

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED
OMB NO 1004-0137
Expires July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

MAY 08 2012

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.
Farmington Field Office
Bureau of Land Management

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

Energen Resources Corporation

3a. Address

2010 Afton Place, Farmington, NM 87401

3b. Phone No. (include area code)

505-325-6800

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

2611' FSL, 898' FWL Sec. 24, T32N, R05W N.M.P.M. (L) NW/SW

5. Lease Serial No

NMM29342

6. If Indian, Allottee or Tribe Name

Nei

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

8. Well Name and No.

Carracas 25A #7H

9. API Well No.

30-039-30852

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 recomplete 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 recompletion 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 make the following changes to the subject well. Please see attached.

- New directional
- Casing and cement change

RCVD MAY 9 '12

OIL CONS. DIV.

DIST. 3

Hold C104
for Directional Survey
and "As Drilled" plat

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

Hold C104

for Directional Survey
and "As Drilled" plat

CONDITIONS OF APPROVAL

Adhere to previously issued stipulations

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

Andrew Soto

Title Drilling Engineer

Signature

Date 5/8/12

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Shea C. Valdez

Title PE

Date

5/8/12

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

FFO

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.

Hold C104

NMOCD A

for Directional Survey
and "As Drilled" plat

5/8/2012



OPERATIONS PLAN

WELL NAME.....Carracas 25A #7H
JOB TYPE.....Horizontal OPE FTC
DEPT.....Drilling and Completions

GENERAL INFORMATION

Surface Location	2,611' FSL 898' FWL
S-T-R	(L) Sec. 24, T32N, R05W
Bottom Hole Location	100' FSL 400' FWL
S-T-R	(M) Sec. 25, T32N, R05W
County, State	Rio Arriba, New Mexico
Elevations	7,368' GL
Total Depth	10,974 +/- (MD); 4,020' (TVD)
Formation Objective	Basin Fruitland Coal

FORMATION TOPS

San Jose	Surface
Nacimiento	2,260' (TVD), 2,261' (MD)
Ojo Alamo Ss	3,385' (TVD), 3,550' (MD)
Kirtland Sh	3,500' (TVD), 3,726' (MD)
Fruitland Fm	3,845' (TVD), 4,501' (MD)
Top Target Coal	4,003' (TVD), 5,503' (MD)
Base Target Coal	4,027' (TVD)
Total Depth	4,015' (TVD), 10,926' (MD)

DRILLING

Surface: 12 1/4" wellbore will be drilled with a fresh water mud system (spud mud).

Intermediate: 8 3/4" wellbore will be drilled with a LSND mud system. Weighting materials will be drill cuttings and if needed barite. Mud density is expected to range from 8.4 ppg to 9.5 ppg.

Production: 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 1,100 psi.

Projected KOP is 2,000' TVD with 3°/100' doglegs.

Blowout Control Specifications:

A 3,000 psi minimum double ram or annulus BOP stack will be used following nipple up of casing head. A 2" nominal, 2,000 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. **Pressure test BOP to 250 psi for 5 min and 2,000 psi for 10 min.**

Logging Program:

Open hole logs: None

Mudlogs: 3,185' TVD, 3,550' MD to TD

Surveys: Surface to KOP every 500' and a minimum of every 200' for directional.

5/8/2012

CASING, TUBING & CASING EQUIPMENT

String	Start Depth	End Depth	Wellbore	Size	Wt	Grade
Surface	0'	200'	12 1/4"	9 5/8"	36 lb/ft	J-55 ST&C
Intermediate	0'	5,863'	8 3/4"	7"	23 lb/ft	J-55 LT&C
TVD	0'	4,015'				
Prod. Liner	5,763'	10,926'	6 1/4"	4 1/2"	11.6 lb/ft	J-55 LT&C
TVD	4,014'	4,015'				Ultra FJ
Tubing	0'	5,400'	none	2 3/8"	4.7 lb/ft	J-55

Surface Casing: Texas Pattern Guide Shoe on bottom of first joint and an insert float valve on top of first joint. Casing centralization with a minimum of 3 standard bow spring centralizers to achieve optimal standoff.

Intermediate Casing: Self fill float shoe with self fill float collar on bottom and top of first joint. Casing centralization with double bow spring and centralizers to optimize standoff.

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

WELLHEAD

11" 3,000 x 9 5/8" weld/slip on casing head. 9 5/8" x 7"x 2 3/8" 3000 psi Flanged Wellhead .

CEMENTING

Surface Casing: 107 sks Premium G with 2.0 % CaCl₂ and 1/8 #/sk Flocele (15.8 ppg, 1.17 ft³/sk 125 ft³ of slurry, 70% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 600 psi for 30 min.

Intermediate Casing: Depending on wellbore conditions, cement may consist of 656 sks PRB II with 5#/sk Gilsonite & 1/4 #/sack Pol-E-Flake (12.3 ppg, 2.41 ft³/sk) and a tail of 100 sacks of PRB II with 5#/sk Gilsonite, 1/4 #/sack Pol-E-Flake (15.6 ppg, 1.81 ft³/sk). (1,761 ft³ of slurry, 100% excess to circulate to surface). WOC 12 hours. Test casing to 1,500 psi for 30 min.

Production Liner: NO CEMENT, Open Hole Completion

Set slips with full string weight

If cement does not circulate, run temperature survey in 8 hrs. to determine TOC.

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.
- 5) This gas is dedicated.

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

State of New Mexico
Energy, Minerals & Natural Resources Department

RECEIVED

Form C-102
Revised October 12, 2005

DISTRICT II
1301 W. Grand Avenue, Artesia, N.M. 88210

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

OIL CONSERVATION DIVISION MAY 08 2012

1220 South St. Francis Dr.
Santa Fe, NM 87505

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

Farmington Field Office ☐ AMENDED REPORT
Bureau of Land Management

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code	3 Pool Name
		71629	BASIN FRUITLAND COAL
4 Property Code	5 Property Name		6 Well Number
35034	CARRACAS 25 A		7
7 OGRID No.	8 Operator Name		9 Elevation
162928	ENERGEN RESOURCES CORPORATION		7368'

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
L	24	32N	5W		2611'	SOUTH	898'	WEST	RIO ARriba

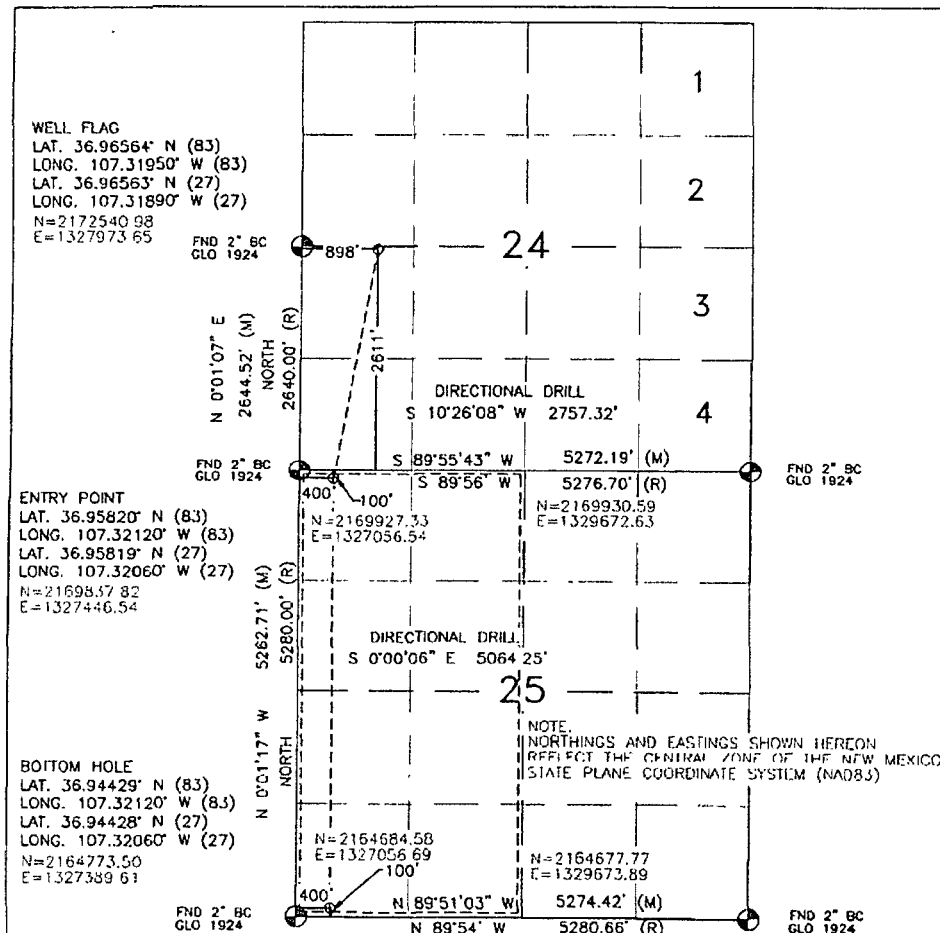
11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	25	32N	5W		100'	SOUTH	400'	WEST	RIO ARriba

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 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

16



Energen Resources

Rio Arriba County

Sec24 T32N-R5W - A7

Carracas 25 A#7

Wellbore #1

Plan: Design #1

Standard Planning Report

14 September, 2011

Carracas 25 A#7
Sec24 T32N-R5W - A7
Rio Arriba Co NM
GE: 7368' / KB: 15'

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

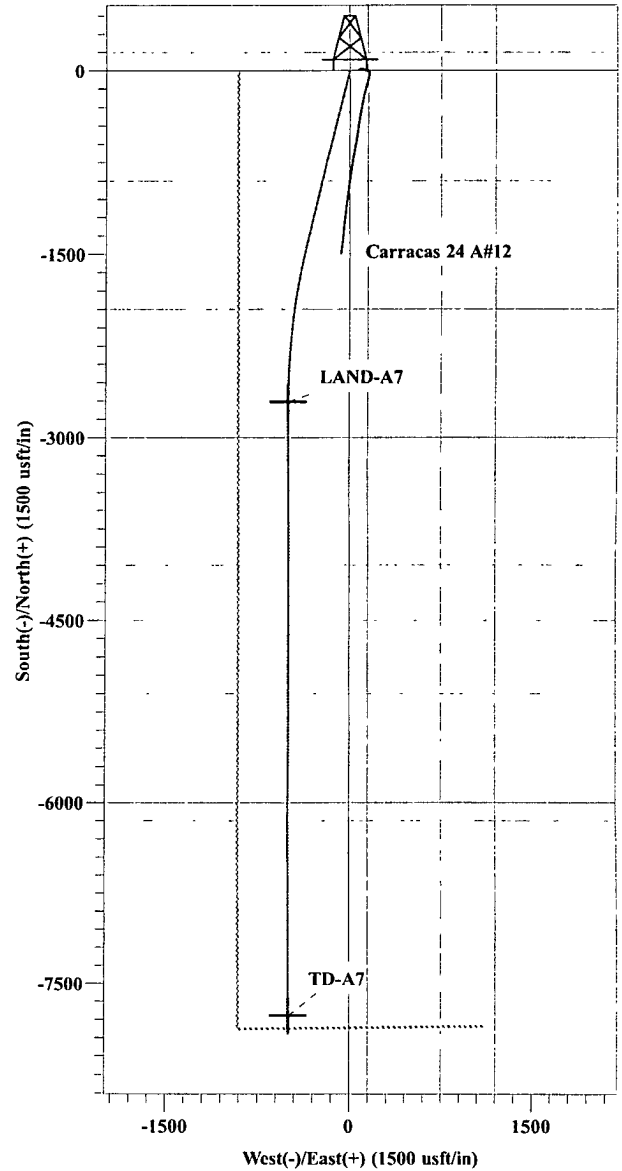
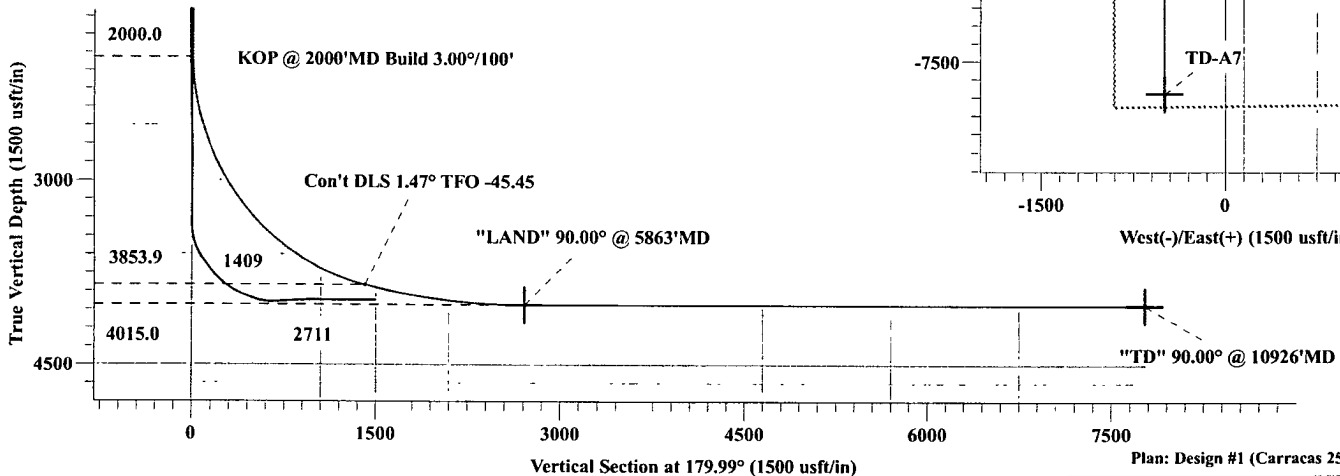
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
LAND-A7	4015.0	-2711.0	-498.0	2169835.74	1327445.24	Point
TD-A7	4015.0	-7773.5	-496.8	2164773.50	1327389.61	Point

WELL DETAILS: Carracas 25 A#7

Northing	Easting	Latitude	Longitude
2172540.98	1327973.65	36° 57' 56.304 N	107° 19' 10.200 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
4536.2	76.08	193.72	3853.9	-1409.2	-344.0	3.00	193.72	1409.2	
5863.3	90.00	179.99	4015.0	-2711.0	-498.0	1.47	-45.45	2710.9	LAND-A7
10926.0	90.00	179.99	4015.0	-7773.7	-496.8	0.00	0.00	7773.6	



Plan: Design #1 (Carracas 25 A#7/Wellbore #1)

Planning Report

Database: EDM 5000.1 Single User Db
 Company: Energen Resources
 Project: Rio Arriba County
 Site: Sec24 T32N-R5W - A7
 Well: Carracas 25 A#7
 Wellbore: Wellbore #1
 Design: Design #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Site Sec24 T32N-R5W - A7
 WELL @ 7383.0usft (Original Well Elev)
 WELL @ 7383.0usft (Original Well Elev)
 True
 Minimum Curvature

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

Site	Sec24 T32N-R5W - A7		
Site Position:	Lat/Long	Northing:	2,172,540.98 usft
From:		Easting:	1,327,973.64 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	36° 57' 56.304 N
		Longitude:	107° 19' 10.200 W
		Grid Convergence:	-0.64 °

Well	Carracas 25 A#7		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	7,368.0 usft
		Latitude:	36° 57' 56.304 N
		Longitude:	107° 19' 10.200 W
		Ground Level:	

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	09/14/11	9.70
			Dip Angle
			63.73
			Field Strength
			50,891

Design	Design #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			179.99

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,536.2	76.08	193.72	3,853.9	-1,409.2	-344.0	3.00	3.00	0.00	193.72	
5,863.3	90.00	179.99	4,015.0	-2,711.0	-498.0	1.47	1.05	-1.03	-45.45	LAND-A7
10,926.0	90.00	179.99	4,015.0	-7,773.7	-496.8	0.00	0.00	0.00	0.00	

Planning Report

Database: EDM 5000.1 Single User Db
 Company: Energen Resources
 Project: Rio Arriba County
 Site: Sec24 T32N-R5W - A7
 Well: Carracas 25 A#7
 Wellbore: Wellbore #1
 Design: Design #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Site Sec24 T32N-R5W - A7
 WELL @ 7383.0usft (Original Well Elev)
 WELL @ 7383.0usft (Original Well Elev)
 True
 Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP @ 2000' MD Build 3.00°/100'									
2,100.0	3.00	193.72	2,100.0	-2.5	-0.6	2.5	3.00	3.00	0.00
2,200.0	6.00	193.72	2,199.6	-10.2	-2.5	10.2	3.00	3.00	0.00
2,300.0	9.00	193.72	2,298.8	-22.8	-5.6	22.8	3.00	3.00	0.00
2,400.0	12.00	193.72	2,397.1	-40.5	-9.9	40.5	3.00	3.00	0.00
2,500.0	15.00	193.72	2,494.3	-63.2	-15.4	63.2	3.00	3.00	0.00
2,600.0	18.00	193.72	2,590.2	-90.8	-22.2	90.8	3.00	3.00	0.00
2,700.0	21.00	193.72	2,684.4	-123.2	-30.1	123.2	3.00	3.00	0.00
2,800.0	24.00	193.72	2,776.8	-160.4	-39.2	160.4	3.00	3.00	0.00
2,900.0	27.00	193.72	2,867.1	-202.2	-49.4	202.2	3.00	3.00	0.00
3,000.0	30.00	193.72	2,954.9	-248.6	-60.7	248.6	3.00	3.00	0.00
3,100.0	33.00	193.72	3,040.2	-299.3	-73.1	299.3	3.00	3.00	0.00
3,200.0	36.00	193.72	3,122.6	-354.3	-86.5	354.3	3.00	3.00	0.00
3,300.0	39.00	193.72	3,201.9	-413.5	-100.9	413.5	3.00	3.00	0.00
3,400.0	42.00	193.72	3,278.0	-476.6	-116.3	476.5	3.00	3.00	0.00
3,500.0	45.00	193.72	3,350.5	-543.4	-132.6	543.4	3.00	3.00	0.00
3,600.0	48.00	193.72	3,419.3	-613.9	-149.8	613.8	3.00	3.00	0.00
3,700.0	51.00	193.72	3,484.3	-687.7	-167.9	687.7	3.00	3.00	0.00
3,800.0	54.00	193.72	3,545.1	-764.8	-186.7	764.8	3.00	3.00	0.00
3,900.0	57.00	193.72	3,601.8	-844.8	-206.2	844.8	3.00	3.00	0.00
4,000.0	60.00	193.72	3,654.0	-927.7	-226.4	927.6	3.00	3.00	0.00
4,100.0	63.00	193.72	3,701.7	-1,013.0	-247.3	1,013.0	3.00	3.00	0.00
4,200.0	66.00	193.72	3,744.8	-1,100.7	-268.7	1,100.7	3.00	3.00	0.00
4,300.0	69.00	193.72	3,783.0	-1,190.4	-290.6	1,190.4	3.00	3.00	0.00
4,400.0	72.00	193.72	3,816.4	-1,282.0	-312.9	1,282.0	3.00	3.00	0.00
4,500.0	75.00	193.72	3,844.8	-1,375.1	-335.6	1,375.1	3.00	3.00	0.00
4,536.2	76.08	193.72	3,853.9	-1,409.2	-344.0	1,409.2	3.00	3.00	0.00
Con't DLS 1.47° TFO -45.45									
4,600.0	76.74	193.03	3,868.9	-1,469.5	-358.3	1,469.5	1.47	1.03	-1.07
4,700.0	77.77	191.97	3,890.9	-1,564.8	-379.4	1,564.7	1.47	1.03	-1.07
4,800.0	78.81	190.91	3,911.2	-1,660.7	-398.8	1,660.7	1.47	1.04	-1.06
4,900.0	79.85	189.86	3,929.7	-1,757.4	-416.5	1,757.3	1.47	1.04	-1.05
5,000.0	80.90	188.82	3,946.4	-1,854.7	-432.5	1,854.6	1.47	1.04	-1.04
5,100.0	81.94	187.78	3,961.3	-1,952.5	-446.8	1,952.4	1.47	1.05	-1.04
5,200.0	82.99	186.75	3,974.5	-2,050.9	-459.3	2,050.8	1.47	1.05	-1.03
5,300.0	84.05	185.72	3,985.7	-2,149.6	-470.1	2,149.5	1.47	1.05	-1.03
5,400.0	85.10	184.70	3,995.2	-2,248.8	-479.1	2,248.7	1.47	1.05	-1.02
5,500.0	86.16	183.68	4,002.8	-2,348.2	-486.4	2,348.1	1.47	1.06	-1.02
5,600.0	87.21	182.66	4,008.6	-2,447.9	-491.9	2,447.8	1.47	1.06	-1.02
5,700.0	88.27	181.64	4,012.5	-2,547.7	-495.7	2,547.6	1.47	1.06	-1.02
5,800.0	89.33	180.63	4,014.6	-2,647.7	-497.7	2,647.6	1.47	1.06	-1.01
5,863.3	90.00	179.99	4,015.0	-2,711.0	-498.0	2,710.9	1.47	1.06	-1.01
"LAND" 90.00° @ 5863' MD									
5,900.0	90.00	179.99	4,015.0	-2,747.7	-498.0	2,747.6	0.00	0.00	0.00
6,000.0	90.00	179.99	4,015.0	-2,847.7	-498.0	2,847.6	0.00	0.00	0.00
6,100.0	90.00	179.99	4,015.0	-2,947.7	-497.9	2,947.6	0.00	0.00	0.00
6,200.0	90.00	179.99	4,015.0	-3,047.7	-497.9	3,047.6	0.00	0.00	0.00
6,300.0	90.00	179.99	4,015.0	-3,147.7	-497.9	3,147.6	0.00	0.00	0.00
6,400.0	90.00	179.99	4,015.0	-3,247.7	-497.9	3,247.6	0.00	0.00	0.00
6,500.0	90.00	179.99	4,015.0	-3,347.7	-497.8	3,347.6	0.00	0.00	0.00
6,600.0	90.00	179.99	4,015.0	-3,447.7	-497.8	3,447.6	0.00	0.00	0.00
6,700.0	90.00	179.99	4,015.0	-3,547.7	-497.8	3,547.6	0.00	0.00	0.00

Planning Report

Database: EDM 5000.1 Single User Db
 Company: Energen Resources
 Project: Rio Arriba County
 Site: Sec24 T32N-R5W - A7
 Well: Carracas 25 A#7
 Wellbore: Wellbore #1
 Design: Design #1

Local Co-ordinate Reference: Site Sec24 T32N-R5W - A7
 TVD Reference: WELL @ 7383.0usft (Original Well Elev)
 MD Reference: WELL @ 7383.0usft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,800.0	90.00	179.99	4,015.0	-3,647.7	-497.8	3,647.6	0.00	0.00	0.00
6,900.0	90.00	179.99	4,015.0	-3,747.7	-497.8	3,747.6	0.00	0.00	0.00
7,000.0	90.00	179.99	4,015.0	-3,847.7	-497.7	3,847.6	0.00	0.00	0.00
7,100.0	90.00	179.99	4,015.0	-3,947.7	-497.7	3,947.6	0.00	0.00	0.00
7,200.0	90.00	179.99	4,015.0	-4,047.7	-497.7	4,047.6	0.00	0.00	0.00
7,300.0	90.00	179.99	4,015.0	-4,147.7	-497.7	4,147.6	0.00	0.00	0.00
7,400.0	90.00	179.99	4,015.0	-4,247.7	-497.6	4,247.6	0.00	0.00	0.00
7,500.0	90.00	179.99	4,015.0	-4,347.7	-497.6	4,347.6	0.00	0.00	0.00
7,600.0	90.00	179.99	4,015.0	-4,447.7	-497.6	4,447.6	0.00	0.00	0.00
7,700.0	90.00	179.99	4,015.0	-4,547.7	-497.6	4,547.6	0.00	0.00	0.00
7,800.0	90.00	179.99	4,015.0	-4,647.7	-497.5	4,647.6	0.00	0.00	0.00
7,900.0	90.00	179.99	4,015.0	-4,747.7	-497.5	4,747.6	0.00	0.00	0.00
8,000.0	90.00	179.99	4,015.0	-4,847.7	-497.5	4,847.6	0.00	0.00	0.00
8,100.0	90.00	179.99	4,015.0	-4,947.7	-497.5	4,947.6	0.00	0.00	0.00
8,200.0	90.00	179.99	4,015.0	-5,047.7	-497.4	5,047.6	0.00	0.00	0.00
8,300.0	90.00	179.99	4,015.0	-5,147.7	-497.4	5,147.6	0.00	0.00	0.00
8,400.0	90.00	179.99	4,015.0	-5,247.7	-497.4	5,247.6	0.00	0.00	0.00
8,500.0	90.00	179.99	4,015.0	-5,347.7	-497.4	5,347.6	0.00	0.00	0.00
8,600.0	90.00	179.99	4,015.0	-5,447.7	-497.3	5,447.6	0.00	0.00	0.00
8,700.0	90.00	179.99	4,015.0	-5,547.7	-497.3	5,547.6	0.00	0.00	0.00
8,800.0	90.00	179.99	4,015.0	-5,647.7	-497.3	5,647.6	0.00	0.00	0.00
8,900.0	90.00	179.99	4,015.0	-5,747.7	-497.3	5,747.6	0.00	0.00	0.00
9,000.0	90.00	179.99	4,015.0	-5,847.7	-497.3	5,847.6	0.00	0.00	0.00
9,100.0	90.00	179.99	4,015.0	-5,947.7	-497.2	5,947.6	0.00	0.00	0.00
9,200.0	90.00	179.99	4,015.0	-6,047.7	-497.2	6,047.6	0.00	0.00	0.00
9,300.0	90.00	179.99	4,015.0	-6,147.7	-497.2	6,147.6	0.00	0.00	0.00
9,400.0	90.00	179.99	4,015.0	-6,247.7	-497.2	6,247.6	0.00	0.00	0.00
9,500.0	90.00	179.99	4,015.0	-6,347.7	-497.1	6,347.6	0.00	0.00	0.00
9,600.0	90.00	179.99	4,015.0	-6,447.7	-497.1	6,447.6	0.00	0.00	0.00
9,700.0	90.00	179.99	4,015.0	-6,547.7	-497.1	6,547.6	0.00	0.00	0.00
9,800.0	90.00	179.99	4,015.0	-6,647.7	-497.1	6,647.6	0.00	0.00	0.00
9,900.0	90.00	179.99	4,015.0	-6,747.7	-497.0	6,747.6	0.00	0.00	0.00
10,000.0	90.00	179.99	4,015.0	-6,847.7	-497.0	6,847.6	0.00	0.00	0.00
10,100.0	90.00	179.99	4,015.0	-6,947.7	-497.0	6,947.6	0.00	0.00	0.00
10,200.0	90.00	179.99	4,015.0	-7,047.7	-497.0	7,047.6	0.00	0.00	0.00
10,300.0	90.00	179.99	4,015.0	-7,147.7	-496.9	7,147.6	0.00	0.00	0.00
10,400.0	90.00	179.99	4,015.0	-7,247.7	-496.9	7,247.6	0.00	0.00	0.00
10,500.0	90.00	179.99	4,015.0	-7,347.7	-496.9	7,347.6	0.00	0.00	0.00
10,600.0	90.00	179.99	4,015.0	-7,447.7	-496.9	7,447.6	0.00	0.00	0.00
10,700.0	90.00	179.99	4,015.0	-7,547.7	-496.8	7,547.6	0.00	0.00	0.00
10,800.0	90.00	179.99	4,015.0	-7,647.7	-496.8	7,647.6	0.00	0.00	0.00
10,900.0	90.00	179.99	4,015.0	-7,747.7	-496.8	7,747.6	0.00	0.00	0.00
10,926.0	90.00	179.99	4,015.0	-7,773.7	-496.8	7,773.6	0.00	0.00	0.00

"TD" 90.00° @ 10926'MD

Planning Report

Database: EDM 5000.1 Single User Db
Company: Energen Resources
Project: Rio Arriba County
Site: Sec24 T32N-R5W - A7
Well: Carracas 25 A#7
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Site Sec24 T32N-R5W - A7
TVD Reference: WELL @ 7383.0usft (Original Well Elev)
MD Reference: WELL @ 7383.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name	Dip Angle	Dip Dir	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
TD-A7	0.00	0.00	4,015.0	-7,773.5	-496.8	2,164,773.50	1,327,389.61	36° 56' 39.444 N	107° 19' 16.320 W
- plan hits target center									
- Point									
LAND-A7	0.00	0.00	4,015.0	-2,711.0	-498.0	2,169,835.74	1,327,445.24	36° 57' 29.499 N	107° 19' 16.336 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
2,000.0	2,000.0	0.0	0.0	KOP @ 2000'MD Build 3.00°/100'
4,536.2	3,853.9	-1,409.2	-344.0	Con't DLS 1.47° TFO -45.45
5,863.3	4,015.0	-2,711.0	-498.0	"LAND" 90.00° @ 5863'MD
10,926.0	4,015.0	-7,773.7	-496.8	"TD" 90.00° @ 10926'MD