

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires March 31, 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		2005 AUG 18 PM 2	5. Lease Serial No. NM-4462
1b. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	7. Unit or CA Agreement Name and No.
2. Name of Operator Energen Resources Corporation		8. Lease Name and Well No. Bullridge 101S	
3a. Address 2198 Bloomfield Highway Farmington, New Mexico 87401	3b. Phone No. (include area code) (505) 325-6800	9. API Well No. 30-039-29631	
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 1330' FSL, 965' FWL @ Surface, 660' FNL, 660' FEL @ Bottom At proposed prod. zone 1805' FNL, 1175' "A"		10. Field and Pool, or Exploratory Basin Fruitland Coal	
14. Distance in miles and direction from nearest town or post office* 7 miles southeast of Arboles, CO		11. Sec., T., R., M., or Blk. and Survey or Area E Sec. 33, T32N, R5W, N.M.P.M.	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 965'		16. No. of Acres in lease 640	17. Spacing Unit dedicated to this well 3204c N/2
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 25'		19. Proposed Depth 3772' (TVD), 6275' (MD)	20. BLM/BIA Bond No. on file
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6821' GL	22. Approximate date work will start* 11/1/05	23. Estimated duration 30 days	

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall 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 shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>Nathan Smith</i>	Name (Printed/Typed) Nathan Smith	Date 8/18/05
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Title Drilling Engineer		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 3/24/06
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.

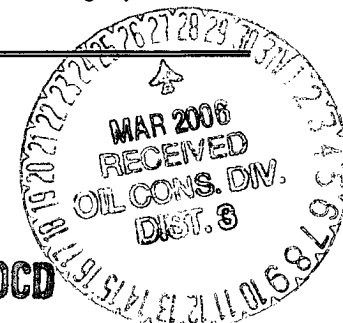
*(Instructions on page 2)

HOLD C104 FOR directional surveys

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".

NMOC



District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer DD, Artesia, NM 88211-0719

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

RECEIVED
070 FARMINGTON NM

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-039-29631		Pool Code 71629	Pool Name BASIN FRUITLAND COAL
Property Code 29677	Property Name BULLRIDGE		Well Number 101S
GRID No. 162928	Operator Name ENERGEN RESOURCES CORPORATION		Elevation 6821'

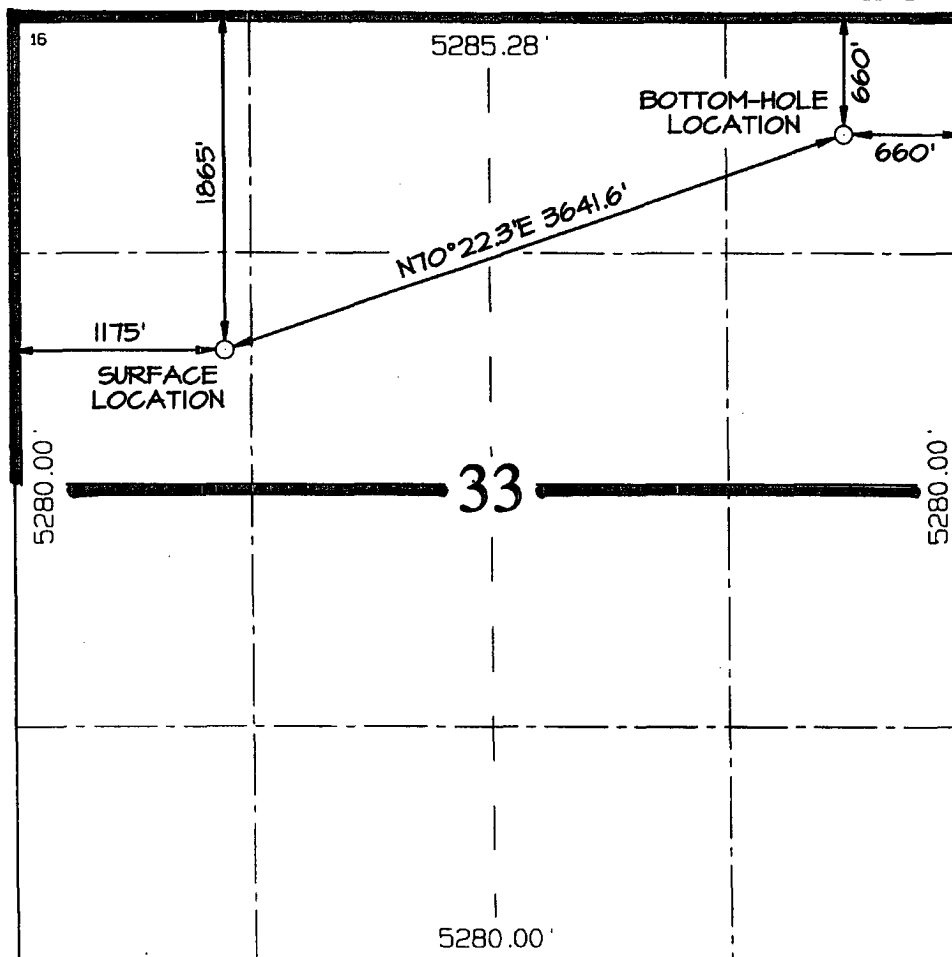
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	33	32N	5W		1865	NORTH	1175	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
A	33	32N	5W		660	NORTH	660	EAST	RIO ARriba
¹² Dedicated Acres 320.0 Acres - (N/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



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Nathan Smith
Signature
Nathan Smith
Printed Name
Drilling Engineer
Title
8/17/05
Date

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.

Date Revised: JULY 8, 2005
Date of Survey: MAY 3, 2005

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 87240
District II
1301 W. Grand Ave., 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 and Natural Resources

Form C-103
May 27, 2004

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

WELL API NO. 30-031-29631

5. Indicate Type of Lease

STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name:

Bullridge

8. Well Number

101S

9. OGRID Number

162928

10. Pool name or Wildcat

Basin Fruitland Coal

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:

Oil Well ☐ Gas Well ☒ Other

2. Name of Operator

Energen Resources Corporation

3. Address of Operator

2198 Bloomfield Highway, Farmington, NM 87401

4. Well Location

Unit Letter E: 1865 feet from the North line and 1175 feet from the West line

Section 33 Township 32N Range 05W NMPM County Rio Arriba

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

6821' GL

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type Drill Depth to Groundwater >100' Distance from nearest fresh water well >1000' Distance from nearest surface water >250'

Pit Liner Thickness: 12 mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPLETION ☐

OTHER: Build drilling pit ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐

CASING TEST AND CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Energen Resources plans to build a lined pit according to "OCD Pit and Below-grade Tank Guidelines", as issued on November 1, 2004. Energen anticipates the submittal of a C-144 for closure of this pit in accordance with BLM and "OCD Pit and Below-grade Tank Guidelines".

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒ , a general permit ☐ or an (attached) alternative OCD-approved plan ☐

SIGNATURE Nathan Smith TITLE Drilling Engineer DATE _____

Type or print name Nathan Smith

E-mail address: nsmith@energen.com Telephone No. 505.325.6800

For State Use Only

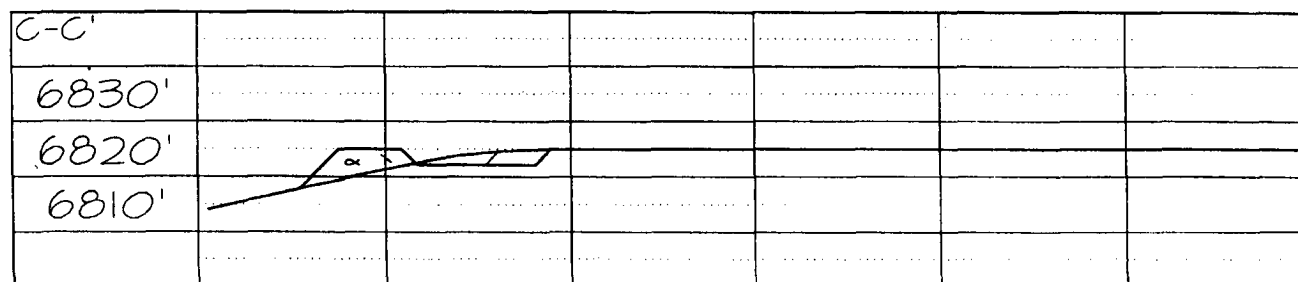
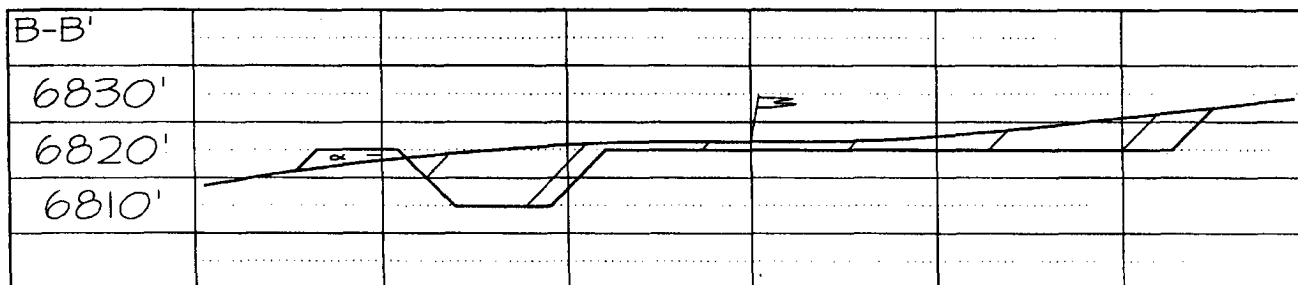
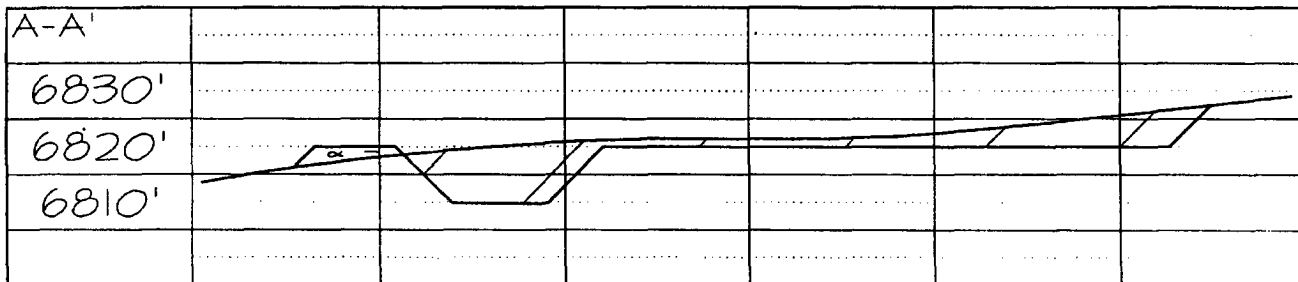
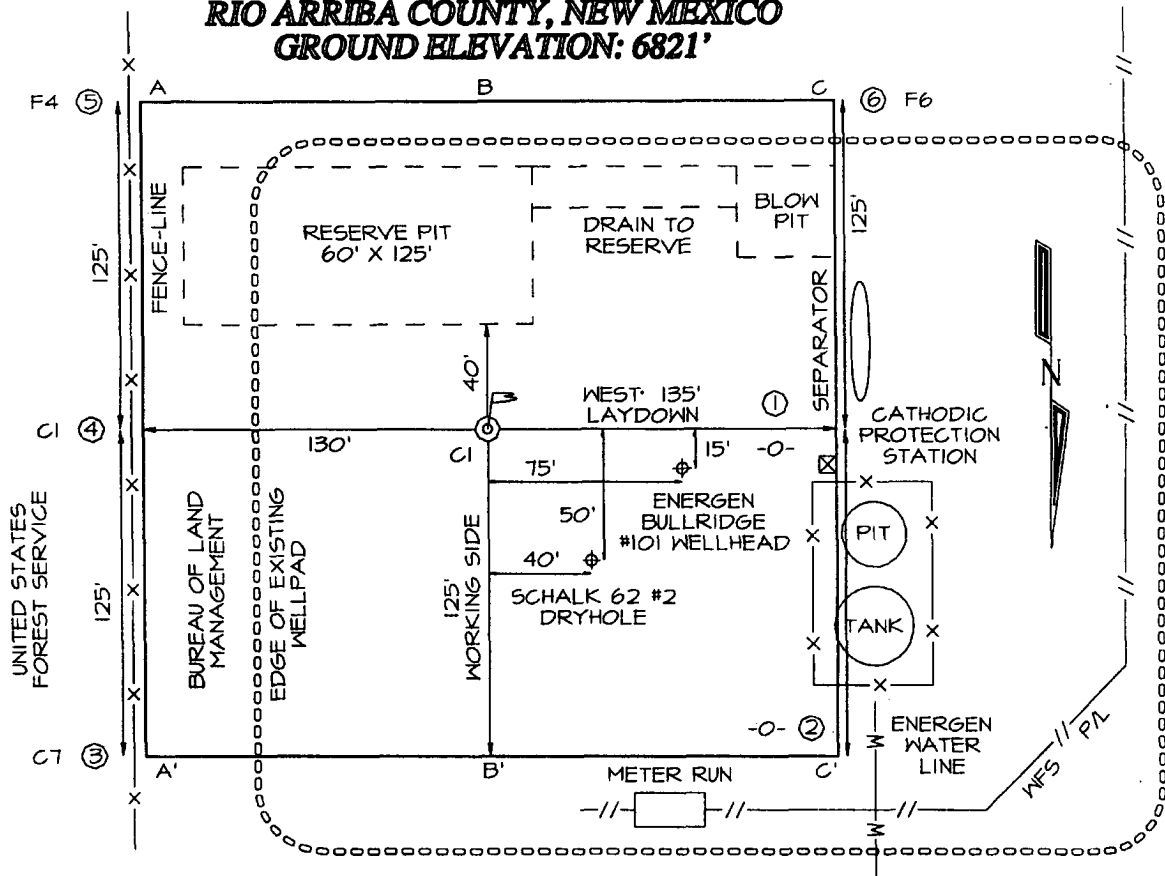
APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 40 DATE MAR 27 2006

Conditions of Approval, if any:

ENERGEN RESOURCES CORPORATION BULLRIDGE #101S
1865' FNL & 1175' FWL, SECTION 33, T32N, R5W, NMPM
RIO ARriba COUNTY, NEW MEXICO
GROUND ELEVATION: 6821'

36.9360° N
 107.3722° W

LATITUDE: 36°56'20"
LONGITUDE: 107°22'20"
 DATUM: NAD1927



Operations Plan

August 17, 2005

Bullridge #101S

General Information

Location	1865' fnl, 1175' fwl at surface 660' fnl, 660' fwl at bottom swnw S33, T32N, R05W Rio Arriba County, New Mexico
Elevations	6821' GL
Total Depth	6275' +/- (MD); 3772' +/- (TVD)
Formation Objective	Basin Fruitland Coal

Formation Tops

San Jose	Surface
Nacimiento	1633' (TVD)
Ojo Alamo Ss	2963' (TVD), 3400' (MD)
Kirtland Sh	3053' (TVD), 3450' (MD)
Fruitland Fm	3433' (TVD), 4075' (MD)
Top Coal	3546' (TVD), 4300' (MD)
Target Coal Top (1)	3546' (TVD), 4300' (MD)
Target Coal Base (1)	3554' (TVD), 4310' (MD)
Target Coal Top (2)	3566' (TVD), 4320' (MD)
Target Coal Base (2)	3582' (TVD), 4380' (MD)
Bottom Coal	3582' (TVD), 4380' (MD)
Pictured Cliffs Ss	3590' (TVD)
Total Depth	3772' (TVD), 6275' (MD)

Drilling

The 12 ¼" wellbore will be drilled with a fresh water mud system.

The 8 ¾" wellbore will be drilled with a low solids fresh water/polymer mud system. Weighting materials will be drill cuttings and if needed barite. Mud density is expected to range from 8.3 ppg to 8.9 ppg. Kick off point is anticipated to be at 1900 ft (TVD).

The 6 ¼" wellbore will be drilled with a fresh water system or CaCl₂ brine as wellbore and formation pressures dictate.

Blowout Control Specifications:

A 2000 psi minimum double ram or annulus BOP stack (figure 1) 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.

Logging Program:

Open hole logs: Gamma Ray MWD and mud logs.

Coring: None

Natural Gauges: Surface and as needed for directional surveys

Tubulars

Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt	Grade
Surface	0'-200	12 ¼"	9 5/8"	32.3 ppf	H-40 ST&C
Intermediate	200'-4593' (MD) 3772' (TVD)	8 ¾"	7"	23.0 ppf	J-55 LT&C
Production	4170'-6265' (MD) 3488'-3550' (TVD) 4210'-6275' (MD) 3515'-3574' (TVD)	6 ¼"	4 ½"	11.6 ppf	J-55 LT&C
Tubing	0'-3725' (TVD) 4575' (MD)		2 3/8"	4.7 ppf	J-55

Casing Equipment:

Surface Casing: Depending on wellbore conditions, a Texas Pattern Guide Shoe on bottom. Casing centralization with standard bow spring centralizers to achieve optimal standoff.

Intermediate Casing: Depending on wellbore conditions, a Cement nose guide shoe with self fill insert float collar on top of bottom joint and casing centralization with standard bow spring centralizers to optimize standoff. Two turbolating centralizers at the base of the Ojo Alamo are recommended.

Wellhead

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

Cementing

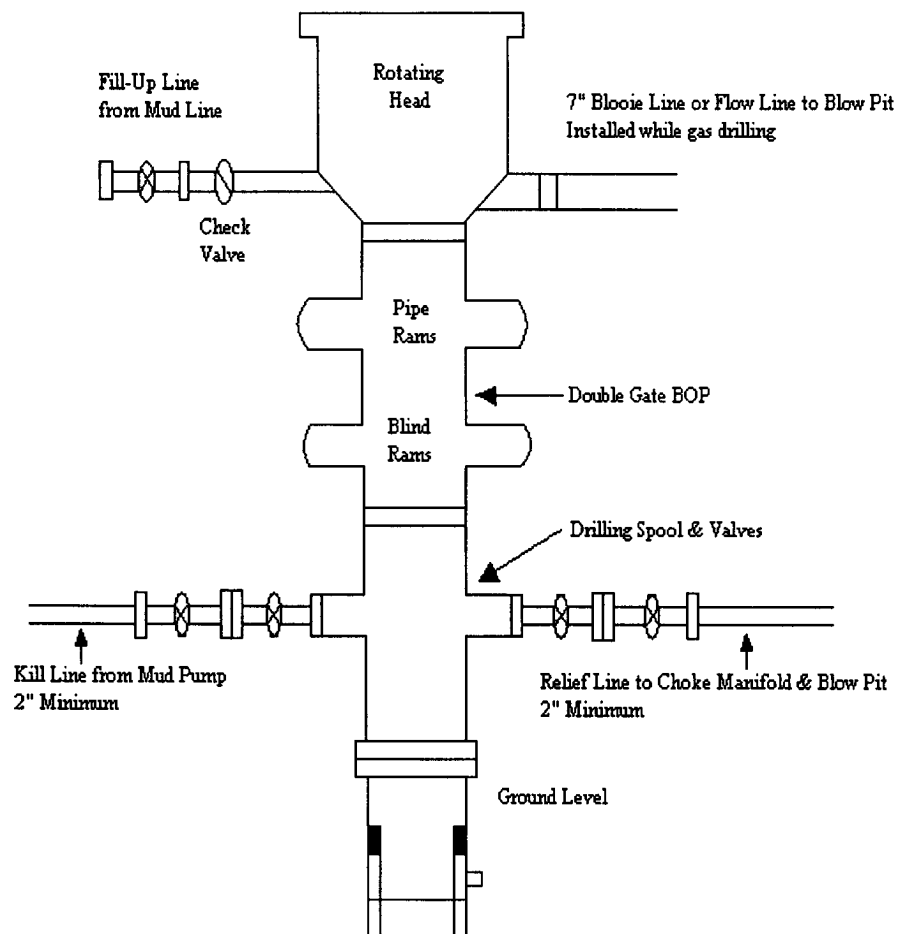
Surface Casing: 125 sks Std (class B) with 2.0 % CaCl₂ and ¼ #/sk Flocele (15.6 ppg, 1.18 ft³/sk 148 ft³ of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 1000 psi for 30 min.

Intermediate Casing: Before cementing, circulate hole at least 1 ½ hole volumes of mud and reduce funnel viscosity to minimum to aide in hole cleanout. Depending on wellbore conditions, cement may consist of 625 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl₂, 10 #/sk Gilsonite, and ½ #/sk Flocele (12.3 ppg, 1.96 ft³/sk) and a tail of 150 sks of Standard (Class B) cement with 5.0 #/sk Gilsonite, and ¼ #/sk Flocele (15.2ppg, 1.24 ft³/sk). (1411 ft³ of slurry, 100 % excess to circulate to surface).

Production: Open Hole Completion – NO CEMENT

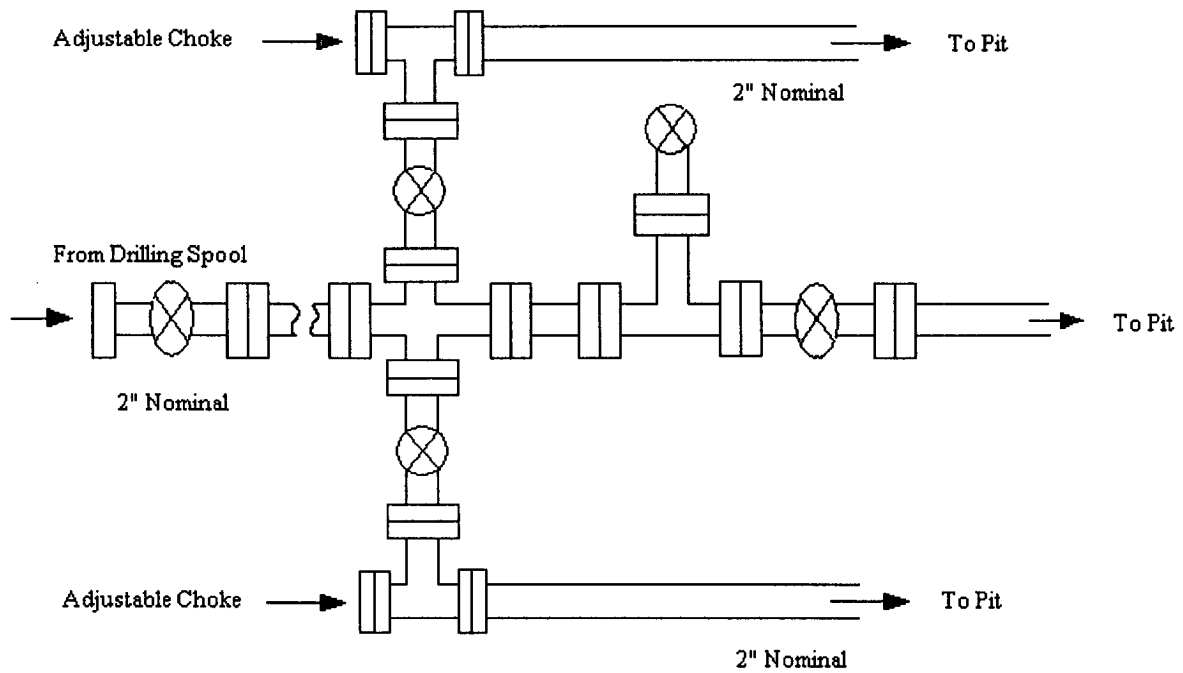
Energen Resources Corporation

Typical BOP Configuration for Gas Drilling



Energen Resources Corporation

Typical 2000 psi Choke Manifold Configuration



Choke manifold installed from surface to TD



Field: Rio Arriba, NM
Site: Bullridge Section 33 T32N R5W
Well: Bullridge 101S
Wellpath: Motherbore
Plan: Plan #1

ENERGEN.

SECTION DETAILS

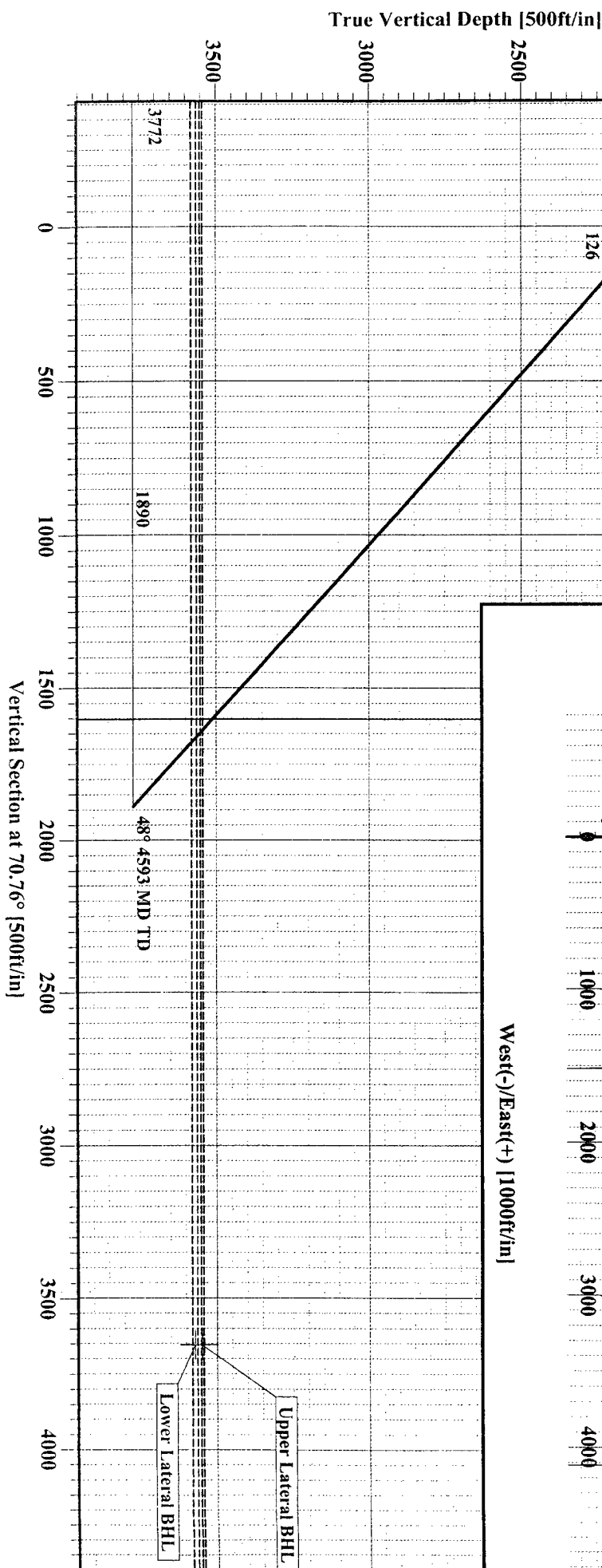
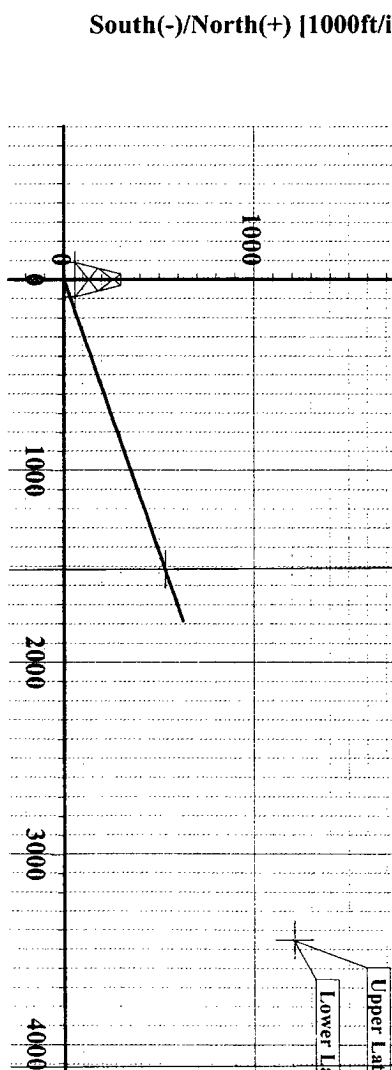
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	0.00	
3	2220.00	48.00	70.76	2183.86	41.65	119.32	15.00	70.76	126.38	
4	4593.44	48.00	70.76	3772.00	622.87	1784.62	0.00	0.00	1890.19	

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Spot
Bullridge 101S	0.00	0.00	2161355.74	634782.25	36°56'20.000"N	107°22'19.720"W	N/A

TARGET DETAILS

Name	TV	+N/-S	+E/-W	Shape
L.L.	0.00	0.00	0.00	Polygon
H.L.	0.00	0.00	0.00	Polygon
V.H.L.	0.00	528.67	1514.72	Circle (Radius: 0)
Upper Lateral BHL	3550.00	1204.70	3451.66	Point
Lower Lateral BHL	3574.00	1204.70	3451.66	Point





Field: Rio Arriba, NM
Site: Bullbridge Section 33 T32N R5W
Well: Bullbridge 101S
Wellpath: Lower Lateral
Plan: Plan #1

ENERGEN.

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Dleg	TFace	VSec	Target
1	4210.00	48.00	70.76	3515.43	528.97	1515.58	0.00	0.00	1605.24	
2	4377.15	90.00	70.76	3574.00	579.25	1659.64	25.13	0.00	1757.82	
3	6275.18	90.00	70.76	3574.00	1204.70	3451.66	0.00	0.00	3655.85	Lower Lateral BHL

WELL DETAILS

Name	+N/S	+E/W	Northing	Eastng	Latitude	Longitude	Slot
Bullbridge 101S	0.00	0.00	2161355.74	634782.25	36°56'30.080"N	107°22'19.720"W	N/A

TARGET DETAILS

Name	TV	+N/S	+E/W	Shape
HL	0.00	0.00	0.00	Polygon
LL	0.00	0.00	0.00	Polygon
V.HL	0.00	0.00	0.00	Circle (radius: 0)
Upper Lateral BHL	3550.00	1204.70	3451.66	Point
Lower Lateral BHL	3574.00	1204.70	3451.66	Point

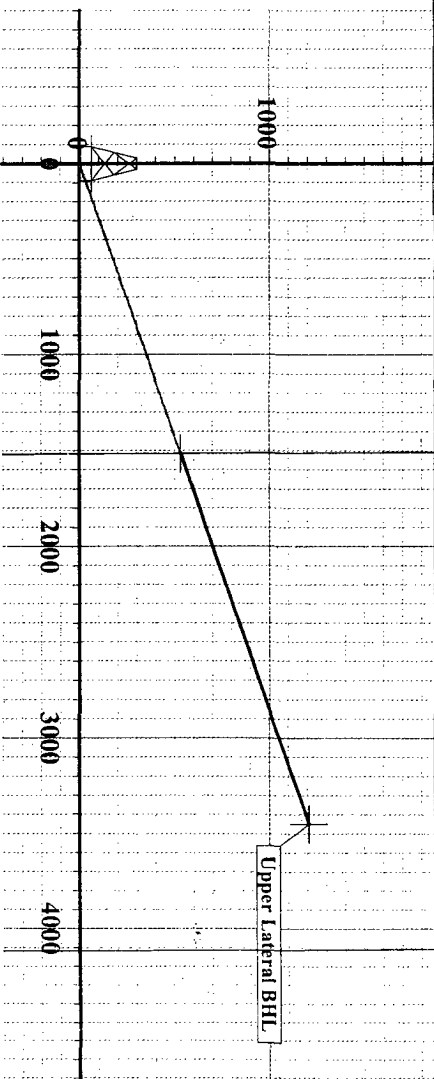
LEGEND

- Bullbridge 101S (Motherbore)
- Lower Lateral
- Plan #1

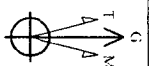
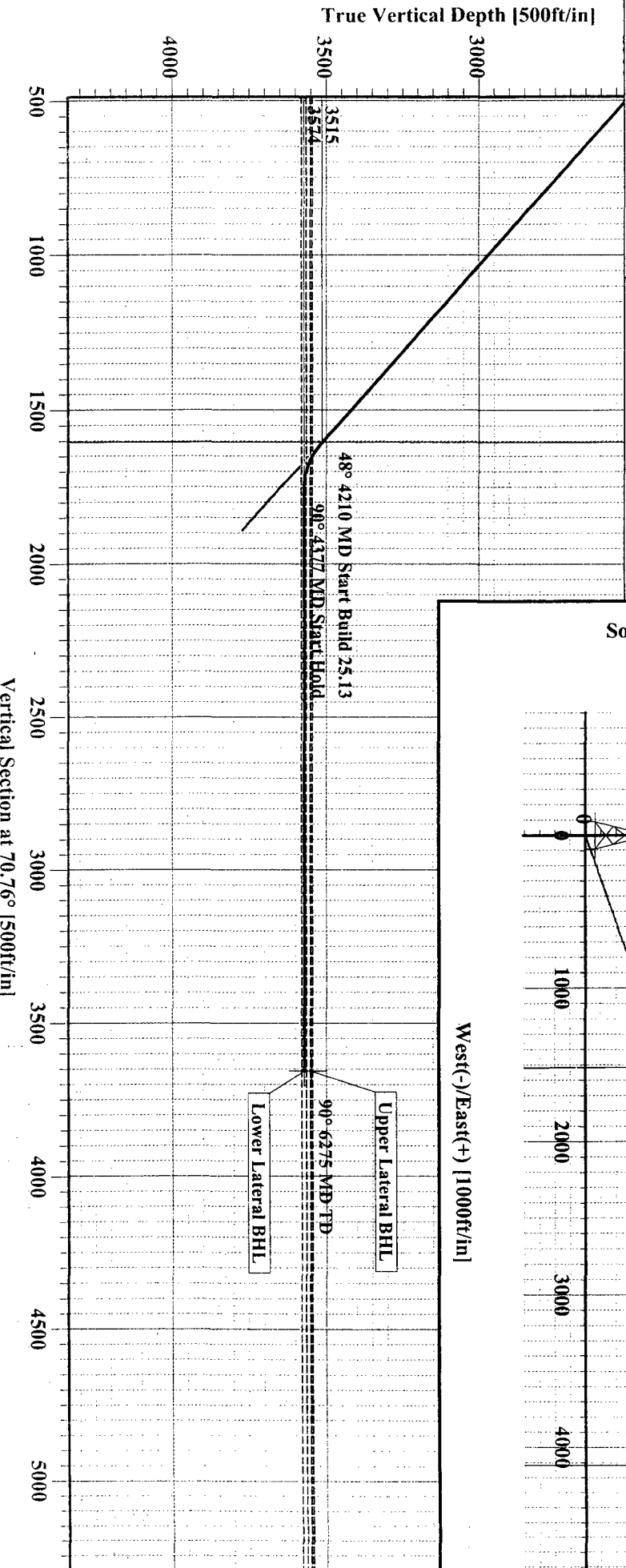
FORMATION TOP DETAILS

No.	TVDP	MDP	Formation
1	3546.00	4282.96	Top Of Coal
2	3554.00	4280.94	Base of Coal
3	3566.00	4316.57	Top of Coal

South(-)/North(+) [1000ft/in]



West(-)/East(+) [1000ft/in]



Atchup to Grid North
True North: 0.28°
Magnetic North: 10.19°
Magnetic Field
Strength: 51550 nT
Dip Angle: 65.85°
Date: 2/05/2008
Model: AGT2005