

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER OCT 02 2008

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. SF 077952-1
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
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. Gordon A #2E
3b. Phone No. (include area code) (505)325-6800		9. API Well No. 30-045-34811
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 1793' FNL 857' FEL H At proposed prod. zone 2500' FNL 1900' FNL E		10. Field and Pool, or Exploratory Basin Dakota
14. Distance in miles and direction from nearest town or post office* Approximately 7 miles east of Bloomfield, NM		11. Sec., T., R., M., or Blk. and Survey or Area H Sec. 24, T27N, R10W NMPM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 857'	16. No. of Acres in lease 173.36 320	17. Spacing Unit dedicated to this well 305.76 E/2
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 159'	19. Proposed Depth 7550' md	20. BLM/BIA Bond No. on file
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6543' GL	22. Approximate date work will start* 10/20/08	23. Estimated duration 25 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.
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 9/18/2008
Title Drilling Engineer		
Approved by (Signature) 	Name (Printed/Typed) AFM	Date 10/29/08
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 States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

Hold C104

for Directional Survey
and "As Drilled" plat

This action is subject to technical and procedural review pursuant to 43 CFR 31.101 and appeal pursuant to 43 CFR 31.102

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

NMOCD

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

DEC 17 2008

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.

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

9/18/2008



OPERATIONS PLAN

WELL NAME.....Gordon A #2E
JOB TYPE.....Deviated Dakota
DEPT.....Drilling and Completions
RIG.....L&W #1
PREPARED BY.....Jason Kincaid

GENERAL INFORMATION

Surface Location	1793 FNL 857 FEL
Bottom Hole Location	2500 FNL 1900 FEL
S-T-R	Sec.24, T27N, R10W
County, State	San Juan, New Mexico
Elevations	6543' GL
Total Depth	7550' +/- (MD); 7305' (TVD)
Formation Objective	Basin Dakota

FORMATION TOPS

Nacimiento	Surface	Point Lookout Ss	4785'
Ojo Alamo Ss	1460'	Mancos Shale	5115'
Kirtland Sh	1625'	Gallup Ss	5935'
Fruitland Fm	2155'	Greenhorn	6750'
Pictured Cliffs Ss	2430'	Graneros	6800'
Lewis Shale	2620'	Dakota "Twowells" Ss	6830' 7069'MD
Cliff House Ss	3965'	Dakota "Pagate" Ss	6920' 7160'MD
Menefee Fm	4060'	Dakota "Main Body" Ss	6985' 7226'MD
		Total Depth	7550' MD

DRILLING

The 12-1/4" wellbore will be drilled with a fresh water mud system.
The 6-1/4" wellbore will be drilled with a LSND mud essentially un-weighted. Mud density is expected to range from 8.6ppg to 8.9ppg. Keep fluid loss between 4 and 6. KOP is 3700' TVD. An "S" curve will be drilled initially building angle at 6°/100' and then dropping angle to 10° with a drop of 6.24°/100'. Anticipated bottom-hole pressure is 1200 psi (8.38 ppg).

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: 6-1/4" wellbore gamma/induction density logs.
Mudlogs: From 6500' TVD to total depth
Surveys: Every 500' for vertical hole section and 250' while directional drilling to TD.

9/18/2008

CASING, TUBING & CASING EQUIPMENT

String	Start Depth	End Depth	Wellbore	Size	Wt	Grade
Surface	0	400	12-1/4"	9-5/8"	32.3 lb/ft	H-40 ST&C
Production	0	7550	6-1/4"	4-1/2"	11.6 lb/ft	J-55 LT&C
Tubing	0	7550		2 3/8"	4.7 lb/ft	J-55

Casing Equipment:

Surface Casing: Depending on wellbore conditions, a Texas Pattern Guide Shoe on first joint with and insert float valve on top. Run standard bow spring centralizers as follows: every other joint from TD to surface.

Production Casing: String will be cemented in multiple (3) stages. Cement float shoe on bottom with float collar on top of 1st shoe joint. Starting from bottom, centralizers will be placed on every 4th joint. Location of centralizers as follows: 12 below and 12 above hydraulic stage packer collar and 20 centralizers above third stage collar for a total of 44 centralizers.

WELLHEAD

11" 3000 x 9 5/8" weld/slip on casing head. 11" 3000 x 7 1/16" Christmas Tree.

CEMENTING

Surface Casing: 220 sks Type V with 2.0 % CaCl₂ and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk 250 ft³ of slurry). WOC 12 hours. Pressure test surface casing to 750 psi for 30 min. Test BOP as outlined in the drilling section

Production Casing: Before cementing, circulate hole at least 1 1/2 hole volumes of mud and reduce funnel viscosity to minimum to aide in hole cleanout.

First Stage: Depending on wellbore conditions, cement may consist of 195 sks 50/50 Class G with 0.60 % Halad-9, 0.10 % CFR-3, 5 #/sk Gilsonite, and 1/4 #/sk Flocele (13.5 ppg, 1.30 ft³/sk). (253 ft³ of slurry, 20 % excess to circulate to surface). **Stage Collar at 5500'.**

Second Stage: Depending on wellbore conditions, cement may consist a lead of 205 sks 65/35 Type V with 2.0% CaCl₂, 10 #/sk Gilsonite, and 1/2 #/sk Flocele and a tail of 50 sks Type V with 1.0 % CaCl₂. (12.3 ppg, 1.93 ft³/sk and 15.6 ppg, 1.18 ft³/sk respectively). (453 ft³ of slurry, 60% excess to circulate to surface). **Stage Collar at 2750'.** Circulate 4 hours starting at time of plug down.

Third Stage: Depending on wellbore conditions, cement may consist a lead of 220 sks 65/35 Type V with 2.0% CaCl₂, 10 #/sk Gilsonite, and 1/2 #/sk Flocele and a tail of 50 sks Type V with 1.0 % CaCl₂. (12.3 ppg, 1.93 ft³/sk and 15.6 ppg, 1.18 ft³/sk respectively). (480 ft³ of slurry, 70% excess to circulate to surface).

Set slips with full string weight

If cement does not circulate, run temperature survey in 8 hrs. to determine TOC.

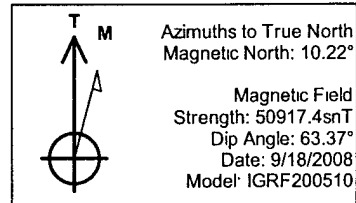
9/18/2008

OTHER INFORMATION

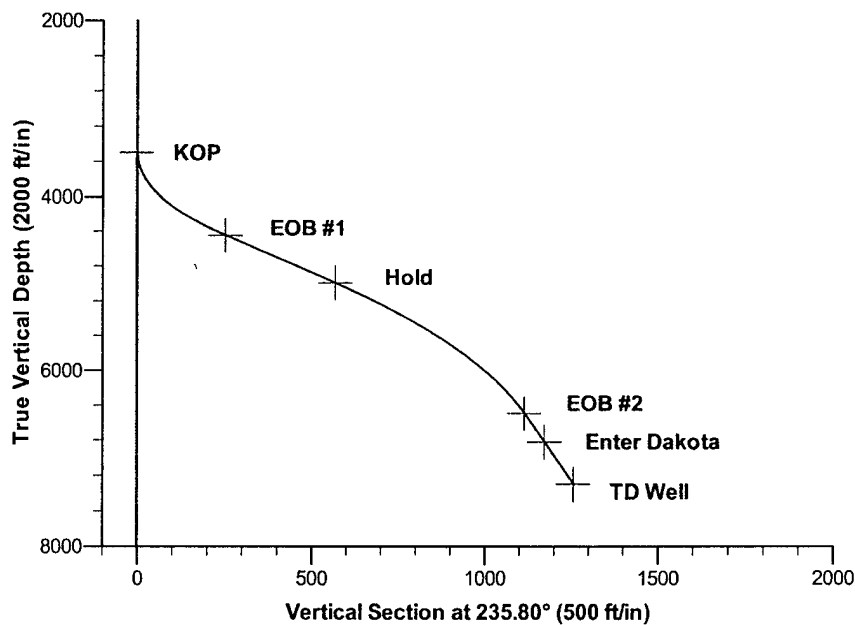
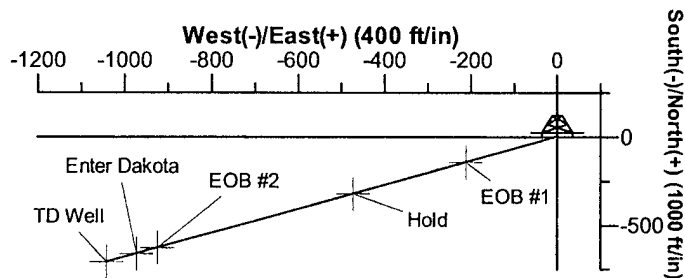
- 1) This well will be cased and the Basin Dakota fracture stimulated.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. The production string may need to be cemented in multiple stages with a slurry design deviated from that listed above.
- 3) If high reservoir pressures or water flows are encountered slurry design may need to be deviated to from those listed above to satisfy wellbore and formation conditions. Anticipated pressure is 1200 psi.
- 4) No abnormal temperatures or pressures are anticipated.
- 5) This gas is dedicated.

Project: Sec 24, T27N, R10W
Site: Central Basin
Well: Gordon A #2E
Wellbore: Deviated Dakota
Plan: Preliminary Plan #1 (Gordon A #2E/Deviated Dakota)

PROJECT DETAILS: Sec 24, T27N, R10W	
Geodetic System: US State Plane 1983	
Datum: North American Datum 1983	
Ellipsoid: GRS 1980	
Zone: New Mexico Central Zone	
System Datum: Mean Sea Level	



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	3500.0	0.00	0.00	3500.0	0.0	0.0	0.00	0.00	0.0	KOP	
3	4500.0	30.00	235.80	4454.9	-143.8	-211.6	3.00	235.80	255.8	EOB #1	
4	5129.4	30.00	235.80	5000.0	-320.7	-471.9	0.00	0.00	570.6	Hold	
5	6733.8	10.00	235.80	6500.0	-627.6	-923.5	1.25	180.00	1116.6	EOB #2	
6	7068.9	9.99	235.78	6830.0	-660.3	-971.6	0.00	-148.71	1174.7	Enter Dakota	
7	7551.2	10.02	235.82	7305.0	-707.4	-1040.9	0.01	16.27	1258.5	TD Well	



Energen

Plan Design

Company: Energen Resources Corporation
Project: Sec 24, T27N, R10W
Site: Central Basin
Well: Gordon A #2E
Wellbore: Deviated Dakota
Design: Preliminary Plan #1

Local Co-ordinate Reference: Well Gordon A #2E
TVD Reference: KB @ 6560.0ft (L&W #1 Rig)
MD Reference: KB @ 6560.0ft (L&W #1 Rig)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Targets

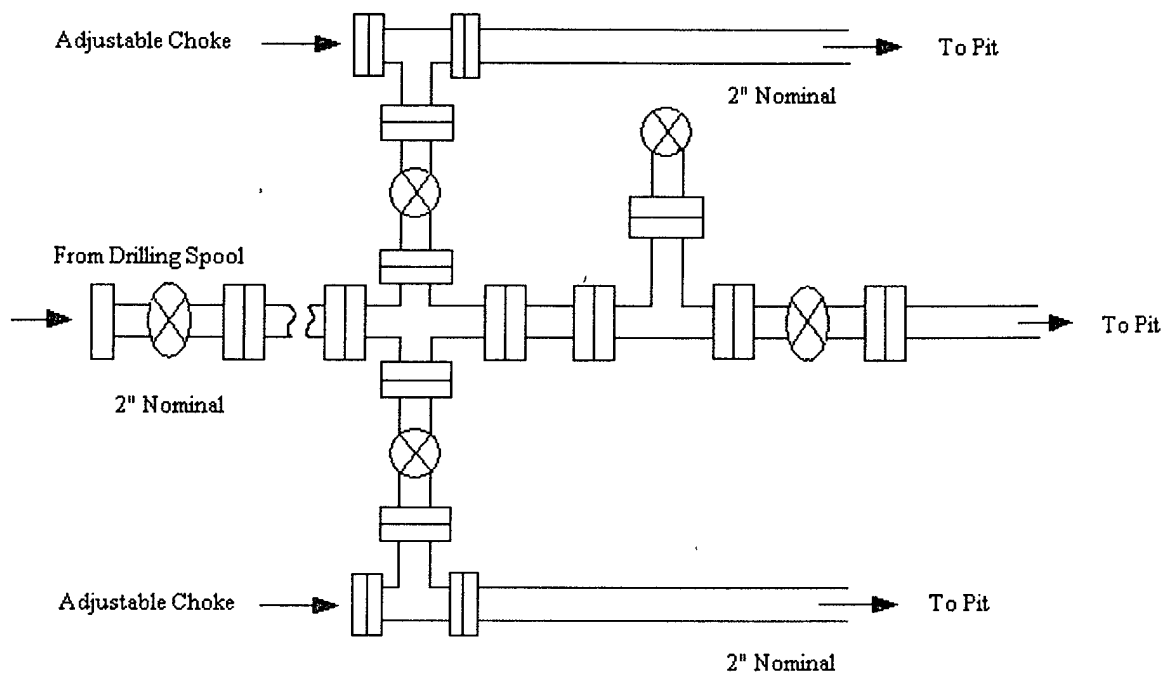
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Enter Dakota - plan hits target - Point	0.00	0 00	6,830.0	-660.3	-971.6	2,027,429.44	1,172,097.46	36° 33' 40.272 N	107° 50' 40.695 W
TD Well - plan hits target - Point	0.00	0.00	7,305.0	-707.4	-1,040.9	2,027,383.49	1,172,027.39	36° 33' 39.806 N	107° 50' 41.545 W
KOP - plan hits target - Point	0.00	0.00	3,500.0	0.0	0.0	2,028,073.57	1,173,079.86	36° 33' 46.800 N	107° 50' 28.788 W
Hold - plan hits target - Point	0.00	0.00	5,000.0	-320.7	-471.9	2,027,760.72	1,172,602.71	36° 33' 43.629 N	107° 50' 34.571 W
EOB #2 - plan hits target - Point	0.00	0.00	6,500.0	-627.6	-923.5	2,027,461.34	1,172,146.10	36° 33' 40.595 N	107° 50' 40.106 W
EOB #1 - plan hits target - Point	0.00	0.00	4,454.9	-143.8	-211.6	2,027,933.29	1,172,865.91	36° 33' 45.378 N	107° 50' 31.381 W

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,430.0	2,430.0	Pictured Cliffs	Sandstone	0.00	
5,261.1	5,115.0	Mancos	Shale	0.00	
4,881.4	4,785.0	Point Lookout	Sandstone	0.00	
7,226.3	6,985.0	Dakota "Main Body"	Sandstone	0.00	
7,160.3	6,920.0	Dakota "Paguate"	Sandstone	0.00	
7,068.9	6,830.0	Dakota "Twowells"	Sandstone	0.00	
2,620.0	2,620.0	Lewis	Shale	0.00	

Checked By: _____ Approved By: _____ Date: _____

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

