Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
AUG 24
Bureau of Land Management
Farmington Field Office

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

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 page 2*

5. Lease Serial No
NMNM 02850

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
San Juan 32-5 Unit # 112S

2. Name of Operator
Energen Resources Corporation

9. API Well No.
30-039-30616

3a. Address
2010 Afton Place, Farmington, NM 87401

3b. Phone No. (*include area code*)
(505) 325-6800

10. Field and Pool, or Exploratory Area
Basin Fruitland Coal

4. Location of Well (*Footage, Sec., T., R., M., or Survey Description*)
SHL: (G) Sec.24, T32N, R6W 2378'FNL & 1573'FEL
BHL: (A) Sec.18, T32N, R5W 760'FNL & 700'FEL

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			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ 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 change to the San Juan 32-5 Unit #112S. The changes will be pertaining to the landing point of the 7" int. casing, the BHL and production hole size:

* Change int. casing setting measured depth (MD) TD to 5319' MD and cement with 735 sks lead followed by 150 sks tail.
* Change the TD of the well to 10,734' (MD) and run the 4 1/2" liner to this depth with a new liner top of approximately 5250' (MD).
* Change the bottom hole footage location to 760'FNL 700'FEL
* Change lateral hole size from 6-1/4" to 6-1/8"

Attached is a revised directional drilling and operations plan.

CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.

RCVD AUG 26 '09
OIL CONS. DIV.
DIST. 3

14. I hereby certify that the foregoing is true and correct
Name (*Printed/Typed*) Jason Kincaid
Title Drilling Engineer
Signature
Date 8/24/2009

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by Troy L Salyers
Title Petroleum Engineer
Date 8/25/2009
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

NMOCD

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.

Energen Will submit Sundry to change Surface casing depth due to 5319' of intermediate

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	[2] Pool Code	[3] Pool Name
30-039-30616	71629	Basin Fruitland Coal

[4] Property Code	[5] Property Name	[6] Well Number
21996	SAN JUAN 32-5 UNIT	112S

[7] OGRID No.	[8] Operator Name	[9] Elevation
162928	ENERGEN RESOURCES CORPORATION	6315'

[10] Surface Location

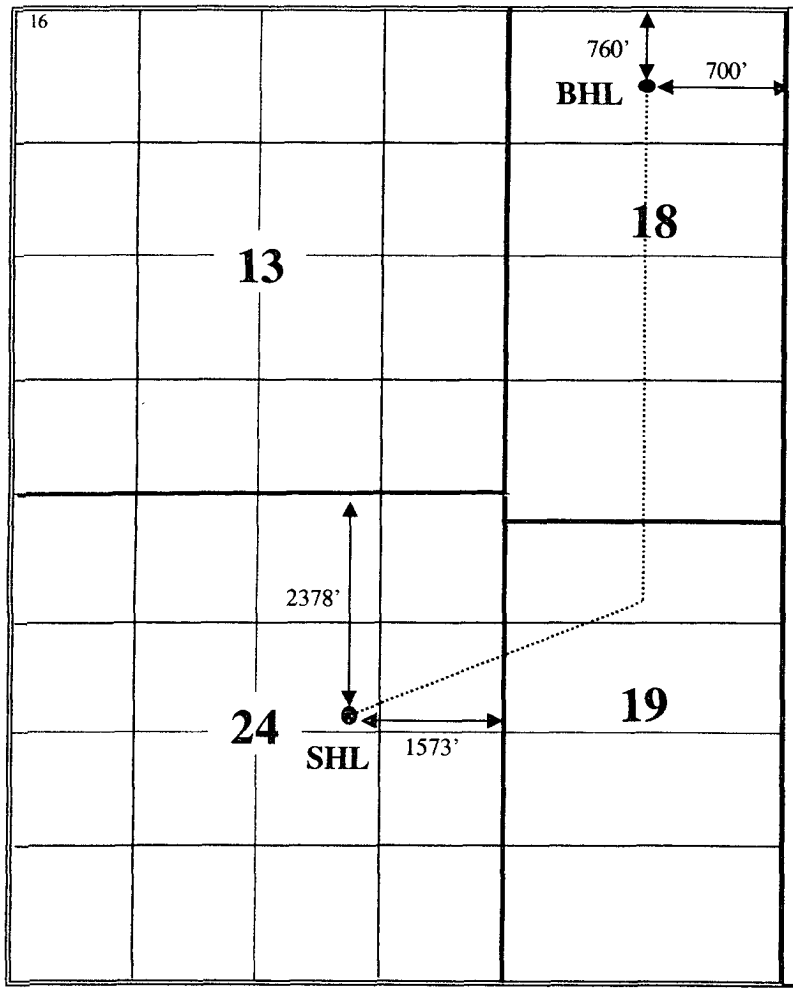
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	24	32N	6W		2378	NORTH	1573	EAST	RIO ARRIBA

[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	18	32N	5W		760	NORTH	700	EAST	RIO ARRIBA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
355.25			R-2319-A NSL-6031-A

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, 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: 8/24/2009

JASON KINCAID
Printed Name

[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.

MAY 14, 2008
Date of Survey

Original Survey Conducted and Recorded By: David Russell

10201
Certificate Number

8/24/2009

ENERGEN RESOURCES

OPERATIONS PLAN

WELL NAME.....San Juan 32-5 Unit #112S
JOB TYPE.....Horizontal Coal
DEPT.....Drilling and Completions

GENERAL INFORMATION

Surface Location	2378 FNL 1573 FEL
S-T-R	(G) Sec.24, T32N, R06W
Bottom Hole Location	760 FNL 700 FEL
S-T-R	(A) Sec.18, T32N, R05W
County, State	Rio Arriba, New Mexico
Elevations	6315' GL
Total Depth	10,734' +/- (MD); 2970' (TVD)
Formation Objective	Basin Fruitland Coal

FORMATION TOPS

San Jose	Surface
Nacimiento	1080' (TVD)
Ojo Alamo Ss	2290' (TVD)
Kirtland Sh	2398' (TVD)
Fruitland Fm	2780' (TVD)
Top Coal Interval	2960' (TVD) 4900' (MD)
Base Coal	2982' (TVD)
Total Depth	2970' (TVD), 10,734' (MD)

DRILLING

Surface Wellbore: 12-1/4" wellbore will be drilled with spud mud.
Intermediate Wellbore: 8-3/4" wellbore will be drilled with a Low Solids Non-Dispersed mud. 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 Wellbore: 6-1/8" wellbore will be drilled with fresh water and $CaCl_2$ as needed for wellbore control. Anticipated BHP can be as high as 1500 psi.

Projected KOP is 1500' TVD with 4.40°/100' doglegs.

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. **Pressure test BOP to 250 psi for 15 min and 2000 psi for 15 min.**

Logging Program:

Open hole logs: None
Mudlogs: 2948' TVD, 4700' MD to TD
Surveys: Surface to KOP every 500' and a minimum of every 200' for directional.

ENERGEN RESOURCES

8/24/2009

CASING, TUBING & CASING EQUIPMENT

String	Start Depth	End Depth	Wellbore	Size	Wt	Grade
Surface	0	300 360	12-1/4"	9-5/8"	32.3 lb/ft	H-40 ST&C
Intermediate TVD	0 0	5319 2970	8-3/4"	7"	23 lb/ft	J-55 LT&C
Prod. Liner TVD	5250 2969	10734 2970	6-1/8"	4-1/2"	11.6 lb/ft	J-55 LT&C
Tubing	0	5200	none	2-3/8"	4.7 lb/ft	J-55

Casing Equipment:

Surface Casing: Texas Pattern Guide Shoe on bottom of first joint and an insert float valve on top of first joint. Casing centralization with 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.

Liner: Bull nose guide shoe on bottom of first joint, H-latch drop off liner hanger tool.

WELLHEAD

11" 3000 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: 170 sks Type V with 2.0 % $CaCl_2$ and ¼ #/sk Flocele (15.6 ppg, 1.18 ft^3/sk 200 ~~159~~ ft^3 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 735 sks 65/35 with 6.0 % Bentonite, 2.0 % $CaCl_2$, 10 #/sk Gilsonite, and ½ #/sk Flocele (12.3 ppg, 1.93 ft^3/sk) and a tail of 150 sks Class G with ¼ #/sk Flocele (15.6 ppg, 1.18 ft^3/sk). (1600 ft^3 of slurry, 100% excess to circulate to surface). WOC 12 hours. Test casing to 1200 psi for 30 min. ✓

Production Liner: NO CEMENT, Open Hole Completion
Set slips with full string weight

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. BHP can be as high as 1500 psi.
5) This gas is dedicated.

ENERGEN
RESOURCES

Energen Resources

Carson National Forest Sec.24-T32N-R06W
Eul Canyon
San Juan 32-5 Unit #112S
Horizontal Coal

Plan: Final Plan

2009 Drilling Program

Prepared By: Jason L. Kincaid

21 August, 2009

ENERGEN RESOURCES

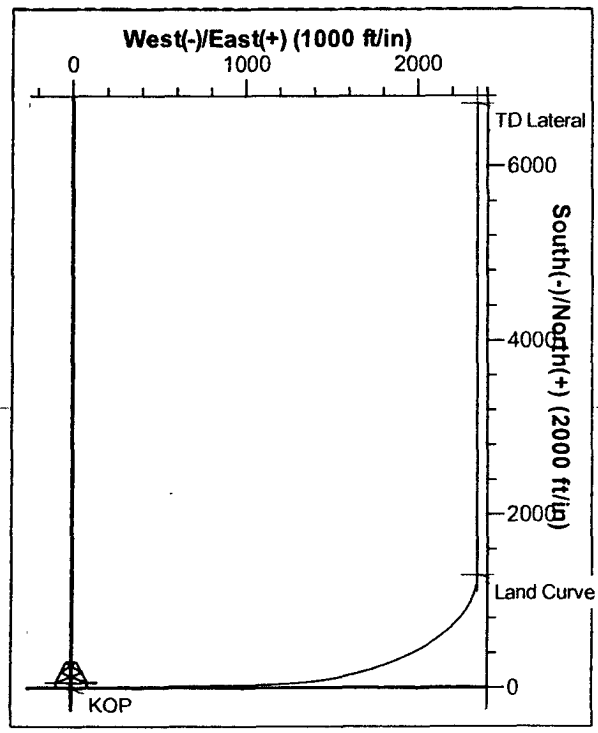
Project: Carson National Forest Sec.24-T32N-R06W
Site: Eul Canyon
Well: San Juan 32-5 Unit #112S
Wellbore: Horizontal Coal

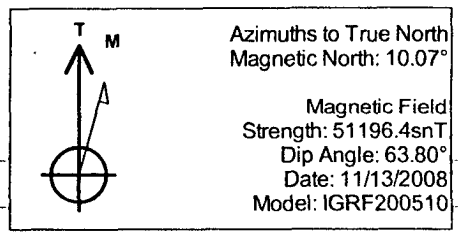
PROJECT DETAILS:

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

SECTION DETAILS

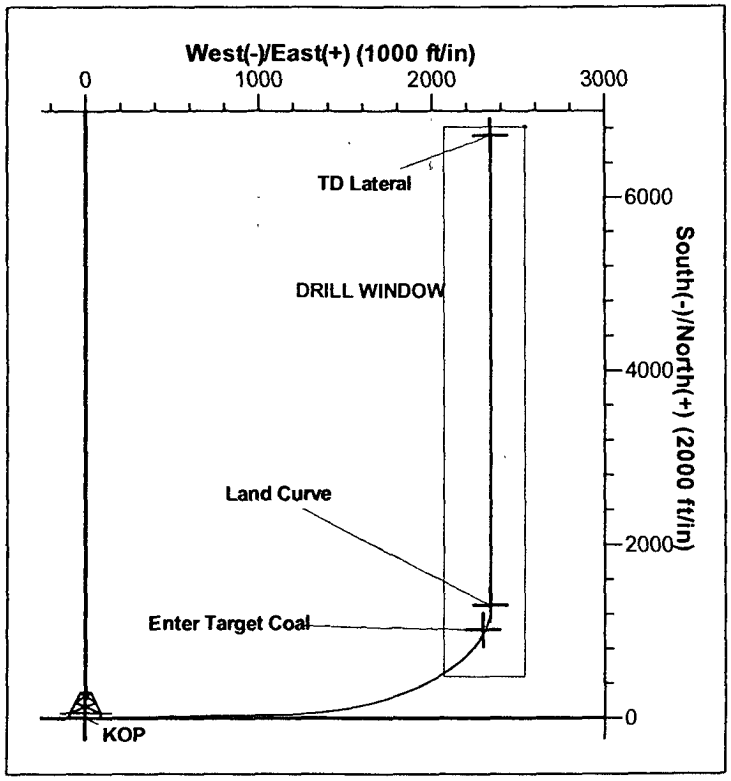
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	KOP
3	3357.2	81.64	88.11	2789.5	36.7	1113.4	4.40	88.11	401.2	
4	3377.3	81.64	88.11	2792.4	37.3	1133.2	0.00	0.00	408.4	
5	5319.2	90.00	0.00	2970.0	1299.1	2341.5	4.54	-89.73	1997.6	Land Curve
6	10734.7	90.00	0.00	2970.0	6714.6	2341.5	0.00	0.00	7111.2	TD Lateral

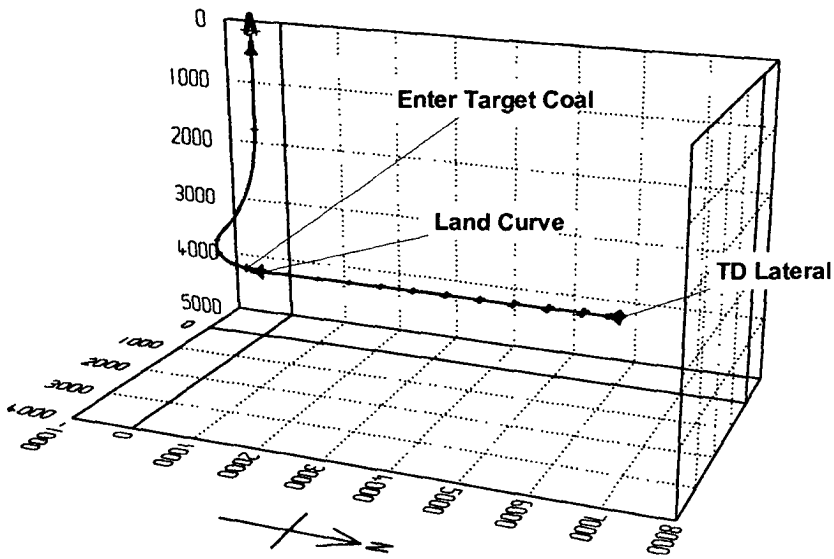




ENERGEN RESOURCES

Project: Carson National Forest Sec.24-T32N-R06W
Site: Eul Canyon
Well: San Juan 32-5 Unit #112S
Wellbore: Horizontal Coal
Design: Final Plan





ENERGEN RESOURCES

Energen Resources

2009 Drilling Program

Company:	Energen Resources	**Local Co-ordinate Reference:**	Well San Juan 32-5 Unit #112S
Project:	Carson National Forest Sec.24-T32N-R06W	**TVD Reference:**	KB @ 6330.0ft (Drilling Rig)
Site:	Eul Canyon	**MD Reference:**	KB @ 6330.0ft (Drilling Rig)
Well:	San Juan 32-5 Unit #112S	**North Reference:**	True
Wellbore:	Horizontal Coal	**Survey Calculation Method:**	Minimum Curvature
Design:	Final Plan	**Database:**	EDM 2003.16 Single User Db

Project Carson National Forest Sec.24-T32N-R06W

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

Site Eul Canyon

Site Position:		**Northing:**	2,173,281.10 ft	**Latitude:**	36° 58' 0.732 N
From:	Lat/Long	**Easting:**	1,302,944.74 ft	**Longitude:**	107° 24' 18.684 W
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	-0.69 °

Well San Juan 32-5 Unit #112S

Well Position	**+N/-S**	0.0 ft	**Northing:**	2,173,281.10 ft	**Latitude:**	36° 58' 0.732 N
	+E/-W	0.0 ft	**Easting:**	1,302,944.74 ft	**Longitude:**	107° 24' 18.684 W
Position Uncertainty		0 0 ft	**Wellhead Elevation:**	6,315 0 ft	**Ground Level:**	6,315.0 ft

Wellbore Horizontal Coal

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	11/13/2008	10.07	63.80	51,196

Design Final Plan

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	19 22	

Survey Tool Program **Date** 8/21/2009

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0 0	10,734.7	Final Plan (Horizontal Coal)	MWD	MWD - Standard

Planned Survey

MD (ft)	TVD (ft)	Inc (°)	Azi (°)	Build (°/100ft)	N/S (ft)	E/W (ft)	V. Sec (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

Company:	Energen Resources	**Local Co-ordinate Reference:**	Well San Juan 32-5 Unit #112S
Project:	Carson National Forest Sec.24-T32N-R06W	**TVD Reference:**	KB @ 6330.0ft (Drilling Rig)
Site:	Eul Canyon	**MD Reference:**	KB @ 6330.0ft (Drilling Rig)
Well:	San Juan 32-5 Unit #112S	**North Reference:**	True
Wellbore:	Horizontal Coal	**Survey Calculation Method:**	Minimum Curvature
Design:	Final Plan	**Database:**	EDM 2003.16 Single User Db

Planned Survey

MD (ft)	TVD (ft)	Inc (°)	Azi (°)	Build (°/100ft)	N/S (ft)	E/W (ft)	V. Sec (ft)
1,080 0	1,080.0	0.00	0.00	0.00	0.0	0.0	0 0
			Nacimiento				
1,100 0	1,100.0	0.00	0.00	0.00	0.0	0 0	0.0
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
			KOP				
1,600.0	1,599 9	4 40	88.11	4.40	0.1	3.8	1.4
1,700.0	1,699.2	8.79	88.11	4.40	0.5	15.3	5.5
1,800.0	1,797.4	13.19	88.11	4.40	1.1	34.4	12.4
1,900.0	1,893.8	17.58	88.11	4.40	2.0	60 9	21.9
2,000.0	1,987.8	21.98	88.11	4.40	3.1	94.7	34 1
2,100.0	2,079.0	26.38	88 11	4.40	4.5	135.6	48.9
2,200.0	2,166.8	30 77	88.11	4.40	6 0	183.4	66 1
2,300.0	2,250.7	35.17	88.11	4.40	7.8	237 8	85.7
2,348.7	2,290.0	37.31	88.11	4 40	8.8	266.6	96.1
			Ojo Alamo				
2,400.0	2,330.2	39.56	88.11	4.40	9.8	298 4	107.5
2,490 7	2,398.0	43.55	88.11	4.40	11.8	358 5	129.2
			Kirtland				
2,500.0	2,404.7	43.96	88 11	4.40	12.0	365 0	131.5
2,600.0	2,474 0	48.36	88.11	4.40	14.4	437 0	157.5
2,700.0	2,537 5	52.75	88 11	4.40	16 9	514.2	185.3
2,800.0	2,594.9	57.15	88.11	4.40	19 6	596.0	214.8
2,900.0	2,645.9	61.54	88.11	4.40	22.5	682.0	245.8
3,000.0	2,690.1	65.94	88.11	4.40	25.4	771.6	278.1
3,100 0	2,727.3	70.34	88.11	4.40	28.5	864.3	311.5
3,200 0	2,757.4	74.73	88 11	4.40	31.6	959 6	345.8
3,300.0	2,780 0	79.13	88.11	4 40	34.8	1,057 0	380 9
3,300.2	2,780.0	79.13	88.11	0.00	34 8	1,057.2	381.0
			Fruitland				
3,357.2	2,789.5	81.64	88.11	4 41	36.7	1,113.4	401.2
3,377.3	2,792.4	81.64	88.11	0.00	37.3	1,133 2	408.4
3,400 0	2,795.7	81.65	87 07	0 03	38.3	1,155 6	416 7
3,500.0	2,810.2	81.71	82.48	0.06	47.3	1,254.1	457.6
3,600.0	2,824.5	81.82	77.90	0.11	64.1	1,351.6	505.6
3,700.0	2,838.6	81.99	73.32	0.16	88.7	1,447 5	560.4
3,800 0	2,852.4	82.20	68.74	0.21	120 9	1,541.2	621.6
3,900 0	2,865.7	82.47	64.17	0.26	160.5	1,632.0	688.9
4,000.0	2,878.6	82.78	59.60	0.31	207.2	1,719.4	761.8
4,100.0	2,890.9	83 13	55.05	0 36	260 8	1,802.9	839.9
4,200.0	2,902 5	83.53	50.49	0.40	320.9	1,882.0	922.7
4,300.0	2,913.4	83.97	45.95	0.44	387.1	1,956.1	1,009.6
4,400.0	2,923.5	84.45	41.41	0.48	459 0	2,024.8	1,100.1

Company:	Energen Resources	**Local Co-ordinate Reference:**	Well San Juan 32-5 Unit #112S
Project:	Carson National Forest Sec.24-T32N-R06W	**TVD Reference:**	KB @ 6330.0ft (Drilling Rig)
Site:	Eul Canyon	**MD Reference:**	KB @ 6330.0ft (Drilling Rig)
Well:	San Juan 32-5 Unit #112S	**North Reference:**	True
Wellbore:	Horizontal Coal	**Survey Calculation Method:**	Minimum Curvature
Design:	Final Plan	**Database:**	EDM 2003.16 Single User Db

Planned Survey

MD (ft)	TVD (ft)	Inc (°)	Azi (°)	Build (°/100ft)	N/S (ft)	E/W (ft)	V. Sec (ft)
4,500 0	2,932.7	84.96	36.88	0 51	536 2	2,087.7	1,193.7
4,600.0	2,941.0	85.50	32.36	0.54	618.2	2,144 3	1,289.8
4,700.0	2,948.4	86 07	27 85	0 57	704 5	2,194 3	1,387 7
4,800.0	2,954.7	86.67	23.34	0.59	794.4	2,237.4	1,486.8
4,900.0	2,960.0	87.28	18.84	0.62	887.6	2,273.3	1,586 6
4,900.5	2,960.0	87.28	18 84	0.00	888.1	2,273.5	1,587.1
			Top Coal				
5,000.0	2,964.2	87 92	14.34	0 64	983 3	2,301.8	1,686.4
5,100 0	2,967.2	88.56	9.84	0.65	1,081 0	2,322.7	1,785.6
5,200 0	2,969.2	89 21	5.35	0 65	1,180.1	2,335 9	1,883 5
5,300 0	2,970.0	89.87	0.86	0.66	1,279.9	2,341 4	1,979.5
5,319.2	2,970.0	90.00	0.00	0.66	1,299.1	2,341.5	1,997.6
			Land Curve				
5,400.0	2,970.0	90.00	0.00	0.00	1,379.9	2,341.5	2,074.0
5,500.0	2,970.0	90.00	0.00	0.00	1,479.9	2,341.5	2,168.4
5,600 0	2,970.0	90.00	0.00	0 00	1,579.9	2,341.5	2,262.8
5,700.0	2,970.0	90.00	0.00	0.00	1,679.9	2,341.5	2,357.2
5,800.0	2,970.0	90.00	0.00	0 00	1,779.9	2,341 5	2,451 7
5,900 0	2,970.0	90 00	0.00	0 00	1,879.9	2,341.5	2,546.1
6,000.0	2,970.0	90.00	0.00	0.00	1,979 9	2,341.5	2,640.5
6,100.0	2,970.0	90.00	0.00	0.00	2,079.9	2,341.5	2,734.9
6,200.0	2,970 0	90.00	0 00	0 00	2,179 9	2,341.5	2,829.4
6,300.0	2,970.0	90 00	0.00	0.00	2,279.9	2,341.5	2,923.8
6,400.0	2,970 0	90.00	0 00	0.00	2,379 9	2,341.5	3,018.2
6,500 0	2,970.0	90 00	0.00	0.00	2,479.9	2,341.5	3,112.6
6,600 0	2,970.0	90.00	0.00	0 00	2,579.9	2,341.5	3,207.1
6,700.0	2,970.0	90.00	0.00	0.00	2,679.9	2,341 5	3,301 5
6,800 0	2,970.0	90.00	0.00	0 00	2,779.9	2,341.5	3,395.9
6,900.0	2,970 0	90.00	0 00	0.00	2,879.9	2,341.5	3,490.3
7,000 0	2,970.0	90.00	0.00	0 00	2,979.9	2,341.5	3,584.7
7,100.0	2,970 0	90.00	0 00	0.00	3,079 9	2,341 5	3,679.2
7,200.0	2,970.0	90.00	0.00	0.00	3,179 9	2,341.5	3,773.6
7,300.0	2,970.0	90.00	0.00	0.00	3,279.9	2,341.5	3,868.0
7,400.0	2,970.0	90.00	0.00	0.00	3,379.9	2,341.5	3,962.4
7,500 0	2,970 0	90 00	0.00	0.00	3,479.9	2,341 5	4,056 9
7,600 0	2,970 0	90.00	0.00	0.00	3,579 9	2,341.5	4,151.3
7,700 0	2,970 0	90.00	0.00	0.00	3,679.9	2,341.5	4,245.7
7,800.0	2,970.0	90.00	0.00	0.00	3,779 9	2,341.5	4,340.1
7,900 0	2,970.0	90 00	0.00	0.00	3,879.9	2,341.5	4,434 6
8,000.0	2,970.0	90.00	0.00	0.00	3,979.9	2,341 5	4,529.0
8,100.0	2,970.0	90.00	0.00	0.00	4,079 9	2,341 5	4,623.4
8,200.0	2,970.0	90.00	0.00	0.00	4,179.9	2,341 5	4,717 8
8,300 0	2,970.0	90.00	0.00	0.00	4,279 9	2,341.5	4,812 3
8,400 0	2,970.0	90.00	0 00	0.00	4,379.9	2,341.5	4,906.7
8,500.0	2,970.0	90 00	0.00	0.00	4,479.9	2,341.5	5,001.1

Company:	Energen Resources	**Local Co-ordinate Reference:**	Well San Juan 32-5 Unit #112S
Project:	Carson National Forest Sec.24-T32N-R06W	**TVD Reference:**	KB @ 6330.0ft (Drilling Rig)
Site:	Eul Canyon	**MD Reference:**	KB @ 6330.0ft (Drilling Rig)
Well:	San Juan 32-5 Unit #112S	**North Reference:**	True
Wellbore:	Horizontal Coal	**Survey Calculation Method:**	Minimum Curvature
Design:	Final Plan	**Database:**	EDM 2003.16 Single User Db

Planned Survey

MD (ft)	TVD (ft)	Inc (°)	Azi (°)	Build (°/100ft)	N/S (ft)	E/W (ft)	V. Sec (ft)
8,600.0	2,970 0	90.00	0.00	0.00	4,579.9	2,341.5	5,095.5
8,700.0	2,970.0	90.00	0.00	0.00	4,679 9	2,341.5	5,189 9
8,800.0	2,970.0	90.00	0.00	0 00	4,779.9	2,341.5	5,284.4
8,900.0	2,970 0	90.00	0.00	0.00	4,879.9	2,341.5	5,378.8
9,000.0	2,970.0	90.00	0 00	0.00	4,979.9	2,341.5	5,473.2
9,100.0	2,970.0	90.00	0.00	0.00	5,079 9	2,341.5	5,567.6
9,200 0	2,970 0	90.00	0.00	0.00	5,179.9	2,341.5	5,662.1
9,300 0	2,970.0	90.00	0.00	0.00	5,279.9	2,341.5	5,756 5
9,400.0	2,970.0	90 00	0 00	0.00	5,379.9	2,341.5	5,850.9
9,500 0	2,970.0	90.00	0 00	0.00	5,479.9	2,341.5	5,945 3
9,600.0	2,970.0	90 00	0.00	0 00	5,579 9	2,341.5	6,039 8
9,700.0	2,970.0	90.00	0 00	0.00	5,679.9	2,341 5	6,134.2
9,800.0	2,970 0	90.00	0.00	0.00	5,779.9	2,341.5	6,228.6
9,900.0	2,970.0	90 00	0.00	0.00	5,879.9	2,341 5	6,323.0
10,000.0	2,970 0	90.00	0.00	0 00	5,979.9	2,341.5	6,417 5
10,100.0	2,970.0	90.00	0.00	0.00	6,079.9	2,341 5	6,511.9
10,200.0	2,970.0	90 00	0.00	0.00	6,179.9	2,341 5	6,606.3
10,300.0	2,970.0	90.00	0.00	0.00	6,279.9	2,341.5	6,700.7
10,400.0	2,970.0	90 00	0.00	0.00	6,379 9	2,341.5	6,795.1
10,500 0	2,970.0	90.00	0.00	0 00	6,479.9	2,341 5	6,889.6
10,600.0	2,970.0	90.00	0.00	0.00	6,579.9	2,341.5	6,984.0
10,700.0	2,970.0	90.00	0.00	0 00	6,679.9	2,341.5	7,078.4
10,734.7	2,970.0	90 00	0 00	0.00	6,714.6	2,341.5	7,111.2
			TD Lateral				

ENERGEN RESOURCES

Energen Resources

2009 Drilling Program

Company:	Energen Resources	**Local Co-ordinate Reference:**	Well San Juan 32-5 Unit #112S
Project:	Carson National Forest Sec.24-T32N-R06W	**TVD Reference:**	KB @ 6330.0ft (Drilling Rig)
Site:	Eul Canyon	**MD Reference:**	KB @ 6330.0ft (Drilling Rig)
Well:	San Juan 32-5 Unit #112S	**North Reference:**	True
Wellbore:	Horizontal Coal	**Survey Calculation Method:**	Minimum Curvature
Design:	Final Plan	**Database:**	EDM 2003.16 Single User Db

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TD Lateral - plan hits target - Point	0.00	0 00	2,970.0	6,714.6	2,341.5	2,179,966 81	1,305,367.49	36° 59' 7.119 N	107° 23' 49 826 W
KOP - plan hits target - Point	0 00	0.00	1,500.0	0.0	0 0	2,173,281.10	1,302,944.74	36° 58' 0.732 N	107° 24' 18.684 W
Enter Target Coal - plan misses by 10 6ft at 5032.5ft MD (2965.3 TVD, 1014 9 N, 2309.4 E) - Point	0.00	0 00	2,960.0	1,017.0	2,300.5	2,174,270.13	1,305,257.41	36° 58' 10.786 N	107° 23' 50.337 W
Land Curve - plan hits target - Point	0.00	0 00	2,970.0	1,299.1	2,341.5	2,174,551 71	1,305,301 82	36° 58' 13.575 N	107° 23' 49.831 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
300 0	300.0	SURFACE	9-5/8	12-1/4
5,319.0	2,970.0	INTERMEDIATE	7	8-3/4
10,734 0	2,970.0	LINER	4-1/2	6-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,080.0	1,080 0	Nacimiento		0 00	
2,348 7	2,290.0	Ojo Alamo		0 00	
3,300.2	2,780.0	Fruitland		0.00	
	2,982.0	Base Coal	Coal	0.00	
4,900.5	2,960.0	Top Coal	Coal	0.00	
2,490.7	2,398.0	Kirtland		0.00	

Checked By: _____ Approved By: _____ Date: _____