Form 3160-5 (August 2007)

UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

RECEIVE

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

5. Lease Serial No.

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

abandoned well. Use Form 3160-3 (APD) for such proposals of Land Management

SF081181 6. If Indian, Allottee or Tribe Name

		Earminato	n Field Office	
SUBMIT IN TRIPLICA	7. If Unit or CA/Agreement, Name and/o			
1. Type of Well Oil Well X Gas Well Other 2. Name of Operator				8. Well Name and No. San Juan 32-5 Unit 104 NP
Energen Resources Corporation 3a. Address 2010 Afton Place, Farmington, NM 8 4. Location of Well (Footage, Sec., T., R., M., or Survey) 540 FSL, 985 FWL 25 - 32 N	Description)	3b. Phone No. (<i>include are</i> (505) 325–6800	ŕ	9. API Well No. 30-039-24290 10. Field and Pool, or Exploratory Area Basin Fruitland Coal 11. County or Parish, State Rio Arriba MM
12. CHECK APPROPRIAT	E BOX(ES) TO INI	DICATE NATURE OF N	OTICE, REPO	Mary 27
TYPE OF SUBMISSION		TYP	E OF ACTION	Service of the Control of the Contro
Subsequent Report Subsequent Report	olete horizontally, give s rformed or provide the I If the operation results in Notices shall be filed or ection.)	ils, including estimated startir ubsurface locations and meas 3 ond No. on file with BLM/E in a multiple completion or re- ally after all requirements, inc San Juan 32-5 Unit	Reclamation Recomplet Temporaril Water Disp In date of any produced and true verolate. Required succompletion in a number of the produced and true verolate. Required succompletion in a number of the produced and true verolate. Required succompletion in a number of the produced and true verolate. The produced and true verolate. The produced are the produced are the produced are the produced are the produced and true verolate. The produced are the pr	oposed work and approximate duration the tical depths of all pertinent markers and z absequent reports shall be filed within 30 lew interval, a Form 3160-4 shall be filed on, have been completed, and the operator
*Drill a curve and horizontal lat		•		of 2540 FSL, 2540 FWL.
Attached is a revised C-102 and of ACOMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOCD FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOCD PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS	directional plan	depicting this rec Hold C104 for Directional Survey and "As Drilled" plat	completion.	RCVD AUG 11'08 OIL CONS. DIV.
AND THE PERSON FROM	MOTIFY	AZTEC OCC) 24 HK	S nist a

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

Nathan Smith Signature

TO CASING & CEMENT Title

8/5/08

Drilling Engineer

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Date

THIS OF AGE TON TEDERAL ON STATE OF THE COL									
Approved by Original Signed: Stephen Mason	Title	Date AUG 0 7 2003							
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	Office								
entitle the applicant to conduct operations thereon.	•								

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

<u>District I</u>
1625 N. French Dr., Hobbs, NM 88240
<u>District II</u>
1301 W. Grand Avenue, Artesia, NM 88210
<u>District III</u>
1000 Rio Brazos Rd., Aztec, NM 87410

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

District IV

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.

Form C-102 Revised October 12, 2005 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

Santa Fe, NM 87505

1	API Number	r		² Pool Code	·	' Pool Name				
3	30-039-24290			71629		Basin Fruitland Coal				
1 Property	Property Code Property Name 6						Well Number			
				San Juan 32-5 Unit NP #104						
'OGRID	No.	Operator Name Ele						'Elevation		
162928	1				Energen Resource	s Corporation			6411' GL	
					¹⁰ Surface	Location				
UL or lot no. M	Section 25	Township 32N	Range 6W	Lot Idn	Feet from the 540	North/South line South	Feet from the 985	East/West line West	County Rio Arriba	
М	25	32N	6W		540	South	985	West	Rio Arriba	

¹¹ Bottom Hole Location If Different From Surface Range UL or lot no. Township Lot Idn Feet from the North/South line Feet from the East/West line Section County 2540 2540 South West Rio Arriba 6W Dedicated Acres Joint or Infill Consolidation Code Order No. 320,00 E/2

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	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
	worlang 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
	Mich Sh 8/4/2008 Signature Date
	Nathan Smith Printed Name
	7 mice reside
2540' BHL 25	¹⁸ SURVEYOR CERTIFICATION
2340	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.
	June 2, 1988
	Date of Survey
2540'	Signature and Seal of Professional Surveyor Original Survey
	Conducted and Recorded By R Howard Daggett
	Conducted and recorded by it from an ampleton
895'	
SHL SHL	9679
540'	Certificate Number

SJ BR

SW Sec 25, T32N, R6W Eul Canyon San Juan 32-5 Unit NP #104 Proposed Sidetrack Plan: Plan #1

Planned Wellpath

05 August, 2008

Project: SW Sec 25, T32N, R6W Site: Eul Canyon

Well: San Juan 32-5 Unit NP #104

Wellbore: Proposed Sidetrack

Plan: Plan #1 (San Juan 32-5 Unit NP #104/Proposed Sidetrack)

PROJECT DETAILS: SW Sec 25, T32N, R6W

Geodetic System: US State Plane 1983

Datum: North American Datum 1983 Ellipsoid: GRS 1980

Zone: New Mexico Central Zone

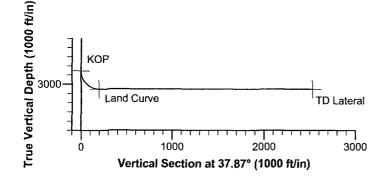
System Datum: Mean Sea Level

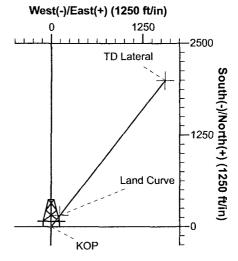


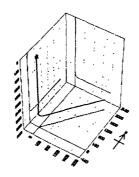
Azımuths to True North Magnetic North: 10.11°

Magnetic Field Strength: 51208.5snT Dip Angle: 63.78° Date: 8/5/2008 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	J
2	2855.0	0.00	0.00	2855.0	0.0	0.0	0.00	0.00	0.0	KOP
3	3169.2	90.01	37.87	3055.0	157.9	122.8	28.65	37.87	200.0	Land Curve
4	5502.5	89.99	37.86	3055.0	2000.0	1555.0	0.00	-137.49	2533.4	TD Lateral







Energen

Planned Wellpath

Company:

SJ BR

Project: SW Sec 25, T32N, R6W

Site:

Eul Canyon

Well: Wellbore: San Juan 32-5 Unit NP #104 Proposed Sidetrack

Design:

Plan #1

Local Co-ordinate Reference:

TVD Reference:

Well San Juan 32-5 Unit NP #104

MD Reference:

KB @ 6425.0ft (Drilling Rig) KB @ 6425.0ft (Drilling Rig)

North Reference:

Survey Calculation Method:

Database:

Minimum Curvature

EDM 2003,16 Single User Db

Project

SW Sec 25, T32N, R6W

Map System: Geo Datum:

US State Plane 1983

Map Zone:

North American Datum 1983

New Mexico Central Zone

System Datum:

Mean Sea Level

True

Site

Eul Canyon

Site Position: From:

Lat/Long

Northing:

2,165,612.97ft

Latitude:

36° 56' 44.592 N 107° 24' 51.264 W

Position Uncertainty:

Easting: Slot Radius: 1,300,206.73ft

Longitude:

Grid Convergence: -0.70 °

Well San Juan 32-5 Unit NP #104

+N/-S

0.0 ft

0.0 ft

Northing:

2,165,612.97 ft 1,300,206.73 ft Easting:

Latitude:

36° 56' 44.592 N

51,208

Position Uncertainty

Well Position

0.0 ft +F/-W 0.0 ft

IGRF200510

Wellhead Elevation:

8/5/2008

6,411.0 ft

10 11

Longitude: **Ground Level:** 107° 24' 51.264 W 6,411.0 ft

Proposed Sidetrack

Magnetics **Model Name** Sample Date

Declination (°)

Dip Angle (°)

Field Strength

Design

Wellbore

Plan #1

Audit Notes:

Version:

Phase:

PROTOTYPE

Tie On Depth:

0.0

63.78

Vertical Section:

Depth From (TVD) (ft)

0.0

+N/-S (ft) 0.0

+E/-W (ft) 0.0

Direction (°) 37.87

Date 8/5/2008 Survey Tool Program Ťο From (ft) (ft)

Survey (Wellbore) **Tool Name** Description

0.0

5,502.5 Plan #1 (Proposed Sidetrack)

Planned Survey										
MD (ft)	TVD (ft)	Inc (°)	Azi (°)	Build (°/100ft)	V. Sec (ft)	N/S (ft)	E/W (ft)			
o.ò	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: Project:

SJ BR

SW Sec 25, T32N, R6W

Site:

Eul Canyon

Well:

San Juan 32-5 Unit NP #104

Wellbore: Design:

Proposed Sidetrack Plan #1

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method: Database:

Well San Juan 32-5 Unit NP #104

KB @ 6425.0ft (Drilling Rig) KB @ 6425.0ft (Drilling Rig)

True

Minimum Curvature

EDM 2003.16 Single User Db

nned Survey		_	_	* · · · · · · · · · · · · · · · · · · ·		1	
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
2,855 0	2,855.0	0.00	0.00	0.00	0.0	0.0	0.0
кор	,			•			
2,860.0	2,860.0	1.43	37.87	28.65	0.1	0.0	0.0
2,880.0	2,879.9	7.16	37.87	28.65	1.6	1.2	1.0
2,900.0	2,899.6	12.89	37.87	28.65	5.0	4.0	3.1
2,920.0	2,918.9	18.62	37 87	28.65	10.5	8 3	6.4
2,940.0	2,937.5	24.35	37.87	28.65	17 8	14.0	10.9
2,960.0	2,955.2	30.08	37.87	28.65	26.9	21.3	16.5
2,980.0	2,972.0	35.81	37.87	28.65	37.8	29.8	23.2
3,000 0	2,987.6	41.54	37.87	28.65	50.3	39.7	30.9
3,020.0	3,001.9	47.27	37.87	28.65	64.3	50 7	39.5
3,040.0	3,014 7	53.00	37.87	28.65	79.6	62.9	48 9
3,060.0	3,025.9	58.73	37.87	28.65	96 2	75.9	59.0
3,080.0	3,035.5	64.46	37.87	28.65	113.8	89.8	69.8
3,100.0	3,043.2	70.19	37.87	28.65	132.2	104.4	81.2
3,120.0	3,049.0	75.92	37.87	28.65	151.3	119.5	92.9
3,140.0	3,052.9	81.65	37.87	28.65	170.9	134.9	104 9
3,160.0	3,054.8	87.38	37.87	28.65	190.8	150.6	117.2
3,169.2	3,055.0	90.01	37.87	28 65	200.0	157 9	122.8
Land Curve							
3,200.0	3,055.0	90.01	37.87	0.00	230.8	182.2	141.7
3,300.0	3,055.0	90.01	37.87	0.00	330.8	261.2	203.1
3,400.0	3,055.0	90.01	37.87	0.00	430.8	340.1	264.5
3,500 0	3,055.0	90.01	37.87	0.00	530.8	419.0	325.9
3,600.0	3,054.9	90.01	37.87	0.00	630.8	498.0	387.3
3,700.0	3,054.9	90.00	37.87	0.00	730.8	576.9	448 7
3,800.0	3,054.9	90.00	37.87	0.00	830.8	655.9	510.0
3,900.0	3,054.9	90.00	37.87	0.00	930.8	734.8	571.4

Energen

Planned Wellpath

Company:

SJ BR

Project:

SW Sec 25, T32N, R6W

Site:

Eul Canyon

Well:

San Juan 32-5 Unit NP #104

Wellbore: Design:

Proposed Sidetrack Plan #1

Local Co-ordinate Reference: **TVD Reference:** MD Reference:

North Reference:

Survey Calculation Method: Database:

Well San Juan 32-5 Unit NP #104

KB @ 6425.0ft (Drilling Rig) KB @ 6425.0ft (Drilling Rig)

True

Minimum Curvature

EDM 2003.16 Single User Db

nned Survey							*
MD (ft)	TVD (ff)	Inc (°)	Azi (°)	Build (°/100ft)	V. Sec (ft)	N/S (ft)	E/W (ft)
4,000.0	3,054.9	90.00	37 87	0.00	1,030.8	813.7	632.8
4,100.0	3,054.9	90.00	37.87	0.00	1,130.8	892.7	694.2
4,200.0	3,054.9	90.00	37.87	0.00	1,230.8	971.6	755.6
4,300.0	3,054.9	90.00	37.86	0.00	1,330.8	1,050.6	817.0
4,400.0	3,054.9	90.00	37.86	0.00	1,430.8	1,129.5	878.3
4,500.0	3,054.9	90.00	37.86	0.00	1,530.8	1,208.5	939.7
4,600.0	3,054.9	90.00	37.86	0.00	1,630.8	1,287.4	1,001.1
4,700.0	3,054.9	90.00	37.86	0.00	1,730.8	1,366.4	1,062.5
4,800.0	3,054.9	90.00	37.86	0.00	1,830.8	1,445.3	1,123.8
4,900.0	3,054.9	90.00	37.86	0 00	1,930.8	1,524.3	1,185 2
5,000.0	3,054.9	90.00	37.86	0.00	2,030.8	1,603.2	1,246.6
5,100.0	3,054.9	89.99	37.86	0 00	2,130.8	1,682.2	1,308.0
5,200.0	3,055.0	89.99	37 86	0.00	2,230.8	1,761.1	1,369.3
5,300.0	3,055.0	89.99	37.86	0.00	2,330 8	1,840.1	1,430.7
5,400.0	3,055.0	89.99	37.86	0.00	2,430.8	1,919 0	1,492.1
5,502.5	3,055.0	89 99	37.86	0.00	2,533.4	2,000.0	1,555.0
TD Lateral							

Targets							,		
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	*,		Longitude
KOP - plan hits target - Point	0.00	0.00	2,855.0	0.0	0.0	2,165,612.97	1,300,206.73	36° 56' 44.592 N	107° 24' 51.264 W
TD Lateral - plan hits target - Point	0.00	0.00	3,055.0	2,000.0	1,555.0	2,167,593 82	1,301,786.05	36° 57' 4.366 N	107° 24' 32.108 W
Land Curve - plan hits target - Point	0.00	0.00	3,055 0	157.9	122.8	2,165,769 36	1,300,331.45	36° 56' 46.153 N	107° 24' 49.751 W

Checked By:	,	Approved By:	Date:	
•		,	 	