Form 3160-3
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
DEC 10 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

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

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

5. Lease Serial No.: SF-077764

6. If Indian, Allotee or Tribe Name:

7. Unit or CA Agreement Name and No.:

2. Name of Operator: Energen Resources Corporation

8. Lease Name and Well No.: Schumacher 12E

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

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

9. API Well No.: 30-045-34874

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

At surface: 1372' FNL 680' FEL H

At proposed prod. zone: 1700'FNL 1850'FWL F

10. Field and Pool, or Exploratory: Basin Dakota

11. Sec., T., R., M., or Blk. and Survey or Area: H Sec.17,T30N,R10W NMPM

14. Distance in miles and direction from nearest town or post office*: Approximately 5 miles east of Aztec, NM

12. County or Parish: San Juan

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any): 680'

16. No. of Acres in lease: 320

17. Spacing Unit dedicated to this well: 320 W 1/2

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

19. Proposed Depth: 8494' ~~8048~~'md

20. BLM/BIA Bond No. on file

RCVD JAN 14'09
OIL CONS. DIV.
DIST. 3

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 6466' GL

22. Approximate date work will start*: 12/20/08

23. Estimated duration: 25 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

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

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: [signature] Name *(Printed/Typed)*: Jason Kincaid Date: 9/18/2008

Title: Drilling Engineer

Approved by *(Signature)*: [signature] Name *(Printed/Typed)*: Date: 1/13/09

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 *(Instructions on page 2)

Hold C104 for Directional Survey and "As Drilled" plat

H_2S POTENTIAL EXIST

Hold C104 for Directional Survey and "As Drilled" plat

NMOCD

JAN 14 2009

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.

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

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

Form C-102
Revised October 12, 2005

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-045-34874	71599	BASIN DAKOTA

[4] Property Code	[5] Property Name	[6] Well Number
21396	SCHUMACHER	12 E

[7] OGRID No.	[8] Operator Name	[9] Elevation
162928	ENERGEN RESOURCES CORPORATION	6466'

[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
H	17	30N	10W		1372'	NORTH	680'	EAST	SAN JUAN

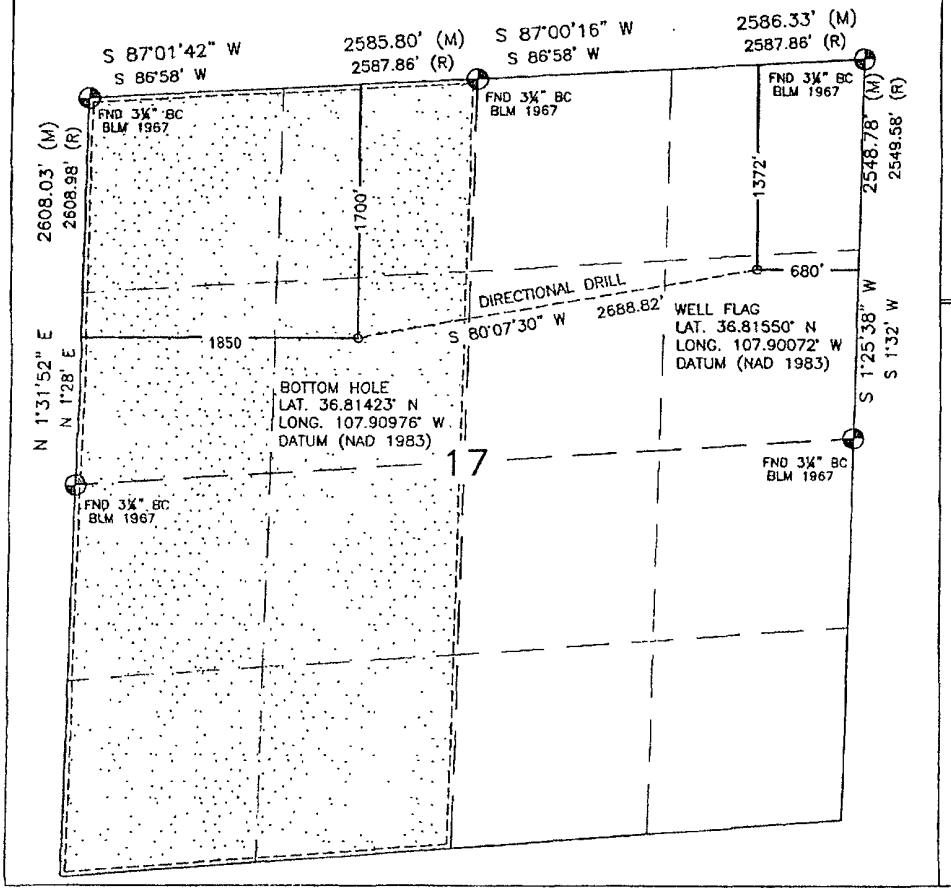
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	17	30N	10W		1700'	NORTH	1850'	WEST	SAN JUAN

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320.00 Acres – (W/2)			

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.

12-1-08
Signature Date

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

OCTOBER 16, 2008
Date of Survey

Signature and Seal of Professional Surveyor:

David R. Russell

DAVID R. RUSSELL NEW MEXICO 10201 REGISTERED PROFESSIONAL LAND SURVEYOR

DAVID RUSSELL
Certificate Number 10201

11/10/2008

ENERGEN RESOURCES

OPERATIONS PLAN

WELL NAME.....Schumacher #12E
JOB TYPE.....Deviated New Drill
DEPT.....Drilling and Completions
PREPARED BY.....Jason Kincaid

GENERAL INFORMATION

Surface Location	1372 fnl, 680 fel
S-T-R	NE Sec.17, T30N, R10W
Bottom Hole Location	1700 fnl, 1850 fwl
S-T-R	NW Sec.17, T30N, R10W
County, State	San Juan, New Mexico
Elevations	6466' GL
Total Depth	8494' +/- (MD); 7650' (TVD)
Formation Objective	Basin Dakota

FORMATION TOPS

Nacimiento	Surface	Point Lookout Ss	5237'
Ojo Alamo Ss	1617'	Mancos Shale	5705'
Kirtland Sh	1738'	Gallup Ss	6544'
Fruitland Fm	2449'	Greenhorn	7295'
Pictured Cliffs Ss	3000'	Graneros	7349'
Lewis Shale	3653'	Dakota "Paguate" Ss	7492' 8333'MD
Cliff House Ss	4628'	Dakota "Cubero" Ss	7532' 8374'MD
Menefee Fm	4810'	Dakota "Encinal Canyon"	7582' 8425'MD
		Total Depth	**8494' 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 3000' TVD. An "S" curve will be drilled initially building angle at 2°/100' and then dropping angle to 10° with a drop of 6.72°/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 7000' TVD to total depth
Surveys: Every 500' for vertical hole section and 250' while directional drilling to TD.

11/10/2008

ENERGEN RESOURCES

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	8494	6-1/4"	4-1/2"	11.6 lb/ft	J-55 LT&C
Tubing	0	8494		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 % $CaCl_2$ and ¼ #/sk Flocele (15.6 ppg, 1.18 ft^3/sk 250 ft^3 of slurry). WOC 12 hours. Pressure test surface casing to 750 psi for 30 min. Test BOP as outlined in the drilling section Circ Cmt to surface

Production Casing: Before cementing, circulate hole at least 1 ½ 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 225 sks 50/50 Class G with 0.60 % Halad-9, 0.10 % CFR-3, 5 #/sk Gilsonite, and ¼ #/sk Flocele (13.5 ppg, 1.30 ft^3/sk). (290 ft^3 of slurry, 20 % excess to circulate to surface). **Stage Collar at 5700'.**

Second Stage: Depending on wellbore conditions, cement may consist a lead of 145 sks 65/35 Type V with 2.0% $CaCl_2$, 10 #/sk Gilsonite, and ½ #/sk Flocele and a tail of 50 sks Type V with 1.0 % $CaCl_2$. (12.3 ppg, 1.93 ft^3/sk and 15.6 ppg, 1.18 ft^3/sk respectively). (338 ft^3 of slurry, 60% excess to circulate to surface). **Stage Collar at 3650'.** Circulate 4 hours starting at time of plug down.

Third Stage: Depending on wellbore conditions, cement may consist a lead of 300 sks 65/35 Type V with 2.0% $CaCl_2$, 10 #/sk Gilsonite, and ½ #/sk Flocele and a tail of 50 sks Type V with 1.0 % $CaCl_2$. (12.3 ppg, 1.93 ft^3/sk and 15.6 ppg, 1.18 ft^3/sk respectively). (638 ft^3 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.

11/10/2008

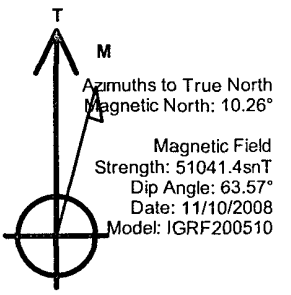
ENERGEN RESOURCES

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.

ENERGEN RESOURCES

Project: Central Basin - S17, T30N, R10W
Site: Central Basin
Well: Schumacher #12E
Wellbore: Deviated Dakota
Plan: Preliminary Plan #1 (Schumacher #12E/Deviated Dakota)

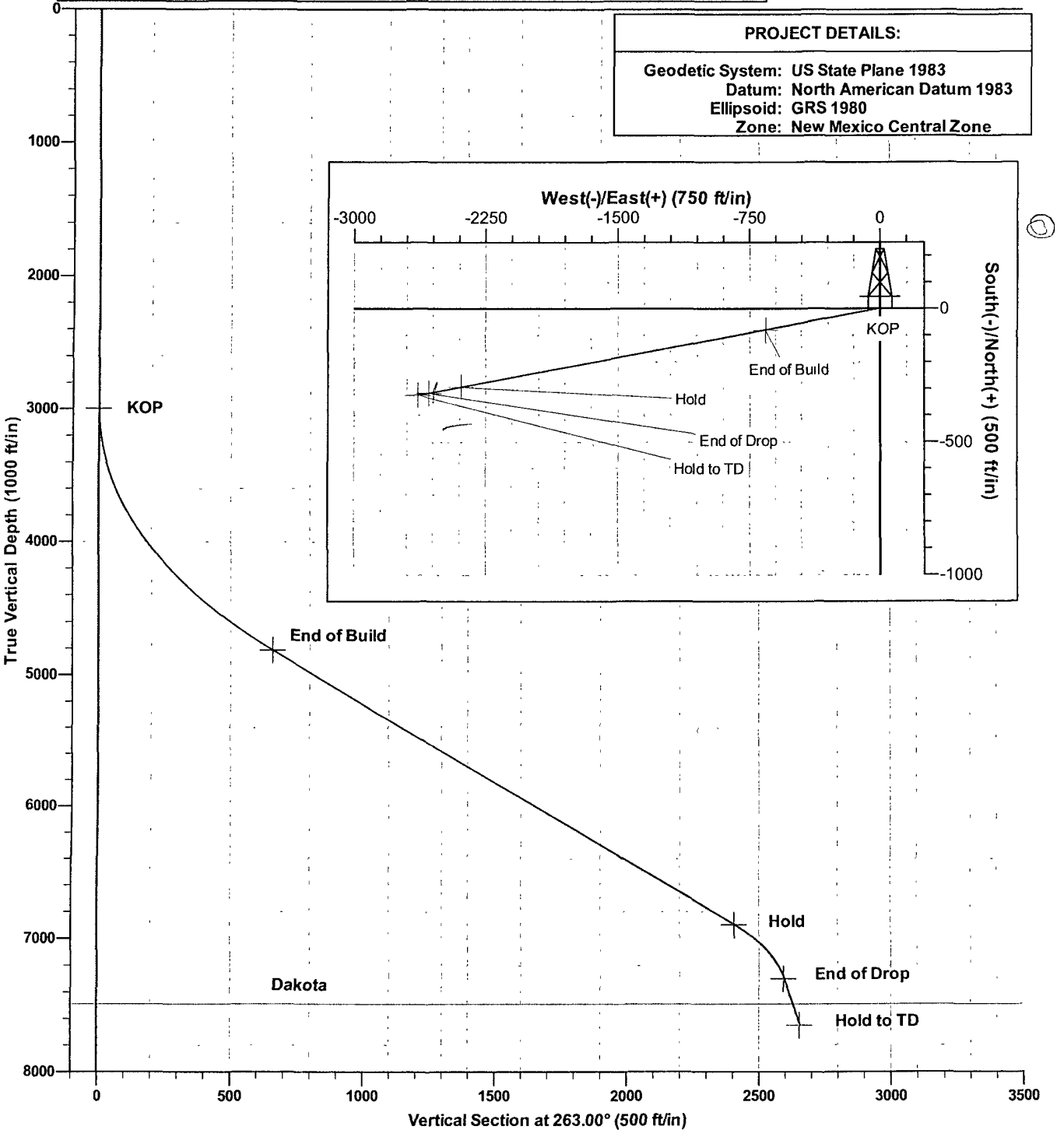


SECTION DETAILS

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	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	KOP
3	4974.6	40.00	263.00	4818.1	-80.6	-656.8	2.03	263.00	661.7	End of Build
4	7692.4	40.00	263.00	6900.0	-293.5	-2390.7	0.00	0.00	2408.6	Hold
5	8138.8	9.99	262.91	7300.0	-316.3	-2575.8	6.72	-179.97	2595.1	End of Drop
6	8494.2	10.02	263.14	7650.0	-323.8	-2637.1	0.01	56.93	2656.9	Hold to TD

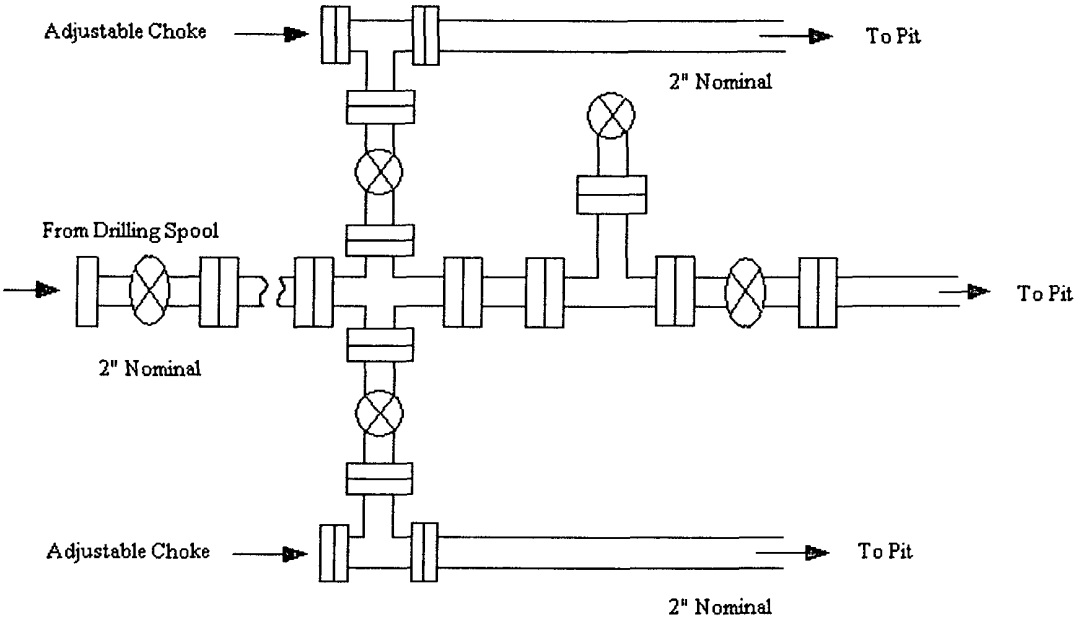
PROJECT DETAILS:

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

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Typical BOP Configuration for Gas Drilling