659.0	Production Liner	4.500	6.250

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_