Form 3160-3
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
DEC 15 2008
Bureau of Land Management
Farmington Field Office

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. ~~NMSF 080657~~ NMNM02850

1a. Type of Work [X] DRILL [ ] REENTER

6. If Indian, Allotee or Tribe Name

1b Type of Well [ ] Oil Well [X] Gas Well [ ] Other [ ] Single Zone [ ] Multiple Zone

7. Unit or CA Agreement Name and No.

2. Name of Operator
Energen Resources Corporation

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

3a. Address
2010 Afton Place Farmington, New Mexico 87401

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

9. API Well No.
30-039-30616

4. Location of Well *(Report location clearly and in accordance with any State equirements)**

At surface 2378'FNL, 1573'FEL

10. Field and Pool, or Exploratory
Basin Fruitland Coal

At proposed prod. zone 760'FNL, 760'FEL (D) Sec 18, T32N, R05W

11. Sec., T., R., M., or Blk. and Survey or Area
(G) Sec 24, T32N R06W

14. Distance in miles and direction from nearest town or post office*
Approx 9 miles SE Arboles Co

12. County or Parish
Rio Arriba

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any)
760'

16. No. of Acres in lease
177.17
~~964.81~~

17. Spacing Unit dedicated to this well
all Sec 18, 19 355.25
(E/2E/2)
18-32N-5W Lots 1-4
19-32N-5W Lots 1-4
(E/2E/2)

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
75'

19. Proposed Depth
10904'MD

20. BLM/BIA Bond No. on file
RCVD APR 22 '09
OIL CONS. DIV.

21. Elevations (Show whether DF, KDB, RT, GL, etc.
6315' GL

22. Approximate date work will start*
6/1/2009

23. Estimated duration
~~28 days~~
DIST. 3

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the BLM

25. Signature | Name *(Printed/Typed)* Jason Kincaid | Date 11/14/08

Title
Drilling Engineer

Approved by *(Signature)* | Name *(Printed/Typed)* | Date 4/21/09

Title AFM | Office FFO

Application approval 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.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowlingly 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.

(Continued on page 2)

NOTIFY AZTEC OCD 24 HRS PRIOR TO CASING & CEMENT

A COMPLETE 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.

Hold C104 for Directional Survey and "As Drilled" plat

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

NMOCD

HOLD C104 FOR NSL

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

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

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

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department

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Farmington Field Office

Form C-102
Revised October 12, 2005

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

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-039-30016	71629	BASIN FRUITLAND COAL

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

[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

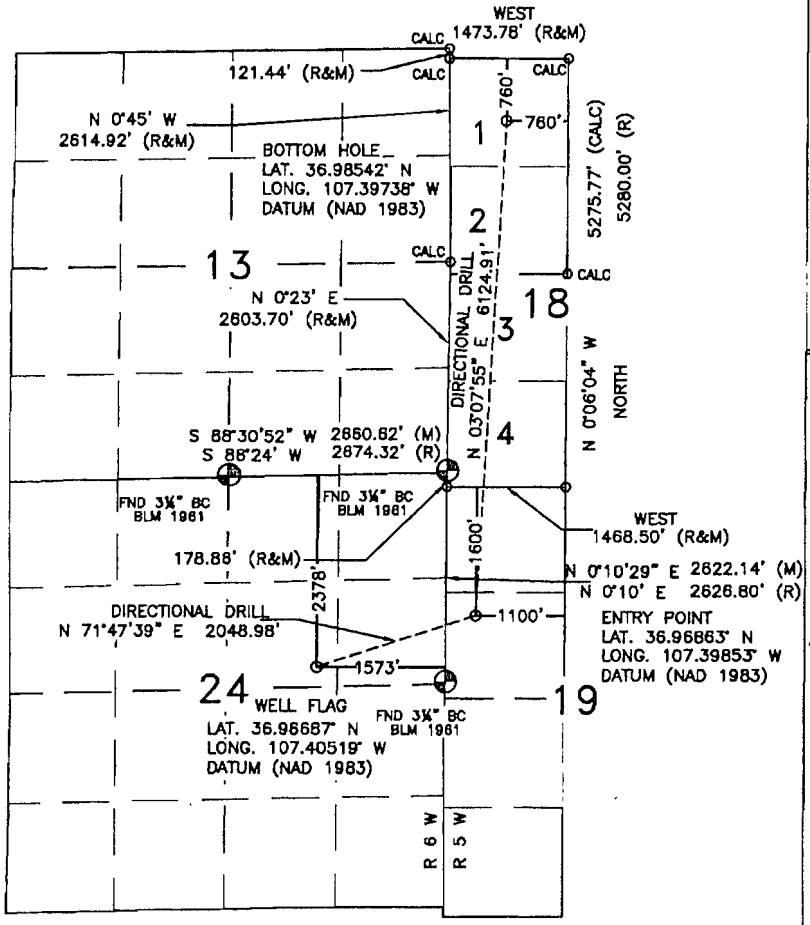
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D A	18	32N	5W	1	760'	NORTH	760'	EAST	RIO ARRIBA

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

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 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 or a compulsory pooling order heretofore entered by the division.

Signature — Date: 11-14-08

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

Signature and Seal of Professional Surveyor:

DAVID R. RUSSELL
NEW MEXICO
10201
REGISTERED PROFESSIONAL LAND SURVEYOR

DAVID RUSSELL
Certificate Number 10201

12/17/2008

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 760 FWL
S-T-R	(D) Sec.18, T32N, R05W
County, State	Rio Arriba, New Mexico
Elevations	6315' GL
Total Depth	10,839' +/- (MD); 2982' (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) 4466' (MD)
Base Coal	2982' (TVD)
Total Depth	2982' (TVD), 10,839' (MD)

DRILLING

Surface Wellbore: wellbore will be drilled with spud mud.
Intermediate Wellbore: wellbore will be drilled with a Low Solids Non-Dispersed mud with densities expected to range from 8.8 ppg to 9.2 ppg, Primary weighting and viscosifing additives used will be barite and bentonite.
Production Wellbore: 6 ¼" wellbore will be drilled with produced Fruitland Coal water and brine ($CaCl_2$ or NaCl) water as needed for wellbore control.
Projected KOP is 1500' TVD with 5.03°/100' doglegs. Anticipated BHP is 1500 psi.

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: 2900' TVD, 3800' MD to TD
Surveys: Surface to KOP every 500' and a minimum of every 200' for directional.

12/17/2008

ENERGEN RESOURCES

CASING, TUBING & CASING EQUIPMENT

String	Start Depth	End Depth	Wellbore	Size	Wt	Grade
Surface	0	300	12-1/4"	9-5/8"	32.3 lb/ft	H-40 ST&C
Intermediate TVD	0 0	4715 2970	8-3/4"	7"	23 lb/ft	J-55 LT&C
Prod. Liner TVD	4700 3082	10840 2970	6-1/4"	4-1/2"	11.6 lb/ft	J-55 LT&C
Tubing	0	4600	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: 175 sks Type V with 2.0 % $CaCl_2$ and ¼ #/sk Flocele (15.6 ppg, 1.18 ft^3/sk 206.5 ft^3 of slurry to circulate to surface). WOC 12 hours. Pressure test surface casing to 750 psi for 30 min. Nipple up BOP after WOC. Test BOP to 250 psi low, 1200 psi high for 15 min each. Test choke manifold to 1200 psi for 30 min.

Intermediate Casing: Depending on wellbore conditions, cement may consist of 700 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). (1528 ft^3 of slurry to circulate to surface). WOC 12 hours. Test casing to 1200 psi for 30 min. Test BOP to 250 psi low, 1200 psi high for 15 min each. Test choke manifold 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 2000 psi.
5) This gas is dedicated.

ENERGEN RESOURCES

Project: Carson National Forest Sec.24-T32N
Site: Eul Canyon
Well: San Juan 32-5 Unit #112S
Wellbore: Horizontal Coal
Plan: Plan #2 (San Juan 32-5 Unit #112S/Horizontal Coal)

T
M
Azimuths to True North
Magnetic North: 10.07°

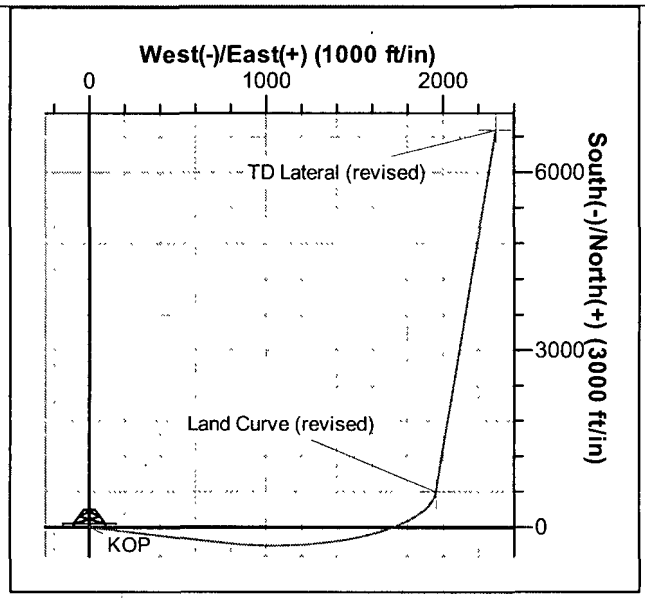
Magnetic Field
Strength: 51196 4snT
Dip Angle: 63.80°
Date: 11/13/2008
Model: IGRF200510

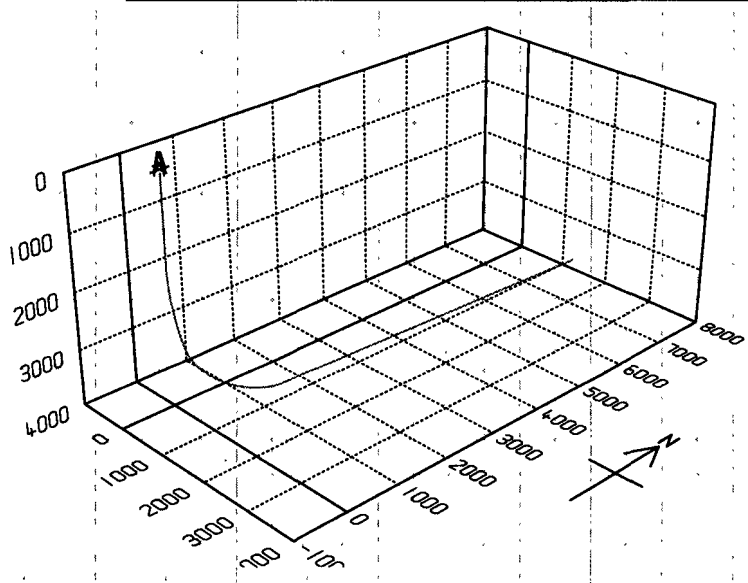
SECTION DETAILS

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	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	KOP
3	2936.7	72.32	109.36	2584.4	-262.7	747.7	5.03	109.36	-6.3	
4	2941.7	72.32	109.36	2585.9	-264.3	752.3	0.00	0.00	-6.3	
5	4714.3	90.00	3.18	2970.0	599.1	1959.4	5.95	-95.03	1201.6	Land Curve (revised)
6	10839.2	90.00	3.18	2970.0	6714.6	2299.4	0.00	0.00	7097.4	TD Lateral (revised)

PROJECT DETAILS:

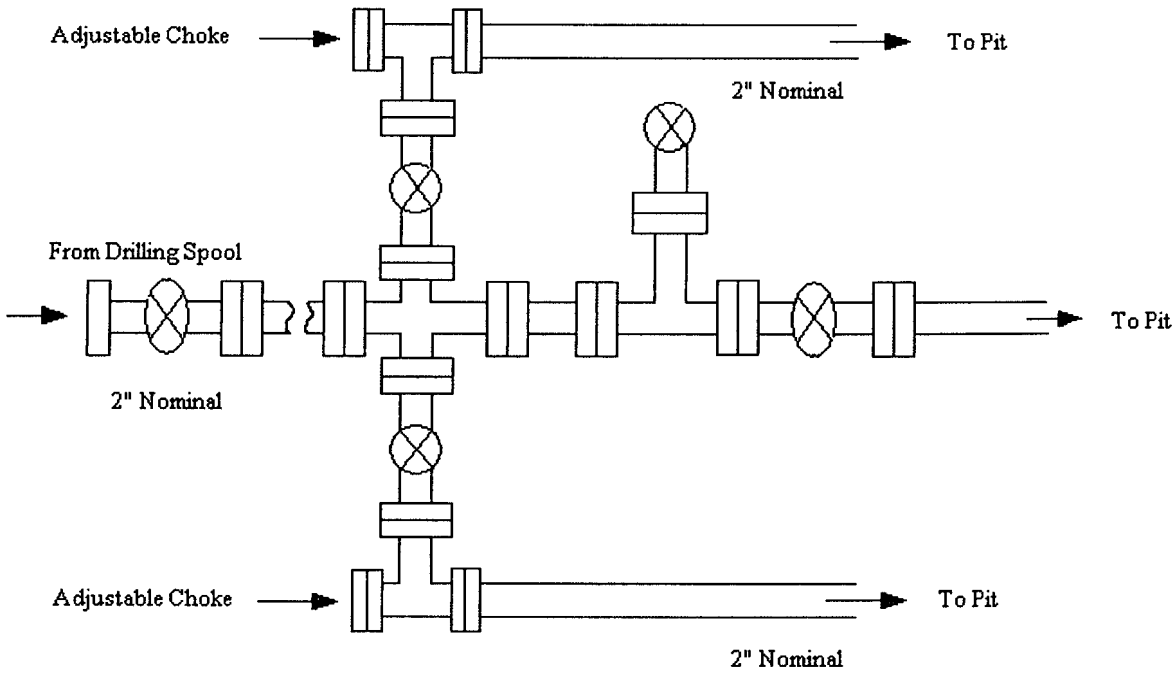
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Central Zone





Energen Resources Corporation

Typical 2000 psi Choke Manifold Configuration



Choke manifold installed from surface to TD

Energen Resources Corporation

Typical BOP Configuration for Gas Drilling