

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM 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		5. Lease Serial No. <b>MM 013363</b>	
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 <b>Energex Resources Corporation</b>		7. Unit or CA Agreement Name and No.	
3a. Address <b>2010 Afton Place Farmington, New Mexico 87401</b>		8. Lease Name and Well No. <b>Phillips #3F</b>	
3b. Phone No. (include area code) <b>(505) 325-6800</b>		9. API Well No. <b>30-045-34666</b>	
4. Location of Well (Report location clearly and in accordance with any State requirements) At surface <b>425 fsl, 1640 fel</b> At proposed prod zone <b>1400 fnl, 330 fwl</b>		10. Field and Pool, or Exploratory <b>Basin Dakota</b>	
14. Distance in miles and direction from nearest town or post office* <b>Approximately 10.3 miles SE of Blanco</b>		11. Sec., T., R., M., or Blk. and Survey or Area <b>(O) Sec 32, T32N, 8W</b>	
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drg. unit line, if any) <b>330'</b>		12. County or Parish <b>San Juan</b>	
16. No. of Acres in lease <b>305.87</b>		13. State <b>NM</b>	
17. Spacing Unit dedicated to this well <b>W/2 - 305.87</b>			
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>Approx 400'</b>		20. BLM/BIA Bond No. on file	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>6379' GL</b>		22. Approximate date work will start* <b>4/25/08</b>	
		23. Estimated duration <b>35 days</b>	

## 24. Attachments


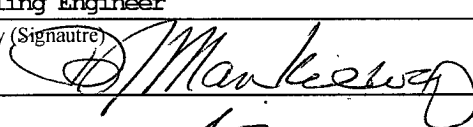
RCVD APR 24 '08

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

OIL CONS. DIV.

- |  |  |
|--|--|
| 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. |

DIST. 3

25. Signature 	Name (Printed/Typed) <b>Nathan Smith</b>	Date <b>3/10/08</b>
Title <b>Drilling Engineer</b>		
Approved by (Signature) 	Name (Printed/Typed) <b>D. Mankeewey</b>	Date <b>4/22/08</b>
Title <b>AFM</b>	Office <b>EFO</b>	

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.

NMOC approval is required for the NSL.

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)

NOTIFY AZTEC OCD 24 HRS.  
PRIOR TO CASING & CEMENTHold C104  
for Directional Survey  
and "As Drilled" plot

NMOC

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

APR 25 2008

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".

## District I

1625 N. French Dr., Hobbs, NM 88240

## District II

1301 W. Grand Avenue, 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 &amp; 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

MAR 21 2008

Bureau of Land Management  
AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION

<sup>1</sup> API Number 30-045-34666	<sup>2</sup> Pool Code 71599	<sup>3</sup> Pool Name Basin Dakota DK
<sup>4</sup> Property Code 21360	<sup>5</sup> Property Name PHILLIPS	<sup>6</sup> Well Number # 3F
<sup>7</sup> OGRID No. 162928	<sup>8</sup> Operator Name ENERGEN RESOURCES CORPORATION	<sup>9</sup> Elevation 6379'

<sup>10</sup> Surface Location

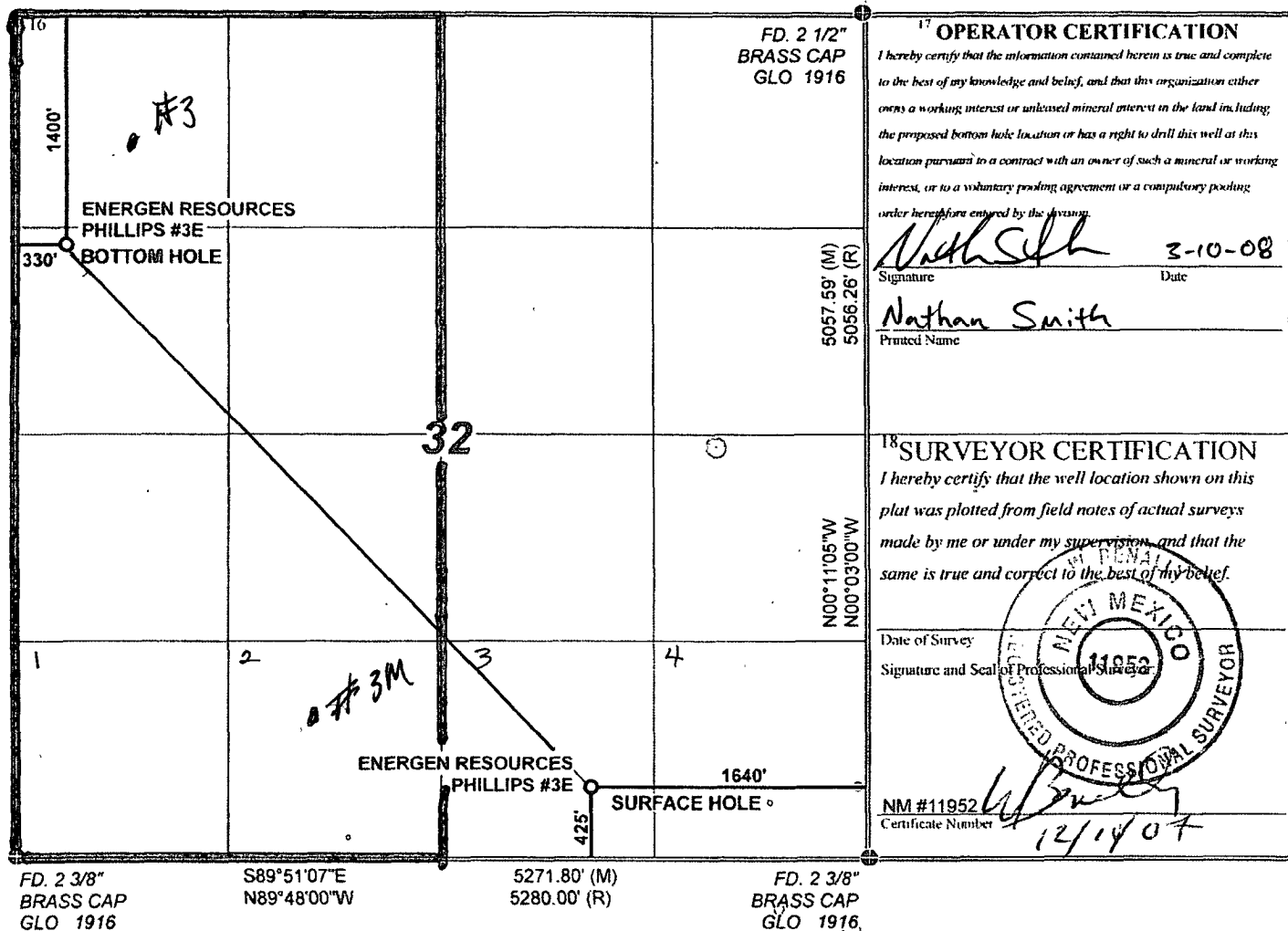
U.I. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	32	28N	8W		425	SOUTH	1640	EAST	SAN JUAN

<sup>11</sup> Bottom Hole Location If Different From Surface

U.I. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	32	28N	8W		1400	NORTH	330	WEST	SAN JUAN

<sup>12</sup> Dedicated Acres 305.67 w/2	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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.



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.  
30-045-3410610

5. Indicate Type of Lease

STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name:

Phillips

8. Well Number

3F

9. OGRID Number

162928

10. Pool name or Wildcat

Basin Dakota

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 O : 425 feet from the South line and 1640 feet from the East line

Section 32 Township 28N Range 08W NMPM County San Juan

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

6379' 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 955'

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 3/10/08

E-mail address:

Type or print name Nathan Smith

Telephone No. 505.325.6800

For State Use Only

APPROVED BY [Signature] TITLE Deputy Oil & Gas Inspector, District #3 DATE APR 25 2008

Conditions of Approval, if any:

RECEIVED

**Operations Plan**

April 14, 2008

APR 18 2008

Bureau of Land Management  
Farmington Field Office

**Phillips #3F**

**General Information**

Location	425 fsl, 1640 fsl at surface 1400 fsl, 330 fsl at bottom swnw 32, T28N, R8W San Juan County, New Mexico
Elevations	6379' GL
Total Depth	10839' (MD), 7031' (TVD)
Formation Objective	Dakota – Paguate Sand

**Formation Tops**

San Jose	Surface	Cliffhouse	4276' (TVD)
Nacimiento	62' (TVD)	Menefee	4301' (TVD)
Ojo Alamo Ss	691' (TVD)	Point Lookout	4891' (TVD)
Kirtland Sh	1816' (TVD)	Mancos Sh	5251' (TVD)
Fruitland Fm	2171' (TVD)	Gallup	6035' (TVD), 6071' (MD)
Pictured Cliffs	2636' (TVD)	Greenhorn	6801' (TVD), 7165' (MD)
Lewis Shale	2791' (TVD)	Graneros	6865' (TVD), 7309' (MD)
		Dakota	
		Top Paguate Sand	7021' (TVD), 7911' (MD)
		Base Paguate Sand	7041' (TVD)

**TOTAL DEPTH      10839' (MD), 7031' (TVD)**

**Drilling**

Surface Wellbore: 12 1/4" wellbore will be drilled with spud mud.

Intermediate Wellbore: 8 3/4" wellbore will be drilled with a Low Solids Non-Dispersed mud with densities expected to range from 8.8 ppg to 9.2 ppg.

Production Wellbore: 6 1/8" wellbore will be drilled with Air/Mist.

**Projected KOP is 5150' TVD with 3.05°/100' doglegs. Anticipated BHP is 500 psi.**

Blowout Control Specifications:

A 3000 psi minimum double ram or annulus BOP stack will be used following nipple up of casing head. During air drilling operations, a Shaffer Type 50 or equivalent rotating head will be installed on top of the stack. A 2" nominal, 2000 psi minimum choke manifold will also be used in conjunction with the 3000 psi BOP. BOP will be tested to 1500 psi prior to drilling out of surface. 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: FMI (Focused Micro Imaging)

Mud logs: 6035' TVD, 6071' MD to TD

Surveys: Surface to KOP every 500' and a minimum of every 200' for directional.

## Tubulars

### Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt	Grade
Conductor	0-250'	17 1/2"	13 3/8"	48.0 ppf	H-40 ST&C
Surface	0'-2000'	12 1/4"	9 5/8"	36.0 ppf	J-55 LT&C
Intermediate	0'-7031' TVD	8 3/4"	7 5/8"		
	0-4950' MD	8 3/4"	7 5/8"	26.4 ppf	J-55 FJ
	4950'-8150' MD	8 3/4"	7 5/8"	26.4 ppf	L-80 FJ HC
Prod Liner	7021'-7041' (TVD)	6 1/4"	4 1/2"	11.6 ppf	J-55 LT&C
	8050'-10839' (MD)				
Tubing	0'-8000' (MD)		2 3/8"	4.7 ppf	J-55

### Casing Equipment:

Conductor Casing: Sawtooth Guide Shoe on bottom of first joint. Insert Float Valve on top of first joint. One regular bow spring centralizer every joint to surface.

Surface Casing: Self fill float shoe on bottom of first joint. Self fill float collar on top of second joint. Casing centralization with standard bow spring centralizers to achieve optimal standoff.

Intermediate Casing: Self fill float shoe on bottom of first joint. Self fill float collar on top of second joint. Casing centralization with double bow spring centralizers and rigid centralizers to optimize standoff. **Place stage collars at 5350' and 2900' TVD.**

Liner: Bull nose guide shoe on bottom of first joint. Ported packer system spaced out along liner string. Total number and placement position to be determined off FMI log interpretation.

## Wellhead

3000 psi 11" x 9 5/8" casing head. 9 5/8" x 7" x 2 3/8" 5000 psi Flanged Slip-on Wellhead. Slip on wellhead will be welded.

## Cementing

Conductor Casing: 350 sks Type V with 2.0 % CaCl<sub>2</sub> and 1/2 #/sk Cellophane Flakes (15.6 ppg, 1.18 ft<sup>3</sup>/sk 413 ft<sup>3</sup>).

Surface Casing: 490 sks 65/35 with 2.0 % CaCl<sub>2</sub>, 10 #/sk Gilsonite and 1/2 #/sk Cellophane Flakes and a tail slurry of 375 sks Class G with 1.0 % CaCl<sub>2</sub> and 1/4 #/sk Cellophane Flakes (15.6 ppg, 1.18 ft<sup>3</sup>/sk 578 ft<sup>3</sup>). WOC 12 hours prior to nipple up BOP. Pressure test surface casing to 750 psi for 30 min. Test BOP to 1500 psi for 30 min. Test choke manifold to ~~750~~ **1500** psi for 30 min.

### Intermediate Casing:

1<sup>st</sup> Stage: 350 sks 50/50 Class G with 0.20 % Halad-344, 0.10 % CFR-3, 5 #/sk Gilsonite, 1/4 #/sk Cellophane Flakes (13.5 ppg, 1.30 ft<sup>3</sup>/sk). Circulate 4 hours at time of plug down on first stage.

2<sup>nd</sup> Stage: 200 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl<sub>2</sub>, 10 #/sk Gilsonite, and 1/2 #/sk Flocele (12.3 ppg, 1.96 ft<sup>3</sup>/sk) and a tail of 50 sks Glass G 1.0 % CaCl<sub>2</sub>. (15.6 ppg, 1.18 ft<sup>3</sup>/sk). Circulate 4 hours at time stage tool is closed.

3<sup>rd</sup> Stage: 225 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl<sub>2</sub>, 10 #/sk Gilsonite, and ½ #/sk Flocele (12.3 ppg, 1.96 ft<sup>3</sup>/sk) and a tail of 50 sks Glass G 1.0 % CaCl<sub>2</sub>. (15.6 ppg, 1.18 ft<sup>3</sup>/sk).

Cement volumes are based on 50 % excess of true hole volume and an 80 shoe track (1393.25 ft<sup>3</sup>). If caliper log is ran, cement volumes will be based on 30 % excess above caliper log. WOC 12 hours prior to nipple up of BOP. Test casing to 1500 psi for 30 min.

Production Liner: NO CEMENT, Open Hole Completion

#### **Other Information**

- 1) This well will be an open hole completion lined with an uncemented pre-drilled liner. The Dakota will be fracture stimulated.
- 2) If lost circulation is encountered. The intermediate 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.
- 4) No abnormal temperatures or pressures are anticipated. This gas is dedicated.



Project: SJ BR - NW S32, T28N, R8W  
Site: Fresno Canyon  
Well: Phillips #3F  
Wellbore: Preliminary Plan  
Plan: Plan #1 (Phillips #3F/Preliminary Plan)

PROJECT DETAILS: SJ BR - NW S32, T28N, R8W

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: New Mexico Western Zone  
System Datum: Mean Sea Level

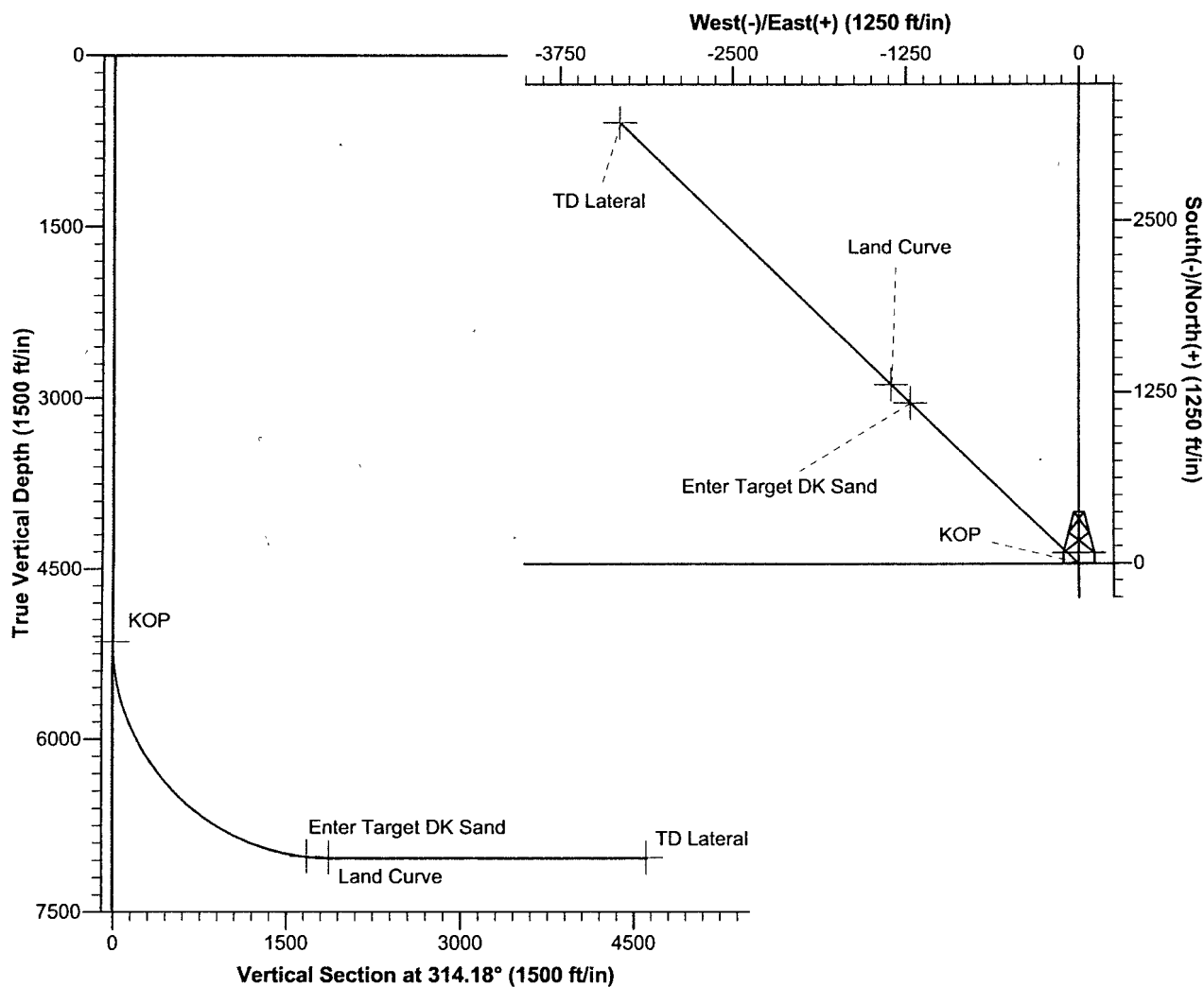


Azimuths to True North  
Magnetic North: 10.24°

Magnetic Field  
Strength: 51017.4snT  
Dip Angle: 63.45°  
Date: 3/6/2008  
Model: IGRF200510

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	5150.0	0.00	0.00	5150.0	0.0	0.0	0.00	0.00	0.0	KOP
3	7910.7	84.09	314.18	7021.0	1175.9	-1210.1	3.05	314.18	1687.3	Enter Target DK Sand
4	8104.7	90.00	314.19	7031.0	1310.9	-1349.0	3.04	0.11	1881.0	Land Curve
5	10839.4	90.00	314.18	7031.0	3217.0	-3310.0	0.00	0.00	4615.8	TD Lateral



# ENERGEN RESOURCES CORPORATION

PHILLIPS #3F

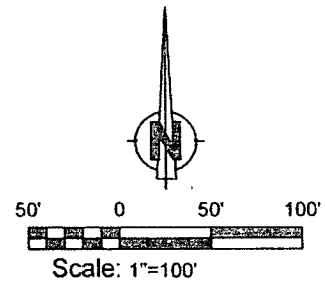
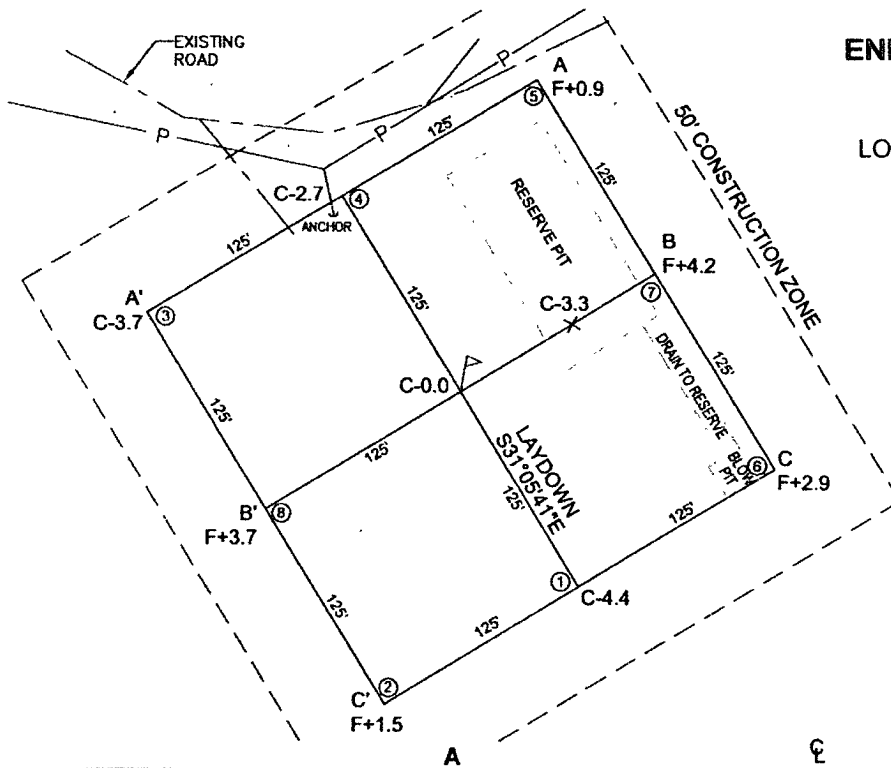
425' FSL & 1640' FEL

LOCATED IN THE SW/4 SE/4 OF SECTION 32,

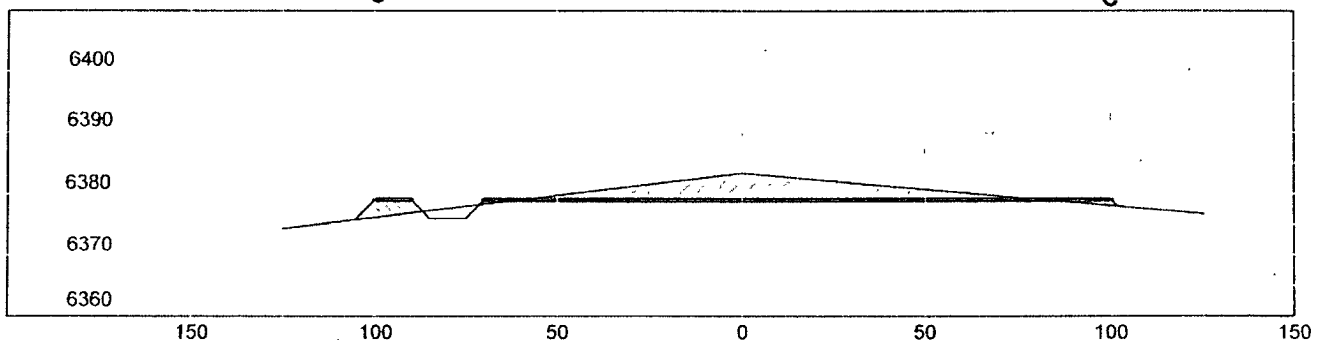
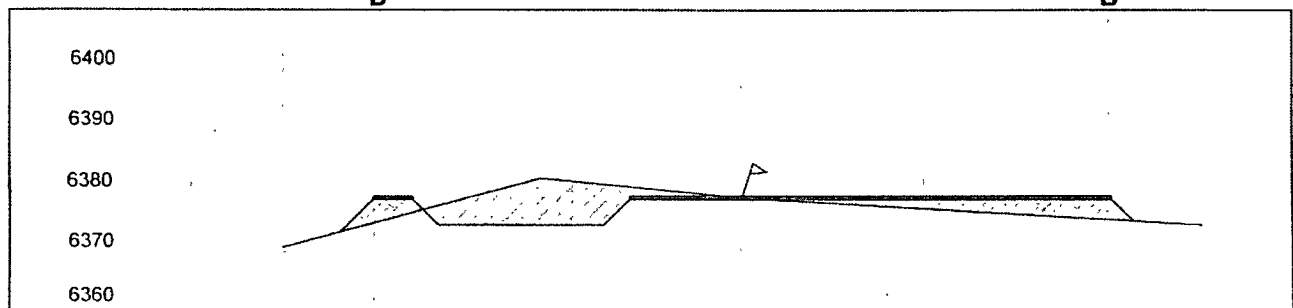
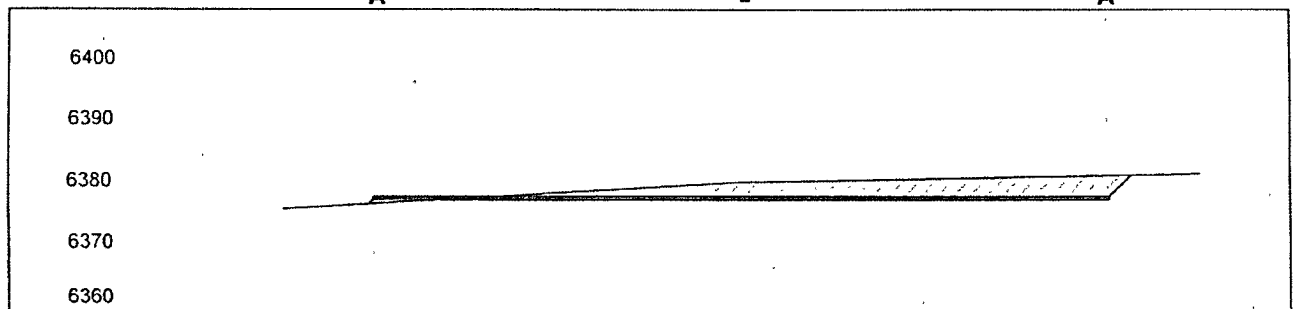
T28N, R8W, N.M.P.M.,

SAN JUAN COUNTY, NEW MEXICO

ELEVATION: 6379', NAVD 88



LATITUDE: 36.61238"N  
LONGITUDE: 107.70088"W  
DATUM: NAD 83



HORIZ. SCALE: 1"=50'  
VERT. SCALE: 1"=30'

**Red Skies Surveying & Mapping, Inc.**

A Native American Owned Company

101 Fauver Lane, Bloomfield, New Mexico 87413

Phone/Fax: (505) 632-8906 Cell No: (505) 793-5325





ENTERPRISE  
FIELD  
SERVICES LLC

BLANCO GATHERING SYSTEM

DWG. NO. BLD004-027-01

WO NO.

RW NO. 0870030

DATE 1/21/08

SCALE 1" = 1000'

SURVEYED 1/14/08

RANGE 08-W, N.M.P.M.

LINE ENERGEN RESOURCES CORPORATION - PHILLIPS NO. 3F

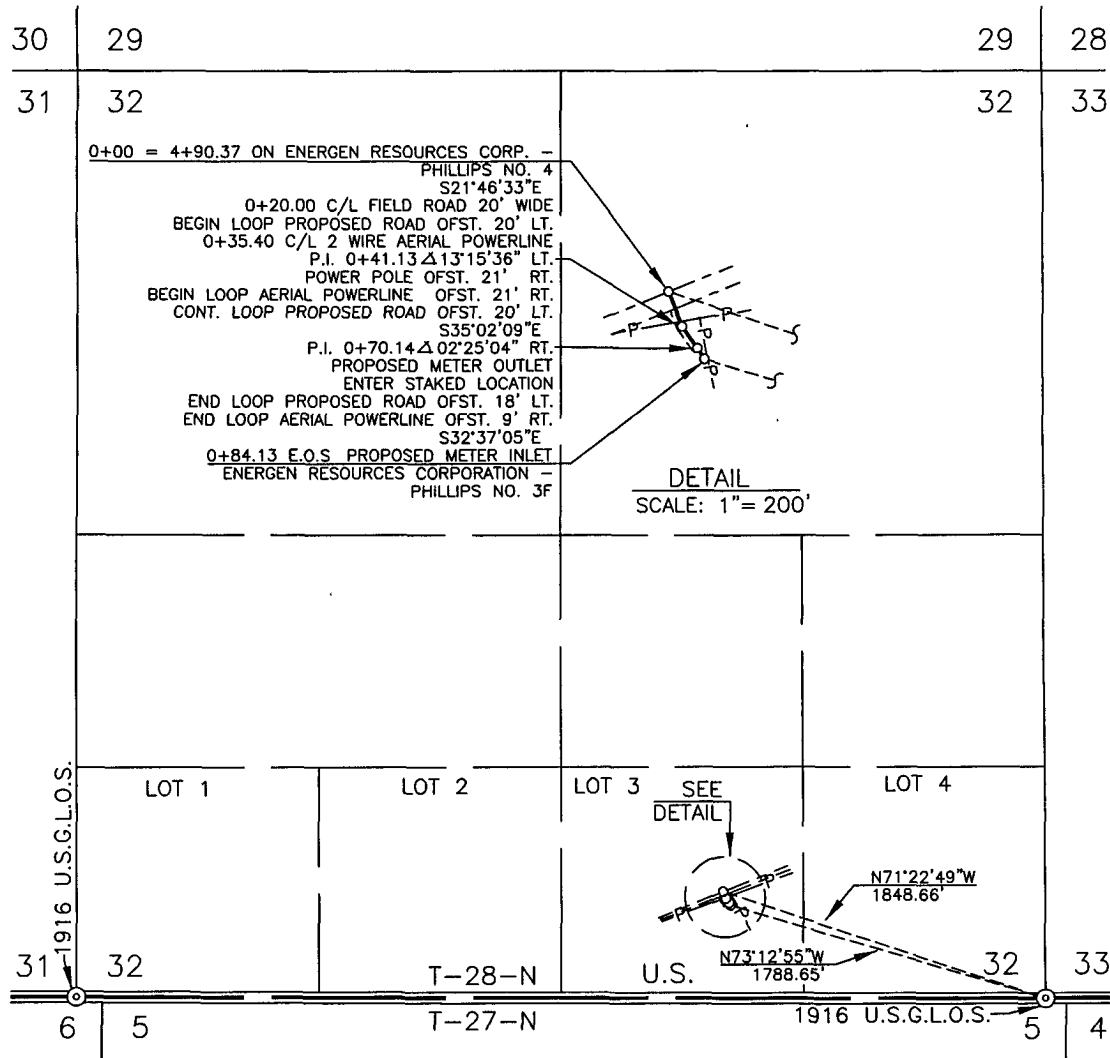
FROM 0+00 = 4+90.37 ON ENERGEN RESOURCES CORPORATION - PHILLIPS NO. 4

(BLD004-013-01, R/W NO. 7270291)(MC NO. 87458)

COUNTY SAN JUAN STATE NEW MEXICO SECTION 32 TOWNSHIP 28-N



T-28-N, R-08-W, N.M.P.M.  
BASIS OF BEARING: GPS OBSERVATIONS



DWN. BY MR CONSTR. COMMENCED APPL. DWG. SLACK CHAIN  
CKD. BY MD CONSTR. COMPLETED DATE PIPE SIZE 4.50" O.D.

PRINT RECORD

PIPE DATA

METER STA. NO.

DK

7 SJ DISTRIB 1/23/08

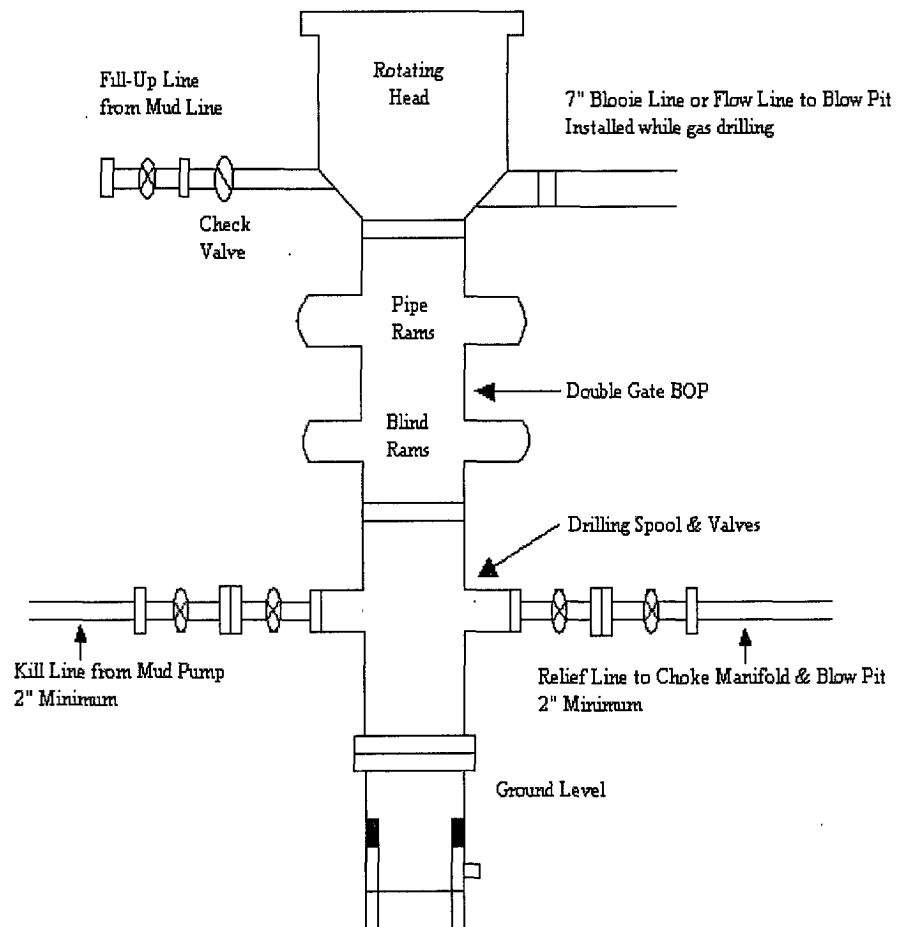
NOTE: WELL FLAG.  
C/L SURVEY LOOPS PROPOSED ROAD.  
LOCATION NOT BUILT.

SUBDIVISION	OWNER	LESSEE	METER(S)	RODS	ACRE(S)
SW/4SE/4, SEC. 32	UNITED STATES	PACHECO RANCHES		5.099	0.077

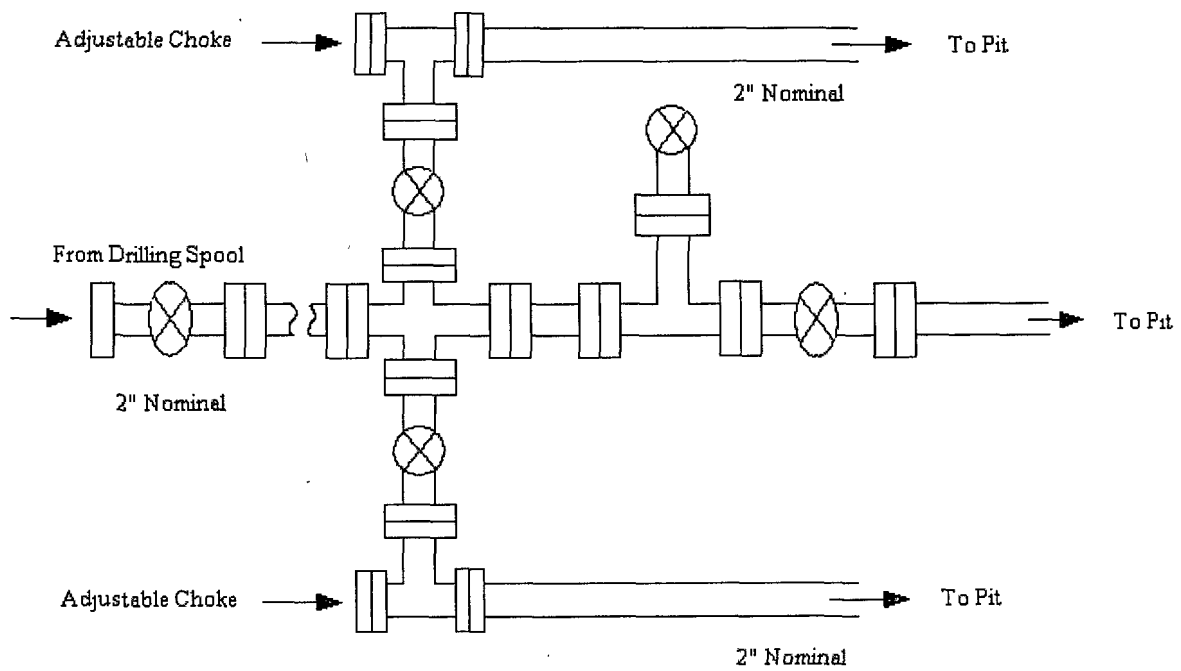
BLD004-027-01 FM24 (Rev. 1/99)

## 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