

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FEB 08 2011

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. JICARILLA APACHE 97	
1b. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name JICARILLA APACHE	
2. Name of Operator Energen Resources Corporation		7. Unit or CA Agreement Name and No.	
3a. Address 2010 Afton Place Farmington, New Mexico 87401		8. Lease Name and Well No. Jicarilla 97 #6M	
3b. Phone No. (include area code) (505)325-6800		9. API Well No. 30-039-31025	
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface (L) Sec.07-T26N-R03W : 2.425' FSL. 680' FWL At proposed prod. zone		10. Field and Pool, or Exploratory Blanco Mesaverde/Basin Dakota	
14. Distance in miles and direction from nearest town or post office* 20 miles northwest of Lindrith		11. Sec., T., R., M., or Blk. and Survey or Area Sec. 07-T26N-R03W	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 680'		12. County or Parish Rio Arriba	
16. No. of Acres in lease 2560.00 640		13. State NM	
17. Spacing Unit dedicated to this well 320.00 305.3 W/2		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1,280'	
19. Proposed Depth 8,250' MD		20. BLM/BIA Bond on file NOV 4 '11 OIL CONS. DIV. DIST. 3	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6.903' GL		22. Approximate date work will start* 04/01/2011	
		23. Estimated duration 15 days	

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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 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). | 6. Such other site specific information and/or plans as may be required by the BLM |

25. Signature 	Name (Printed/Typed) Andrew Soto	Date 2/4/2011
Title Drilling Engineer		
Approved by (Signature) 	Name (Printed/Typed)	Date 4/29/11
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 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.

(Continued on page 2)

**NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT**

*(Instructions on page 2)

JUN 02 2011

AV NMOCD

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
1825 N. French Dr., Hobbs, N.M. 88240

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised July 16, 2010

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

Submit one copy to appropriate
District Office

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

OIL CONSERVATION DIVISION

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-31025	² Pool Code 72319/71599	³ Pool Name Blanco Mesaverde / BASIN DAKOTA
⁴ Property Code 21939	⁵ Property Name JICARILLA 97	⁶ Well Number 6M
⁷ GRID No. 162928	⁸ Operator Name ENERGEN RESOURCES CORPORATION	⁹ Elevation 6903'

¹⁰ Surface Location

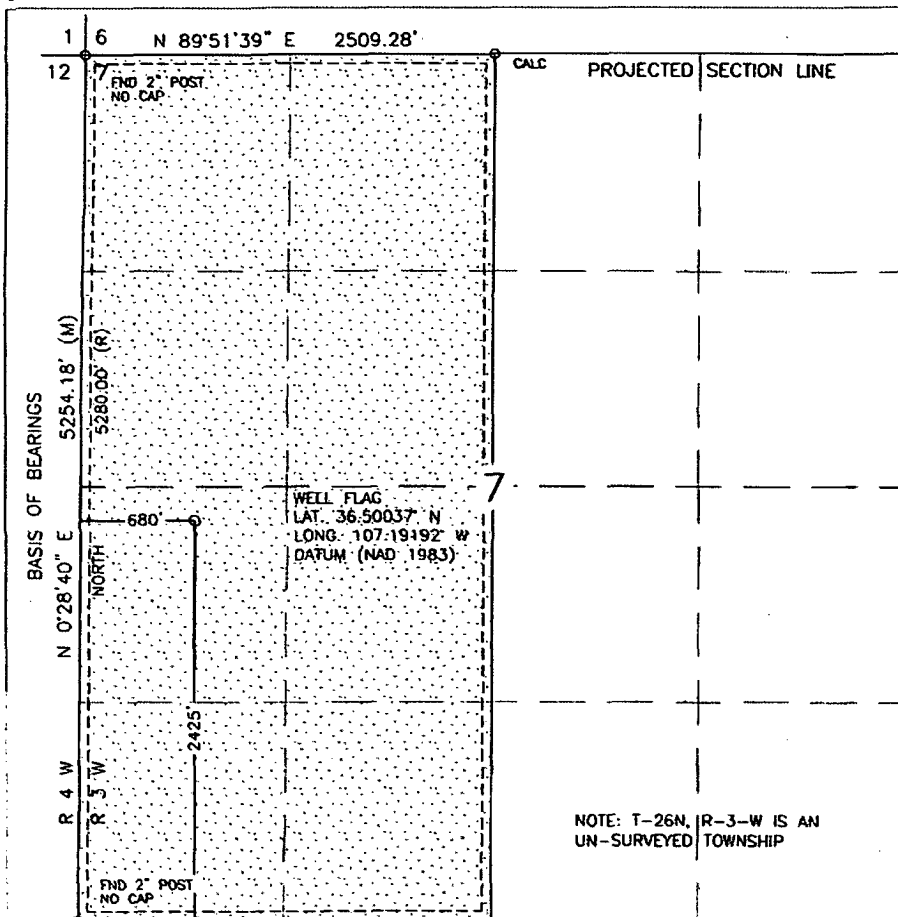
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	7	26N	3W		2425'	SOUTH	680'	WEST	RIO ARriba

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
¹² Dedicated Acres 305.30 Acres - (W/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

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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: *Andrew Soto* Date: 3-31-11
Printed Name: Andrew Soto
E-mail Address: asoto@energen.com

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.

OCTOBER 14, 2010

Date of Survey

Signature and Seal of Professional Surveyor:

David Russell
DAVID R. RUSSELL
REGISTERED PROFESSIONAL LAND SURVEYOR
NEW MEXICO
10201

Certificate Number: 10201

2/7/2011



OPERATIONS PLAN

WELL NAME.....Jicarilla 97 #6M
JOB TYPE.....Vertical Blanco Mesaverde/Basin Dakota
DEPT.....Drilling and Completions
PREPARED BY.....Andrew Soto

GENERAL INFORMATION

Surface Location	2,425' FSL 680' FWL
S-T-R	(L) Sec. 07, T26N, R03W
County, State	Rio Arriba, New Mexico
Elevations	6,903' GL
Total Depth	8,250' +/- (MD)
Formation Objective	Blanco Mesaverde Basin Dakota

FORMATION TOPS

San Jose	Surface
Nacimiento	2,050' (TVD)
Ojo Alamo Ss	3,130' (TVD)
Kirtland Sh	3,340' (TVD)
Fruitland Fm	3,460' (TVD)
Pictured Cliffs SS	3,640' (TVD)
Lewis Shale	3,820' (TVD)
Cliff House SS	5,315' (TVD)
Menefee Fm	5,425' (TVD)
Point Lookout SS	5,785' (TVD)
Mancos Sh	6,045' (TVD)
Greenhorn Ls	7,725' (TVD)
Graneros Sh	7,790' (TVD)
Dakota Two Wells SS	7,820' (TVD)
Dakota Pagaute SS	7,915' (TVD)
Dakota Cubero SS	7,950' (TVD)
Dakota Main Body SS	8,065' (TVD)
Burro Canyon Fm.	8,155' (TVD)
Morrison Fm.	8,215' (TVD)
Total Depth	8,250' (MD)/(TVD)

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 9.0 ppg.

Production: 6 1/4" wellbore will be drilled with an air hammer system or air/mist system depending on reservoir characteristics. Anticipated BHP can be as high as 2,000 psi.

2/7/2011

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 15 min and 2,000 psi for 15 min.**

Logging Program:

Open hole logs: Schlumberger's Platform Express from Intermediate casing pt to TD.

Mudlogs: From intermediate casing point to TD.

Surveys: Surface casing point and every 500' from surface to TD.

Cased Hole Logs: CBL from PBTD to TOC.

CASING, TUBING & CASING EQUIPMENT

String	Start Depth	End Depth	Wellbore	Size	Wt	Grade
Surface	0	250'	12 1/4"	9 5/8"	32.3 lb/ft	H-40 ST&C
Intermediate	0	4,000'	8 3/4"	7"	23 lb/ft	J-55 LT&C
Prod. Casing	0	8,250'	6 1/4"	4 1/2"	11.6 lb/ft	J-55 LT&C
Tubing	0	8,250'	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 will be done 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 will be done with double bow spring centralizers to optimize standoff.

Production Casing: Self fill float shoe with self fill float collar on bottom and top of the first joint followed by the casing. Casing centralization will be done with double bow spring centralizers to optimize standoff. If multistage cementing is required, DV tools will be place based on formation characteristics.

WELLHEAD

11" x 9 5/8" 3,000 psi weld/slip on casing head. 9 5/8" x 7 1/16" 3,000 psi flanged christmas tree.

CEMENTING

Surface Casing: 133 sks Type V with 2.0 % CaCl₂ and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk 157 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 331 sks PRB II with 5 #/sk Gilsonite, and 1/4 #/sk Flocele (12.3 ppg, 2.24 ft³/sk) and a tail of 100 sks PRB II with 5 #/sk Gilsonite and 1/4 #/sk Flocele (13.5 ppg, 1.81 ft³/sk) (922 ft³ of slurry, 100% excess lead to circulate to surface). WOC 12 hours. Test casing to 1,500 psi for 30 min.

2/7/2011

Production Casing: Depending on wellbore conditions, pre-flush with 10 bbls H2O + 20 bbls Chem Flush + 10 bbls scavenger slurry (mix at lighter density). Follow flush with a lead of 167 sks 65/35 Halliburton Light Premium with 10#/sk Gilsonite, 1/2 #/sk Flocele 1.2% Halad-9 (12.3 ppg, 1.8 ft³/sk) and a tail of 342 sks 50/50 Poz Premium with 5#/sk Gilsonite, 1/4 #/sk Flocele and 1.2% Halad-9 (13.5 ppg, 1.31 ft³/sk) (749 ft³, 20% excess of OH to circulate inside of intermediate casing). The top of tail is designed to 5,006' FS and the top of lead is designed to 3,800' FS (plus excess).

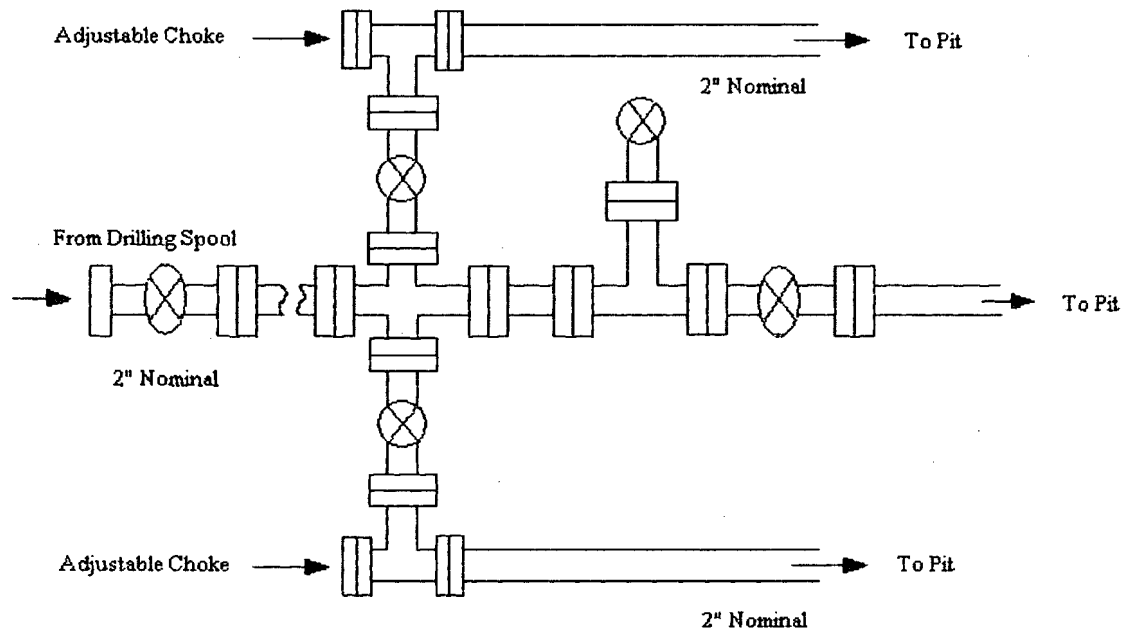
Set slips with full string weight

A CBL will be run to determine TOC.

OTHER INFORMATION

- 1) This well will be a cased hole completion and the Mesaverde and Dakota formations will be fracture stimulated and downhole commingled.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. The production 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 from those listed above to satisfy wellbore and formation conditions.
- 4) No abnormal temperatures or pressures are anticipated.
- 5) This gas is dedicated.

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

