

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED
OMB NO. 1004-0137
Expires March 31, 2007

MAY 07 2008

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.

5. Lease Serial No. **NMSF 079487-A**

6. If Indian, Allottee or Tribe Name _____

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

8. Well Name and No. **San Juan 30-4 Unit # 21Z**

9. API Well No. **30-039-30241**

10. Field and Pool, or Exploratory Area **East Blanco Pictured Cliffs**

11. County or Parish, State **Rio Arriba NM**

SUBMIT IN TRIPLICATE - Other instructions on reverse side

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)
**2400' FSL, 2300' FEL Sec. 21, T30N, R04W
 NW/SE (J)**

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 recomple 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 recomple 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 San Juan 30-4 Unit #21Z:

*Change the azimuth from 126.83 deg to 90.0 deg. This change will allow the horizontal lateral to optimize the intersecting of natural fracture for completion and production.

*Change the BHL to 2400 fsl, 110 fel.

*Change the 7" intermediate casing setting depth to 4825' MD, 4370' TVD. The curve will be landed and the lateral drilled in the upper PC Sand (4332' - 4421' TVD). Cement with 675 sks lead and 125 sks tail.

*Change the TD of the well to 6272' MD.

RCVD MAY 16 '08
OIL CONS. DIV.
DIST. 3

Hold C104

for Directional Survey
and "As Drilled" plat

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

Nathany Smith

Title

Drilling Engineer

Date **5/7/08**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Petr. Eng.

Date

5/15/08

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 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
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

¹ API Number 30-039-30241	² Pool Code 71629 72400	³ Pool Name East Blanco Pictured Cliffs
⁴ Property Code 21994	⁵ Property Name San Juan 30-4 Unit	⁶ Well Number #21Z
⁷ OGRID No. 162928	⁸ Operator Name Energen Resources Corporation	⁹ Elevation 7609' GL

¹⁰ Surface Location

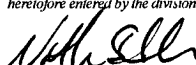
UL or lot no. J	Section 21	Township 30N	Range 4W	Lot Idn	Feet from the 2400	North/South line South	Feet from the 2300	East/West line East	County Rio Arriba
--------------------	---------------	-----------------	-------------	---------	-----------------------	---------------------------	-----------------------	------------------------	----------------------

¹¹ Bottom Hole Location If Different From Surface

UL or lot no. I	Section 21	Township 30N	Range 4W	Lot Idn	Feet from the 2400	North/South line South	Feet from the 110	East/West line East	County Rio Arriba
--------------------	---------------	-----------------	-------------	---------	-----------------------	---------------------------	----------------------	------------------------	----------------------

¹² Dedicated Acres 320.42 E/2	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.

<div style="writing-mode: vertical-rl; transform: rotate(180deg);">5282 .12' (M)</div>	16				<p>¹⁷ OPERATOR CERTIFICATION</p> <p><i>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></p> <p> 05/07/2008</p> <p>Signature Date</p> <p>Nathan Smith</p> <p>Printed Name</p>
			2300'	110'	<p>¹⁸ SURVEYOR CERTIFICATION</p> <p><i>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</i></p> <p>November 20, 2006</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p>Original Survey Conducted and Recorded by David R. Russell</p>
		2400'	2400'		
					<p>10201</p> <p>Certificate Number</p>

5285 34' (M)

Operations Plan

Revised May 7, 2008

San Juan 30-4 Unit #21Z

General Information

Location	2400 fsl, 2300 fel at surface 2400 fsl, 110 fel at bottom sese S21, T30N, R4W Rio Arriba County, New Mexico
Elevations	7609' GL
Total Depth	6272' (MD), 4370' (TVD)
Formation Objective	East Blanco Pictured Cliffs

Formation Tops

San Jose	Surface
Nacimiento	450' (TVD)
Ojo Alamo Ss	3712' (TVD)
Kirtland Sh	3945' (TVD), 3950' (MD)
Fruitland Fm	4112' (TVD), 4144' (MD)
Top Coal	4211' (TVD), 4281' (MD)
Bottom Coal	4283' (TVD), 4407' (MD)
Upper Pictured Cliffs Ss	4315' (TVD), 4497' (MD)
Lower Pictured Cliffs Ss	4513' (TVD)
Total Depth	4370' (TVD), 6272' (MD)

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 3700' TVD with a BUR of 8.55°/100'.

The 6 1/4" wellbore will be drilled with a treated fresh water/synthetic polymer system with a density range of 8.5 to 8.8 ppg. Anticipated BHP can be as high as 750 psi.

Blowout Control Specifications:

A 3000 psi minimum double ram or annulus BOP stack 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 the stack. 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. Test Choke Manifold to 1200 psi.

Logging Program:

Open hole logs: None

Mud logs: From 4112' (TVD), 4144' (MD) to TD. (Top of Fruitland Fm)

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'-4370' (TVD) 4825' (MD)	8 3/4"	7"	23.0 ppf	J-55 LT&C
Tubing	0'-4750' (MD)		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: A Self Fill Float Shoe with self fill insert float collar on the bottom and top of the first joint respectively 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: None initially. Production lateral will be left open to monitor production without a liner. If necessary, ECP's will be ran in pre-drilled liner string every 400' and inflated with cement prior to fracture stimulating.

Wellhead

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

Cementing

Surface Casing: 125 sks with 2.0 % CaCl₂ and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk 148 ft³ of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 750 psi for 30 min.

Intermediate Casing: Depending on wellbore conditions, cement may consist of 675 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl₂, 10 #/sk Gilsonite, and 1/2 #/sk Flocele (12.3 ppg, 1.93 ft³/sk) and a tail of 125 sks Sks with 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk). (1450 ft³ of slurry, 100 % excess to circulate to surface). Test casing to 1200 psi for 30 min. Test BOP to 250 psi for 15 min and 1200 psi for 15 min.

Other Information

- 1) This well will initially be an open hole completion with no 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.

Energen Resources

SJ BR; S21, T30N, R4W

Cabresto Mesa

San Juan 30-4 Unit #21Z

Upper Sand - Revised Plan

Plan: Plan #1

Planned Wellpath

06 May, 2008

Project: SJ BR; S21, T30N, R4W
 Site: Cabresto Mesa
 Well: San Juan 30-4 Unit #21Z
 Wellbore: Upper Sand - Revised Plan
 Plan: Plan #1 (San Juan 30-4 Unit #21Z/Upper Sand - Revised Plan)

PROJECT DETAILS: SJ BR; S21, T30N, R4W

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

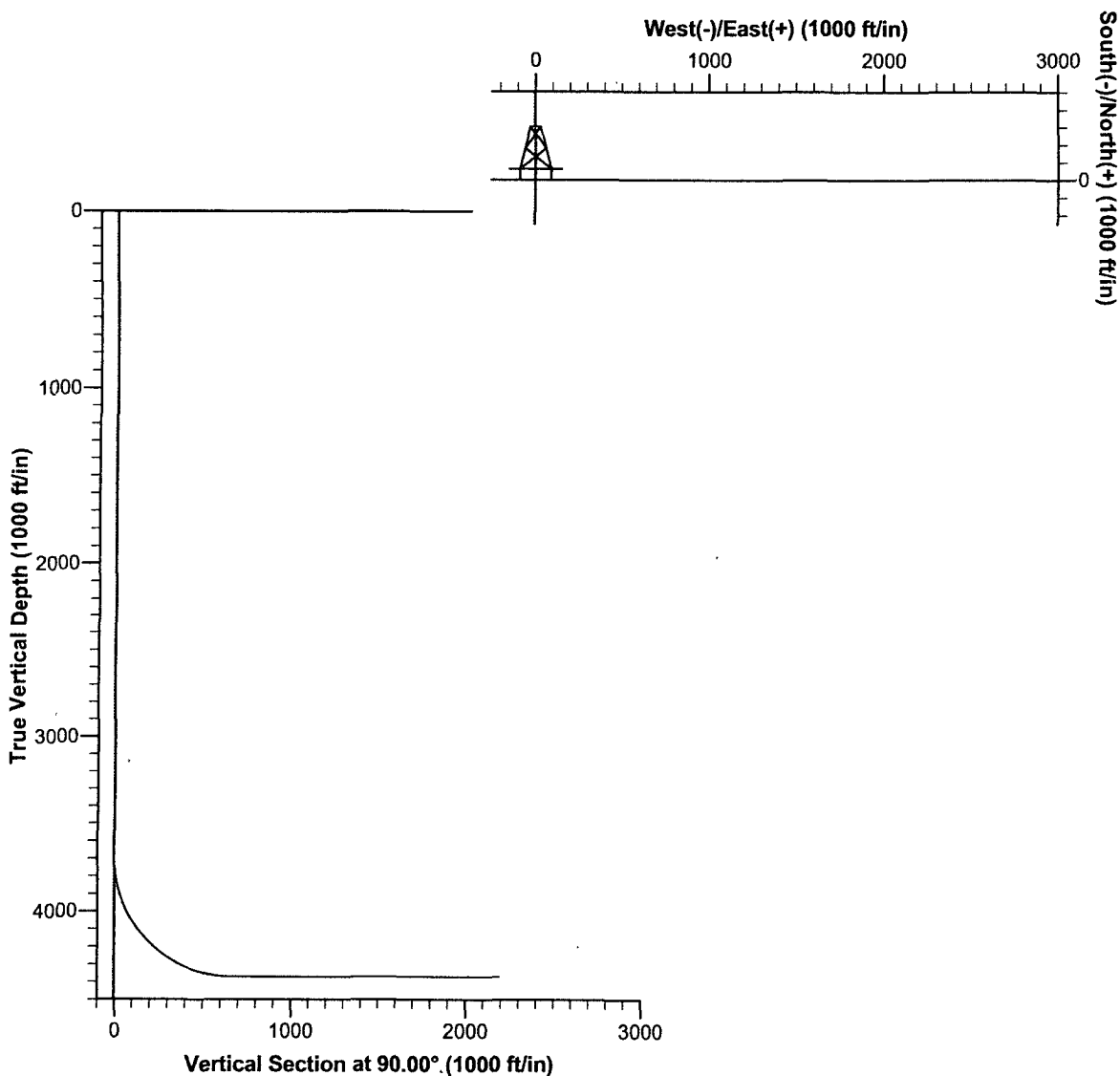


Azimuths to True North
 Magnetic North: 10.05°

Magnetic Field
 Strength: 51158.4snT
 Dip Angle: 63.69°
 Date: 5/6/2008
 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	3700.0	0.00	0.00	3700.0	0.0	0.0	0.00	0.00	0.0	
3	4752.4	90.00	90.00	4370.0	0.0	670.0	8.55	90.00	670.0	
4	6272.4	90.00	90.00	4370.0	0.0	2190.0	0.00	0.00	2190.0	



Energen
Planned Wellpath



Company:	Energen Resources	Local Co-ordinate Reference:	Well San Juan 30-4 Unit #21Z
Project:	SJ BR; S21, T30N, R4W	TVD Reference:	KB @ 7624.0ft (Drilling Rig)
Site:	Cabresto Mesa	MD Reference:	KB @ 7624.0ft (Drilling Rig)
Well:	San Juan 30-4 Unit #21Z	North Reference:	True
Wellbore:	Upper Sand - Revised Plan	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 2003.16 Single User Db

Project SJ BR; S21, T30N, R4W

Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site Cabresto Mesa

Site Position:		Northing:	2,109,747.12 ft	Latitude:	36° 47' 47.364 N
From:	Lat/Long	Easting:	2,891,213.24 ft	Longitude:	107° 15' 32.832 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.34 °

Well San Juan 30-4 Unit #21Z

Well Position	+N/-S	0.0 ft	Northing:	2,109,747.12 ft	Latitude:	36° 47' 47.364 N
	+E/-W	0.0 ft	Easting:	2,891,213.24 ft	Longitude:	107° 15' 32.832 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	7,609.0 ft	Ground Level:	7,609.0 ft

Wellbore Upper Sand - Revised Plan

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	5/6/2008	10.05	63.69	51,158

Design Plan #1

Audit Notes:

Version: Phase: PROTOTYPE Tie On Depth: 0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	90.00

Survey Tool Program Date 5/6/2008

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	6,272.4	Plan #1 (Upper Sand - Revised Plan)	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: SJ BR; S21, T30N, R4W
Site: Cabresto Mesa
Well: San Juan 30-4 Unit #21Z
Wellbore: Upper Sand - Revised Plan
Design: Plan #1

Local Co-ordinate Reference: Well San Juan 30-4 Unit #21Z
TVD Reference: KB @ 7624.0ft (Drilling Rig)
MD Reference: KB @ 7624.0ft (Drilling Rig)
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
2,400.0	2,400.0	0.00	0.00	0.00	0.0	0.0	0.0
2,500.0	2,500.0	0.00	0.00	0.00	0.0	0.0	0.0
2,600.0	2,600.0	0.00	0.00	0.00	0.0	0.0	0.0
2,700.0	2,700.0	0.00	0.00	0.00	0.0	0.0	0.0
2,800.0	2,800.0	0.00	0.00	0.00	0.0	0.0	0.0
2,900.0	2,900.0	0.00	0.00	0.00	0.0	0.0	0.0
3,000.0	3,000.0	0.00	0.00	0.00	0.0	0.0	0.0
3,100.0	3,100.0	0.00	0.00	0.00	0.0	0.0	0.0
3,200.0	3,200.0	0.00	0.00	0.00	0.0	0.0	0.0
3,300.0	3,300.0	0.00	0.00	0.00	0.0	0.0	0.0
3,400.0	3,400.0	0.00	0.00	0.00	0.0	0.0	0.0
3,500.0	3,500.0	0.00	0.00	0.00	0.0	0.0	0.0
3,600.0	3,600.0	0.00	0.00	0.00	0.0	0.0	0.0
3,700.0	3,700.0	0.00	0.00	0.00	0.0	0.0	0.0
3,750.0	3,750.0	4.28	90.00	8.55	1.9	0.0	1.9
3,800.0	3,799.6	8.55	90.00	8.55	7.4	0.0	7.4
3,850.0	3,848.8	12.83	90.00	8.55	16.7	0.0	16.7
3,900.0	3,897.0	17.10	90.00	8.55	29.6	0.0	29.6
3,950.0	3,944.2	21.38	90.00	8.55	46.1	0.0	46.1
4,000.0	3,990.1	25.65	90.00	8.55	66.0	0.0	66.0
4,050.0	4,034.3	29.93	90.00	8.55	89.4	0.0	89.4
4,100.0	4,076.7	34.21	90.00	8.55	115.9	0.0	115.9
4,150.0	4,116.9	38.48	90.00	8.55	145.5	0.0	145.5
4,200.0	4,154.9	42.76	90.00	8.55	178.1	0.0	178.1
4,250.0	4,190.3	47.03	90.00	8.55	213.4	0.0	213.4
4,300.0	4,223.0	51.31	90.00	8.55	251.2	0.0	251.2
4,350.0	4,252.7	55.59	90.00	8.55	291.3	0.0	291.3
4,400.0	4,279.4	59.86	90.00	8.55	333.6	0.0	333.6
4,450.0	4,302.9	64.14	90.00	8.55	377.7	0.0	377.7
4,500.0	4,323.0	68.41	90.00	8.55	423.5	0.0	423.5
4,550.0	4,339.7	72.69	90.00	8.55	470.6	0.0	470.6
4,600.0	4,352.7	76.96	90.00	8.55	518.9	0.0	518.9

Energen

Planned Wellpath



Company: Energen Resources
Project: SJ BR; S21, T30N, R4W
Site: Cabresto Mesa
Well: San Juan 30-4 Unit #21Z
Wellbore: Upper Sand - Revised Plan
Design: Plan #1

Local Co-ordinate Reference: Well San Juan 30-4 Unit #21Z
TVD Reference: KB @ 7624.0ft (Drilling Rig)
MD Reference: KB @ 7624.0ft (Drilling Rig)
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)
4,650.0	4,362.2	81.24	90.00	8.55	568.0	0.0	568.0
4,700.0	4,367.9	85.52	90.00	8.55	617.6	0.0	617.6
4,752.4	4,370.0	90.00	90.00	8.55	670.0	0.0	670.0
4,800.0	4,370.0	90.00	90.00	0.00	717.6	0.0	717.6
4,900.0	4,370.0	90.00	90.00	0.00	817.6	0.0	817.6
5,000.0	4,370.0	90.00	90.00	0.00	917.6	0.0	917.6
5,100.0	4,370.0	90.00	90.00	0.00	1,017.6	0.0	1,017.6
5,200.0	4,370.0	90.00	90.00	0.00	1,117.6	0.0	1,117.6
5,300.0	4,370.0	90.00	90.00	0.00	1,217.6	0.0	1,217.6
5,400.0	4,370.0	90.00	90.00	0.00	1,317.6	0.0	1,317.6
5,500.0	4,370.0	90.00	90.00	0.00	1,417.6	0.0	1,417.6
5,600.0	4,370.0	90.00	90.00	0.00	1,517.6	0.0	1,517.6
5,700.0	4,370.0	90.00	90.00	0.00	1,617.6	0.0	1,617.6
5,800.0	4,370.0	90.00	90.00	0.00	1,717.6	0.0	1,717.6
5,900.0	4,370.0	90.00	90.00	0.00	1,817.6	0.0	1,817.6
6,000.0	4,370.0	90.00	90.00	0.00	1,917.6	0.0	1,917.6
6,100.0	4,370.0	90.00	90.00	0.00	2,017.6	0.0	2,017.6
6,200.0	4,370.0	90.00	90.00	0.00	2,117.6	0.0	2,117.6
6,272.4	4,370.0	90.00	90.00	0.00	2,190.0	0.0	2,190.0

Checked By: _____ Approved By: _____ Date: _____