

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input type="checkbox"/> DRILL <input checked="" type="checkbox"/> REENTER		5. Lease Serial No. USA SF 079011
1b. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zones		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	3b. Phone No. (include area code) (505)325-6800	8. Lease Name and Well No. SAN JUAN 32-5 UNIT #101
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface Sec.23-T32N-R06W; 710'FSL, 780'FEL At proposed prod. zone Sec.23-T32N-R06W; 1500'FSL, 2500'FEL		9. API Well No. 30-039-27263
14. Distance in miles and direction from nearest town or post office* 9 miles from Arboles		10. Field and Pool, or Exploratory Basin Fruitland Coal
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 710'		11. Sec., T., R., M., or Blk. and Survey or Area P Sec.23-T32N-R06W
16. No. of Acres in lease 1480		12. County or Parish Rio Arriba
17. Spacing Unit dedicated to this well 320 E/2		13. State NM
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 101'		19. Proposed Depth 4787' MD
20. BLM/BIA Bond No. on file		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6331' GL		22. Approximate date work will start* 04/01/2011
23. Estimated duration 10 days		

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

24. Attachments

- The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:
- Well plat certified by a registered surveyor.
 - A Drilling Plan.
 - A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
 - Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
 - Operator certification.
 - Such other site specific information and/or plans as may be required by the BLM

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED GENERAL REQUIREMENTS*

RCVD MAR 17 '11
OIL CONS. DIV.

DIS. 3

25. Signature <i>Stephen Byers</i>	Name (Printed/Typed) Stephen Byers	Date 09-28-2010
Title Drilling Engineer		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 3/11/11
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)

*(Instructions on page 2)

START mud log when window is cut in CSG
file mud log
Hold C104
for Directional Survey and "As Drilled" plat & mud log

MAR 30 2011

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

16				<div data-bbox="1127 985 1481 1015">17 OPERATOR CERTIFICATION</div> <div data-bbox="1060 1019 1516 1223"><i>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.</i></div> <div data-bbox="1060 1227 1516 1302"><div data-bbox="1060 1227 1339 1302"><i>Stephen Byers</i></div><div data-bbox="1443 1236 1516 1257">09/28/2010</div><div data-bbox="1060 1281 1127 1302">Signature</div><div data-bbox="1406 1281 1443 1302">Date</div></div>
				<div data-bbox="1060 1332 1193 1351"><u>STEPHEN BYERS</u></div> <div data-bbox="1060 1351 1156 1370">Printed Name</div>

| | | **23** | | **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 25, 2002 Date of Survey Original Survey Conducted and Recorded By: Jason C. Edwards |
| | | **BHL** 2500' 1500' | 780' **SHL** 710' | 15269 Certificate Number |

9/29/2010



OPERATIONS PLAN

WELL NAME.....San Juan 32-5 Unit #101S
JOB TYPE.....Re-entry Sidetrack
DEPT.....Drilling and Completions
RIG.....D & J #1
PREPARED BY.....Stephen Byers

General Information

Surface Location	710 FSL 780 FEL
S-T-R	(P) Sec.23, T32N, R6W
Bottom Hole Location	1500 FSL 2500 FEL
S-T-R	(K) Sec.23, T32N, R6W
County, State	Rio Arriba, New Mexico
Elevations	6331' GL
Total Depth	4787' +/- (MD); 2987' (TVD)
Formation Objective	Basin Fruitland Coal

Formation Tops

Top Target Coal	2972' (TVD)
Base Target Coal	3002' (TVD)
Total Depth	2987' (TVD), 4787' +/- (MD)

Drilling

1. Set whipstock on top of the composite bridge plug left by the workover rig.
2. Orientate the whipstock at an azimuth of 295°. KOP is 2772' *Kilgand*
3. Run in hole with a 6-1/4" milling assembly and mill window and 30' of formation
4. Pick up 6-1/4" directional tools and follow attached directional plan
 - a. The build section will be drilled with and LSND or polymer and water as directed by the mud engineer.
 - b. The mud density range for the lateral section should range from 8.5-8.8 ppg based on offset data.
5. Pull out of hole. If problems are encountered before reaching the window run back to bottom and condition well for casing run. If problems are encountered continue pulling out and pick up a cleanout assembly.
6. Prior to running liner and hook hanger system, trip in hole and retrieve whipstock.
7. Run 4-1/2" 11.6# J-55 pre-drilled liner and hanger system through window.

Blowout Control Specifications:

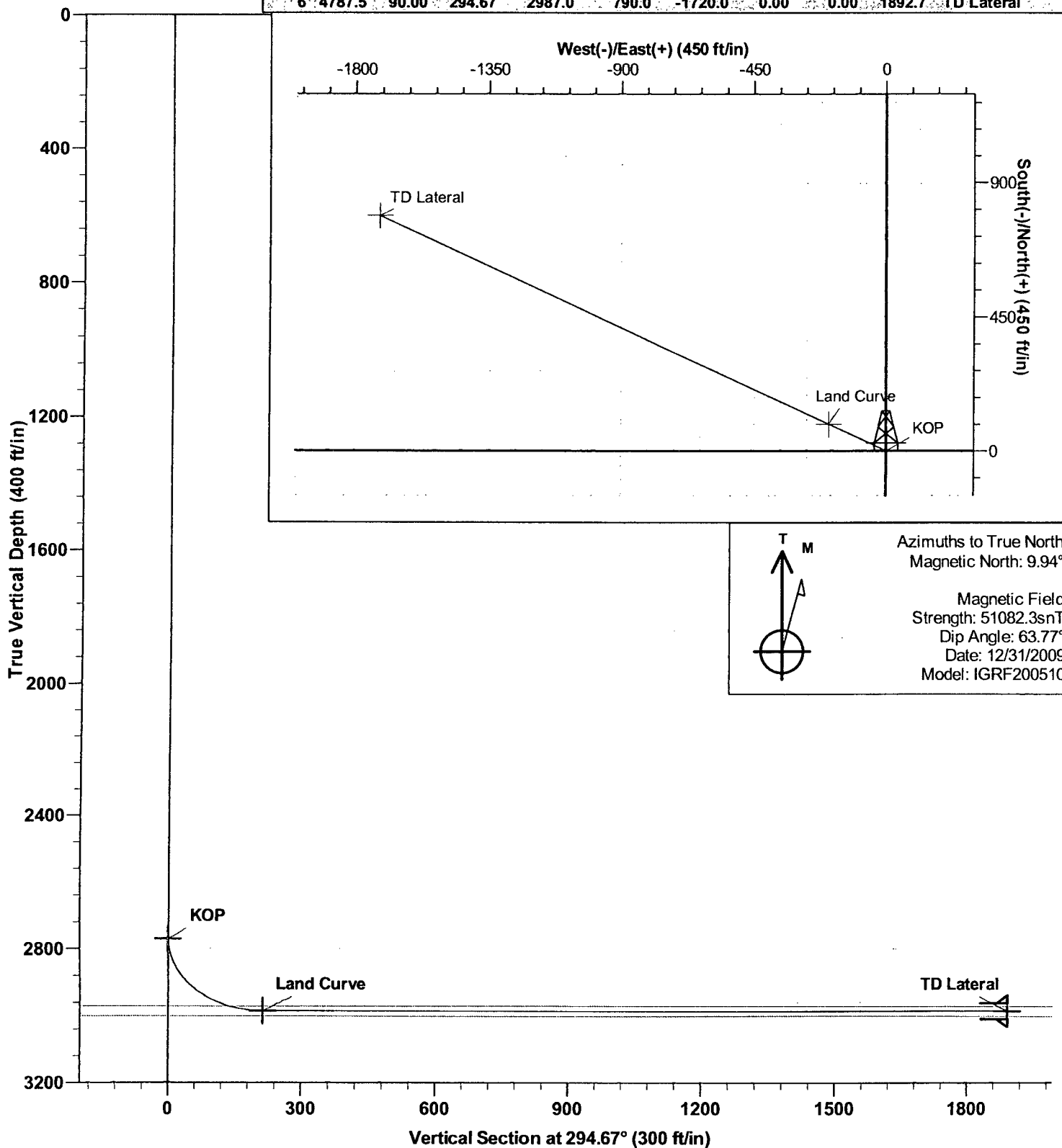
A 3000 psi minimum double ram or annulus BOP stack will be used following nipple up of casing head. A 2" nominal, 2000 psi minimum choke manifold will also be used. An upper Kelly Cock valve handle and drill string valve should be available to fit each drill string and be available on the rig floor during drilling operations. **Pressure test BOP to 250 psi for 15 min and 2000 psi for 15 min.**

Logging Program:

Open hole logs: None
Mudlogs: From KOP to TD.
Coring: None
Surveys: Every 250' while directional drilling to TD.

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	2772.0	0.00	0.00	2772.0	0.0	0.0	0.00	0.00	0.0	KOP
3	2940.8	45.00	294.65	2924.0	26.3	-57.2	26.65	294.65	63.0	
4	2940.9	45.00	294.65	2924.0	26.3	-57.3	0.00	0.00	63.0	
5	3109.7	90.00	294.67	2987.0	89.7	-195.4	26.65	0.03	215.0	Land Curve
6	4787.5	90.00	294.67	2987.0	790.0	-1720.0	0.00	0.00	1892.7	TD Lateral



Energen

DIRECTIONAL PLAN

Company: Energen Resources
Project: SJBR Sec.23-T32N-R6W
Site: Eul Canyon
Well: San Juan 32-5 Unit #101S ST
Wellbore: Re-Entry Sidetrack OPE FTC
Design: Plan #1

Local Co-ordinate Reference: Well San Juan 32-5 Unit #101S ST
TVD Reference: KB @ 6346.0ft (KB)
MD Reference: KB @ 6346.0ft (KB)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Project	SJBR Sec.23-T32N-R6W		
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:	2,171,070.21 ft
From:	Lat/Long	Easting:	1,298,517.20 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	36° 57' 38.340 N
		Longitude:	107° 25' 12.900 W
		Grid Convergence:	-0.70 °

Well	San Juan 32-5 Unit #101S ST		
Well Position	+N/-S	0.0 ft	Northing: 2,171,070.21 ft
	+E/-W	0.0 ft	Easting: 1,298,517.20 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	6,331.0 ft
		Ground Level:	6,331.0 ft

Wellbore	Re-Entry Sidetrack OPE FTC				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	9.94	63.77	51,082

Design	Plan #1			
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	294.67

Survey Tool Program	Date 9/3/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	4,787.5	Plan #1 (Re-Entry Sidetrack OPE FTC)	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
1,100.0	1,100.0	0.00	0.00	0.00	0.0	0.0	0.0

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Planned Survey

MD (ft)	TVD (ft)	Inc (°)	Azi (°)	Build (°/100ft)	N/S (ft)	E/W (ft)	V. Sec (ft)
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
1,600.0	1,600.0	0.00	0.00	0.00	0.0	0.0	0.0
1,700.0	1,700.0	0.00	0.00	0.00	0.0	0.0	0.0
1,800.0	1,800.0	0.00	0.00	0.00	0.0	0.0	0.0
1,900.0	1,900.0	0.00	0.00	0.00	0.0	0.0	0.0
2,000.0	2,000.0	0.00	0.00	0.00	0.0	0.0	0.0
2,100.0	2,100.0	0.00	0.00	0.00	0.0	0.0	0.0
2,200.0	2,200.0	0.00	0.00	0.00	0.0	0.0	0.0
2,300.0	2,300.0	0.00	0.00	0.00	0.0	0.0	0.0
2,400.0	2,400.0	0.00	0.00	0.00	0.0	0.0	0.0
2,500.0	2,500.0	0.00	0.00	0.00	0.0	0.0	0.0
2,600.0	2,600.0	0.00	0.00	0.00	0.0	0.0	0.0
2,700.0	2,700.0	0.00	0.00	0.00	0.0	0.0	0.0
2,772.0	2,772.0	0.00	0.00	0.00	0.0	0.0	0.0
KOP							
2,780.0	2,780.0	2.13	294.65	26.65	0.1	-0.1	0.1
2,800.0	2,799.9	7.46	294.65	26.65	0.8	-1.7	1.8
2,820.0	2,819.6	12.79	294.65	26.65	2.2	-4.9	5.3
2,840.0	2,838.9	18.13	294.65	26.65	4.4	-9.7	10.7
2,860.0	2,857.6	23.46	294.65	26.65	7.4	-16.1	17.8
2,880.0	2,875.5	28.79	294.65	26.65	11.1	-24.1	26.6
2,900.0	2,892.6	34.12	294.65	26.65	15.4	-33.6	37.0
2,920.0	2,908.6	39.45	294.65	26.65	20.4	-44.5	49.0
2,940.8	2,924.0	45.00	294.65	26.66	26.3	-57.2	63.0
2,940.9	2,924.0	45.00	294.65	0.00	26.3	-57.3	63.0
2,960.0	2,936.9	50.09	294.65	26.65	32.2	-70.1	77.1
2,980.0	2,949.0	55.43	294.66	26.65	38.8	-84.5	93.0
3,000.0	2,959.6	60.76	294.66	26.65	45.9	-100.0	110.0
3,020.0	2,968.5	66.09	294.66	26.65	53.3	-116.2	127.9
3,028.9	2,972.0	68.47	294.66	26.65	56.8	-123.7	136.1
Top Target Coal							
3,040.0	2,975.8	71.42	294.66	26.65	61.1	-133.1	146.5
3,060.0	2,981.3	76.75	294.67	26.65	69.1	-150.6	165.7
3,080.0	2,984.9	82.08	294.67	26.65	77.3	-168.5	185.4
3,100.0	2,986.8	87.41	294.67	26.65	85.6	-186.6	205.3
3,109.7	2,987.0	90.00	294.67	26.65	89.7	-195.4	215.0
Land Curve							
3,200.0	2,987.0	90.00	294.67	0.00	127.4	-277.4	305.3
3,300.0	2,987.0	90.00	294.67	0.00	169.1	-368.3	405.3
3,400.0	2,987.0	90.00	294.67	0.00	210.9	-459.2	505.3
3,500.0	2,987.0	90.00	294.67	0.00	252.6	-550.1	605.3
3,600.0	2,987.0	90.00	294.67	0.00	294.3	-640.9	705.3

Energen

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North Reference: True
Survey Calculation Method: Minimum Curvature
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)
3,700.0	2,987.0	90.00	294.67	0.00	336.1	-731.8	805.3
3,800.0	2,987.0	90.00	294.67	0.00	377.8	-822.7	905.3
3,900.0	2,987.0	90.00	294.67	0.00	419.6	-913.6	1,005.3
4,000.0	2,987.0	90.00	294.67	0.00	461.3	-1,004.4	1,105.3
4,100.0	2,987.0	90.00	294.67	0.00	503.0	-1,095.3	1,205.3
4,200.0	2,987.0	90.00	294.67	0.00	544.8	-1,186.2	1,305.3
4,300.0	2,987.0	90.00	294.67	0.00	586.5	-1,277.0	1,405.3
4,400.0	2,987.0	90.00	294.67	0.00	628.3	-1,367.9	1,505.3
4,500.0	2,987.0	90.00	294.67	0.00	670.0	-1,458.8	1,605.3
4,600.0	2,987.0	90.00	294.67	0.00	711.7	-1,549.7	1,705.3
4,700.0	2,987.0	90.00	294.67	0.00	753.5	-1,640.5	1,805.3
4,787.5	2,987.0	90.00	294.67	0.00	790.0	-1,720.0	1,892.7

TD Lateral

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
Land Curve - plan hits target - Point	0.00	0.00	2,987.0	89.7	-195.4	2,171,162.30	1,298,322.91	36° 57' 39.227 N	107° 25' 15.307 W
TD Lateral - plan hits target - Point	0.00	0.00	2,987.0	790.0	-1,720.0	2,171,881.27	1,296,807.03	36° 57' 46.150 N	107° 25' 34.092 W
KOP - plan hits target - Point	0.00	0.00	2,772.0	0.0	0.0	2,171,070.21	1,298,517.20	36° 57' 38.340 N	107° 25' 12.900 W

Casing Points

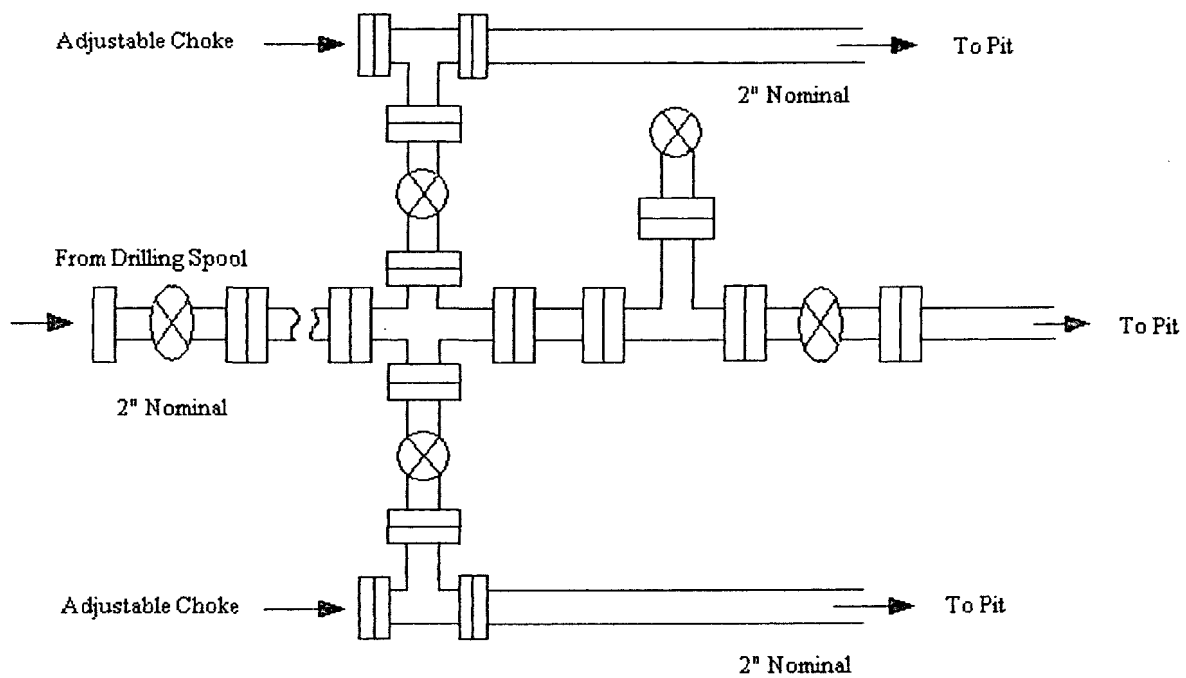
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
4,787.0	2,987.0	Liner	4-1/2	6-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,028.9	2,972.0	Top Target Coal		0.00	
	3,002.0	Base Target Coal		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

