

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

5. Lease Serial No.

NM-29760 NM 30586

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

Carracas 13A #3

9. API Well No.

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

- ☒ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

- | | | | |
|--|---|--|---|
| ☐ Acidize | ☐ Deepen | ☐ Production (Start/Resume) | ☐ Water Shut-Off |
| ☐ Alter Casing | ☐ Fracture Treat | ☐ Reclamation | ☐ Well Integrity |
| ☐ Casing Repair | ☐ New Construction | ☐ Recomplete | ☐ Other _____ |
| ☒ Change Plans | ☐ Plug and Abandon | ☐ Temporarily Abandon | |
| ☐ Convert to Injection | ☐ Plug Back | ☐ 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.)

Energen Resources would like to change the Carracas 13A #3 from a vertical drill and cavitaion well to a horizontal drill and open hole completion well with the following information:

- *Change the 7" casing setting depth to 5250' (MD), 4084' (TVD).
- *Change the setting depth of the liner to 6023' (MD), 4084' (TVD).
- *Change the production liner to a 4 1/2" 11.6 ppf pre-drilled liner.
- *Cement the 7" casing with 750 sks (1470 cuft) lead and 125 sks (155 cuft) tail.

Changes are noted on the attached revised C-102, Operations Plan, and Directional Planning Report.

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Nathan Smith

Title

Drilling Engineer

Date 6/14/06

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

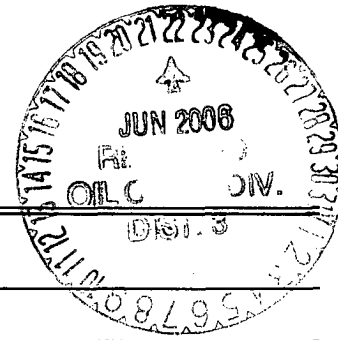
Date

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 entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NMOC



District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer 00, Artesia, NM 88211-0719

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number	*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code	*Property Name CARRACAS	*Well Number 13A-3
*OGRID No. 162928	*Operator Name ENERGEN RESOURCES CORPORATION	*Elevation 7426'

¹⁰ Surface Location

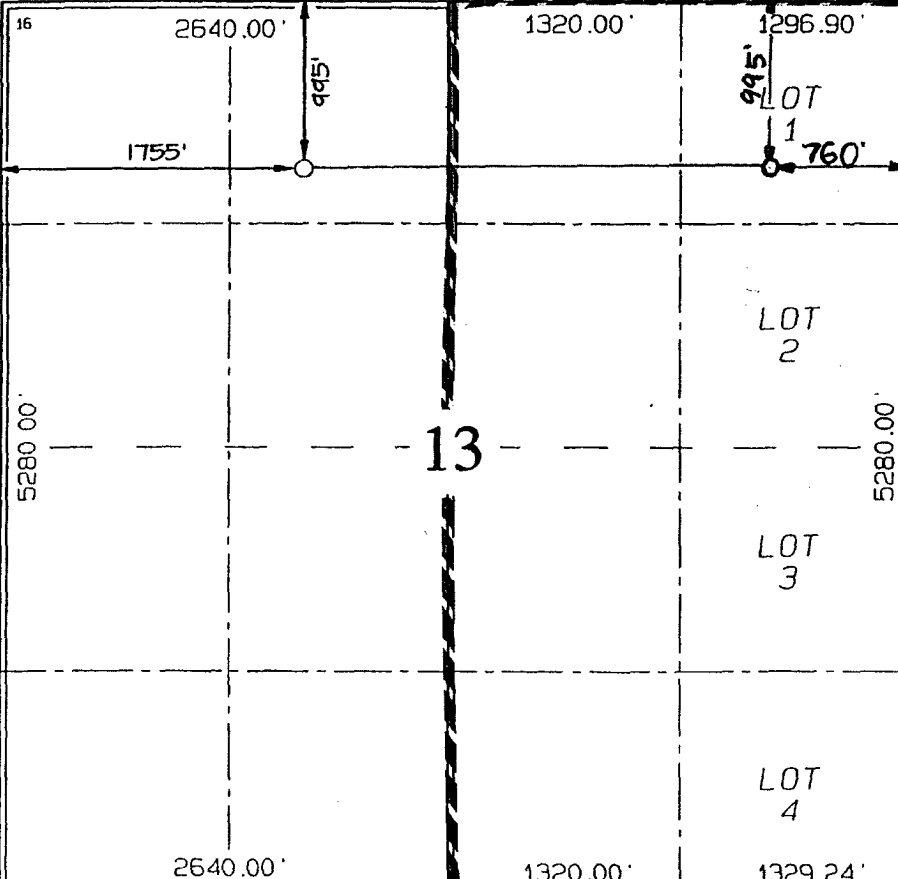
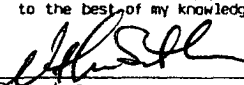
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	13	32N	5W		995	NORTH	1755	WEST	RIO ARriba

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
A	13	32N	5W		995	NORTH	760	EAST	RIO ARriba

¹² Dedicated Acres 320.0 Acres - (E/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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

	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature Nathan Smith Printed Name Drilling Engineer Title 6/14/06 Date
	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. Date of Survey: AUGUST 18, 2004 Signature and Seal of Professional Surveyor  JASON C. EDWARDS Certificate Number 15269

Operations Plan

Revised June 14, 2006

Carracas # 13A-3

General Information

Location	0995' fnl, 1755' fwl at surface 0995' fnl, 760' fel at bottom S13, T32N, R5W Rio Arriba County, New Mexico
Elevations	7426' GL
Total Depth	6023' (MD), 4084' (TVD)
Formation Objective	Basin Fruitland Coal

Formation Tops

San Jose	Surface
Nacimiento	1968'
Ojo Alamo Ss	3398' (TVD), 3500' (MD)
Kirtland Sh	3538' (TVD), 3690' (MD)
Fruitland Fm	3948" (TVD, 4410' (MD)
Top Coal	4068' (TVD), 4900' (MD)
Bottom Coal	4088' (TVD), 5110' (MD)
Pictured Cliffs Ss	4138'
Total Depth	4184' (TVD), 6023' (MD)

Drilling

The 12 ¼" wellbore will be drilled with a fresh water mud system.

The 8 ¾" 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. Kick off point is expected to be at 2213' (TVD) and a build of 3°/100'.

The 6 ¼" wellbore will be drilled with a produced water and polymer starch system.

Blowout Control Specifications:

An 11" 2000 psi minimum double gate BOP stack (figure 1) will be used following nipple up of casing head. During air drilling operations, a Shaffer Type 50 or equivalent rotating head will be installed on top of stack. A 2" nominal, 2000 psi minimum choke manifold will also be used. An upper Kelly Cock valve handle available and drill string valve to fit each drill string will be available on the rig floor during drilling operations.

Logging Program:

Open hole logs: None

Mud logs: From 4000' (TVD), 4420' (MD) to Intermediate TD and Production TD

Surveys: Surface to KOP every 500'. From KOP to TD every 200' or as directional drilling requires.

Tubulars

Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt	Grade
Surface	0'-300'	12 1/4"	9 5/8"	32.3 ppf	H-40 ST&C
Intermediate	0'-5250' (MD) 0-4084' (TVD)	8 3/4"	7"	23.0 ppf	J-55 ST&C
Production	5230'-6023' (MD) 4068'-4084' (TVD)	6 1/4"	5 1/2"	15.5 ppf	J-55 LT&C
Tubing	0'-4078'		2 3/8"	4.7 ppf	J-55

Casing Equipment:

Surface Casing: Depending on wellbore conditions, a Texas Pattern Guide Shoe on bottom. Casing centralization with standard bow spring centralizers to achieve optimal standoff.

Intermediate Casing: Depending on wellbore conditions, a Cement nose guide shoe with self fill insert float collar on top of bottom joint and casing centralization with standard bow spring and rigid 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.

3000 psi 9 5/8" x 7"x 2 3/8" Flanged Wellhead .

Cementing

Surface Casing: 175 sks Std (class B) with 2.0 % CaCl₂ and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk 206 ft³ of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 1000 psi for 30 min.

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 750 sks 65/35 Std (class B) with 6.0 % Bentonite, 2.0 % CaCl₂, 10 #/sk Gilsonite, and 1/2 #/sk Flocele (12.3 ppg, 1.96 ft³/sk) and a tail of 125 sks Std (class B) with 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk). (1625 ft³ of slurry, 100 % excess to circulate to surface).

Liner: Open hole with pre-drilled liner, no cement.

Other Information

- 1) This well will be an open hole completion with an non-cemented, 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. Anticipated BHP is 1150 psi
- 5) This gas is dedicated.

Energen Resources Corporation

Field: Carracas Canyon

Site: Carracas 13A-3

Well: Carracas 13A-3

Wellpath: Original Hole

Plan: Plan #1 6-13-06

COMPANY DETAILS
 Energen Resources Corporation
 2198 Bloomfield Hwy
 Farmington, NM 87401

Calculation Method: Minimum Curvature
Error System: Six Sigma Elliptical
Scan Method: Closest Approach 3D
Error Surface: Elliptical Conic
Warning Method: Error Ratio

SITE DETAILS
 Carracas 13A-3
 S-13, T-32N, R-5W

Ground Level: 7426.00
Positional Uncertainty: 0.00
Convergence: 0.41

ANNOTATIONS

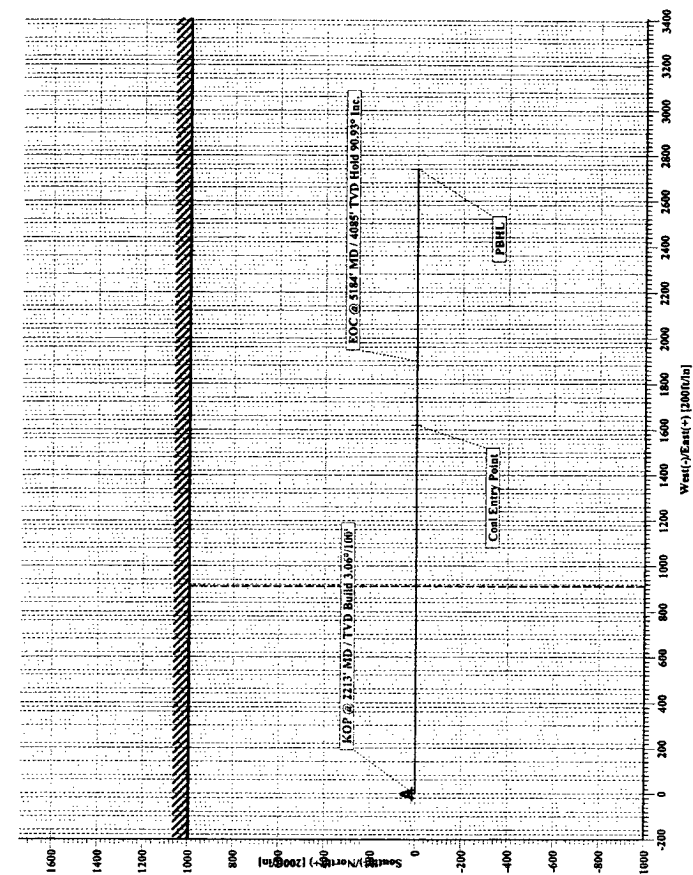
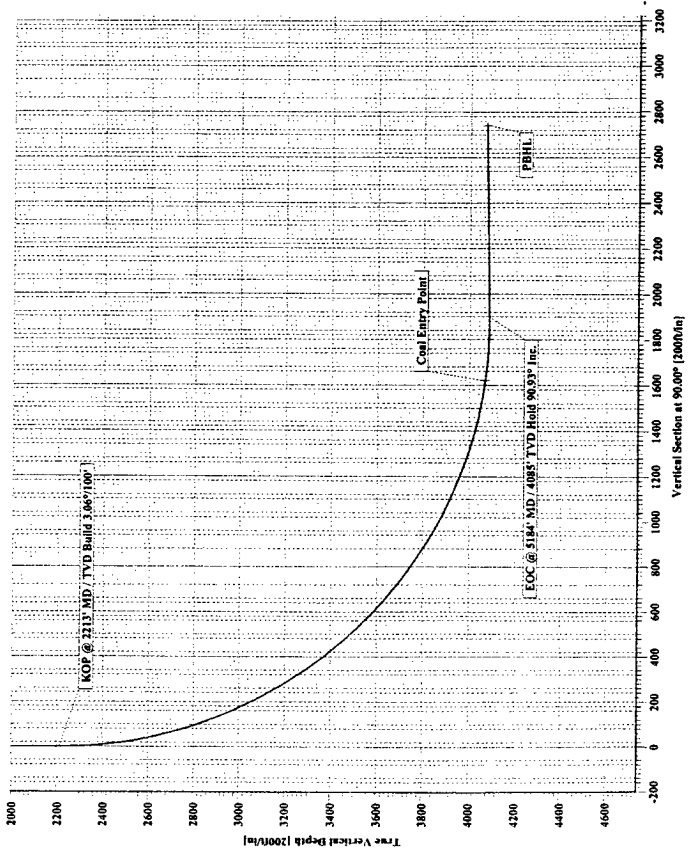
No.	TVD	MD	Annotation
1	2212.50	2212.50	KOP @ 2213' MD / TVD Build 3.06°/100'
2	4084.66	5184.17	EOC @ 5184' MD / 4085' TVD Hold 90.93° Inc.

WELLPATH DETAILS

Original Hole			
Rig:	SITE	7426.00R	
Ref. Datum:			
V. Section Angle	Origin +N-S	Origin +E-W	Starting From TVD
90.00°	0.00	0.00	0.00

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	2212.50	0.00	0.00	2212.50	0.00	0.00	0.00	0.00	0.00	
3	5184.17	90.93	90.00	4084.66	0.00	1902.90	3.06	90.00	1902.90	
4	6023.28	90.93	90.00	4071.00	0.00	2741.90	0.00	0.00	2741.90	PBHL



Azimuths to Grid North
 True North: -0.41°
 Magnetic North: 9.85°

Magnetic Field
 Strength: 51324nT
 Dip Angle: 63.92°
 Date: 6/13/2006
 Model: Igr2005

Pathfinder Energy Planning Report

Company: Energen Resources Corporation				Date: 6/13/2006		Time: 16:30:33		Page: 1		
Field: Carracas Canyon				Co-ordinate(NE) Reference: Well: Carracas 13A-3, Grid North						
Site: Carracas 13A-3				Vertical (TVD) Reference: SITE 7426.0						
Well: Carracas 13A-3				Section (VS) Reference: Well (0.00N,0.00E,90.00Azi)						
Wellpath: Original Hole				Plan:		Plan #1 6-13-06				
Field: Carracas Canyon Rio Arriba County, NM										
Map System: US State Plane Coordinate System 1927					Map Zone: New Mexico, Western Zone					
Geo Datum: NAD27 (Clarke 1866)					Coordinate System: Well Centre					
Sys Datum: Mean Sea Level					Geomagnetic Model: igrf2005					
Site: Carracas 13A-3 S-13, T-32N, R-5W										
Site Position:		Northing:		ft		Latitude:				
From: Lease Line		Easting:		ft		Longitude:				
Position Uncertainty: 0.00 ft						North Reference:		Grid		
Ground Level: 7426.00 ft						Grid Convergence:		0.41 deg		
Well: Carracas 13A-3										
Slot Name:										
Well Position: +N/-S 0.00 ft		Northing: 2178425.42 ft		Latitude: 36 59 5.000 N						
+E/-W 0.00 ft		Easting : 699828.38 ft		Longitude: 107 8 57.000 W						
Position Uncertainty: 0.00 ft										
Wellpath: Original Hole										
Current Datum: SITE		Height 7426.00 ft		Drilled From: Surface						
Magnetic Data: 6/13/2006				Tie-on Depth: 0.00 ft						
Field Strength: 51524 nT				Above System Datum: Mean Sea Level						
Vertical Section: Depth From (TVD)		+N/-S		Declination: 10.27 deg						
ft		ft		Mag Dip Angle: 63.92 deg						
		+E/-W		Direction						
		ft		deg						
0.00		0.00		0.00		90.00				
Plan: Plan #1 6-13-06										
Date Composed: 6/13/2006										
Version: 1										
Principal: Yes										
Tied-to: From Surface										
Plan Section Information										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2212.50	0.00	0.00	2212.50	0.00	0.00	0.00	0.00	0.00	0.00	
5184.17	90.93	90.00	4084.66	0.00	1902.90	3.06	3.06	3.03	90.00	
6023.28	90.93	90.00	4071.00	0.00	2741.90	0.00	0.00	0.00	0.00	PBHL
Survey										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00			

Pathfinder Energy

Planning Report

Company: Energen Resources Corporation
Field: Carracas Canyon
Site: Carracas 13A-3
Well: Carracas 13A-3
Wellpath: Original Hole

Date: 6/13/2006 **Time:** 16:30:33 **Page:** 2
Co-ordinate(NE) Reference: Well: Carracas 13A-3, Grid North
Vertical (TVD) Reference: SITE 7426.0
Section (VS) Reference: Well (0.00N,0.00E,90.00Azi)
Plan: Plan #1 6-13-06

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	0.00	0.00	
2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2212.50	0.00	0.00	2212.50	0.00	0.00	0.00	0.00	0.00	0.00	KOP @ 2213' MD / TVD Buil
2300.00	2.68	90.00	2299.97	0.00	2.04	2.04	3.06	3.06	0.00	
2400.00	5.74	90.00	2399.69	0.00	9.38	9.38	3.06	3.06	0.00	
2500.00	8.80	90.00	2498.87	0.00	22.03	22.03	3.06	3.06	0.00	
2600.00	11.86	90.00	2597.24	0.00	39.95	39.95	3.06	3.06	0.00	
2700.00	14.92	90.00	2694.51	0.00	63.10	63.10	3.06	3.06	0.00	
2800.00	17.98	90.00	2790.41	0.00	91.42	91.42	3.06	3.06	0.00	
2900.00	21.04	90.00	2884.66	0.00	124.80	124.80	3.06	3.06	0.00	
3000.00	24.10	90.00	2976.99	0.00	163.18	163.18	3.06	3.06	0.00	
3100.00	27.16	90.00	3067.14	0.00	206.42	206.42	3.06	3.06	0.00	
3200.00	30.22	90.00	3154.85	0.00	254.42	254.42	3.06	3.06	0.00	
3300.00	33.28	90.00	3239.88	0.00	307.03	307.03	3.06	3.06	0.00	
3400.00	36.34	90.00	3321.98	0.00	364.11	364.11	3.06	3.06	0.00	
3500.00	39.40	90.00	3400.91	0.00	425.48	425.48	3.06	3.06	0.00	
3600.00	42.46	90.00	3476.46	0.00	490.99	490.99	3.06	3.06	0.00	
3700.00	45.52	90.00	3548.40	0.00	560.43	560.43	3.06	3.06	0.00	
3800.00	48.58	90.00	3616.53	0.00	633.61	633.61	3.06	3.06	0.00	
3900.00	51.64	90.00	3680.66	0.00	710.33	710.33	3.06	3.06	0.00	
4000.00	54.70	90.00	3740.60	0.00	790.36	790.36	3.06	3.06	0.00	
4100.00	57.76	90.00	3796.18	0.00	873.47	873.47	3.06	3.06	0.00	
4200.00	60.82	90.00	3847.25	0.00	959.44	959.44	3.06	3.06	0.00	
4300.00	63.88	90.00	3893.65	0.00	1048.00	1048.00	3.06	3.06	0.00	
4400.00	66.94	90.00	3935.26	0.00	1138.92	1138.92	3.06	3.06	0.00	
4500.00	70.00	90.00	3971.96	0.00	1231.93	1231.93	3.06	3.06	0.00	
4600.00	73.06	90.00	4003.64	0.00	1326.77	1326.77	3.06	3.06	0.00	
4700.00	76.12	90.00	4030.22	0.00	1423.16	1423.16	3.06	3.06	0.00	
4800.00	79.18	90.00	4051.61	0.00	1520.83	1520.83	3.06	3.06	0.00	
4900.00	82.24	90.00	4067.75	0.00	1619.51	1619.51	3.06	3.06	0.00	
5000.00	85.30	90.00	4078.61	0.00	1718.91	1718.91	3.06	3.06	0.00	
5100.00	88.36	90.00	4084.14	0.00	1818.74	1818.74	3.06	3.06	0.00	
5184.17	90.93	90.00	4084.66	0.00	1902.90	1902.90	3.06	3.06	0.00	EOC @ 5184' MD / 4085' TV
5200.00	90.93	90.00	4084.41	0.00	1918.73	1918.73	0.00	0.00	0.00	
5300.00	90.93	90.00	4082.78	0.00	2018.72	2018.72	0.00	0.00	0.00	
5400.00	90.93	90.00	4081.15	0.00	2118.70	2118.70	0.00	0.00	0.00	
5500.00	90.93	90.00	4079.52	0.00	2218.69	2218.69	0.00	0.00	0.00	
5600.00	90.93	90.00	4077.89	0.00	2318.68	2318.68	0.00	0.00	0.00	
5700.00	90.93	90.00	4076.26	0.00	2418.66	2418.66	0.00	0.00	0.00	
5800.00	90.93	90.00	4074.64	0.00	2518.65	2518.65	0.00	0.00	0.00	
5900.00	90.93	90.00	4073.01	0.00	2618.64	2618.64	0.00	0.00	0.00	
6000.00	90.93	90.00	4071.38	0.00	2718.63	2718.63	0.00	0.00	0.00	
6023.28	90.93	90.00	4071.00	0.00	2741.90	2741.90	0.00	0.00	0.00	PBHL

Targets

Name	Description Dip. Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	← Latitude → Deg Min Sec			← Longitude → Deg Min Sec		
Coal Entry Point		4068.00	0.00	1621.90	2178425.42	701450.28	36	59	4.884 N	107	8	37.010 W

Pathfinder Energy

Planning Report

Company: Energen Resources Corporation
Field: Carracas Canyon
Site: Carracas 13A-3
Well: Carracas 13A-3
Wellpath: Original Hole

Date: 6/13/2006 **Time:** 16:30:33 **Page:** 3
Co-ordinate(NE) Reference: Well: Carracas 13A-3, Grid North
Vertical (TVD) Reference: SITE 7426.0
Section (VS) Reference: Well (0.00N,0.00E,90.00Azi)
Plan: Plan #1 6-13-06

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<— Latitude —>			<— Longitude —>		
PBHL			4071.00	0.00	2741.90	2178425.42	702570.28	36	59	4.804 N	107	8	23.207 W

Annotation

MD ft	TVD ft	
2212.50	2212.50	KOP @ 2213' MD / TVD Build 3.06°/100'
5184.17	4084.66	EOC @ 5184' MD / 4085' TVD Hold 90.93° Inc.