

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

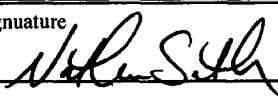
APPLICATION FOR PERMIT TO DRILL OR REENTER

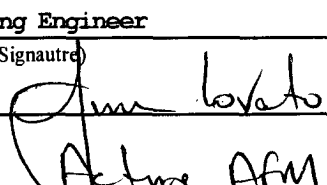
1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM 29372 29342
1b. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name NM 9-21
2. Name of Operator Energen Resources Corporation		7. Unit or CA Agreement Name and No. RECEIVED
3a. Address 2198 Bloomfield Highway Farmington, New Mexico 87401	3b. Phone No. (include area code) (505) 325-6800	8. Lease Name and Well No. Carracas 26A #11
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 2240' fsl, 955' fel (I) S27 T32N R5W At proposed prod. zone 1600' fsl, 1880' fwl (K) S26 T32N R5W		9. API Well No. 30-039-29821
14. Distance in miles and direction from nearest town or post office* 6.75 miles south of Arboles, CO		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) 955'		11. Sec., T., R., M., or Blk. and Survey or Area I Sec. 27, T32N, R5W, N.M.P.M.
16. No. of Acres in lease 1350.36		12. County or Parish Rio Arriba
17. Spacing Unit dedicated to this well W/2		13. State NM
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 75'		19. Proposed Depth 3850' (TVD), 6028' (MD)
20. BLM/BIA Bond No. on file		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 7128' GL	22. Approximate date work will start* 7/1/06	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 	Name (Printed/Typed) Nathan Smith	Date 2/24/06
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Approved by (Signature) 	Name (Printed/Typed) Acting AFM	Date 6/13/06
Title Drilling Engineer	Office	

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.

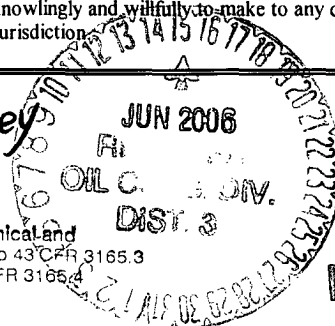
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on page 2)

HOLD C104 FOR directional survey

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

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



NMOCD

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
811 South First, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 15, 2000

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, NM 87505

2006 FEB 24 10:31 AM
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies
RECEIVED
070 FARMINGTON
AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-29821	² Pool Code 71629	³ Pool Name BASIN FRUITLAND COAL
⁴ Property Code 39663	⁵ Property Name CARRACAS 26A	⁶ Well Number 11
⁷ GRID No. 162928	⁸ Operator Name ENERGEN RESOURCES CORPORATION	⁹ Elevation 7128'

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
I	27	32N	5W		2240'	SOUTH	955'	EAST	RIO ARRIBA

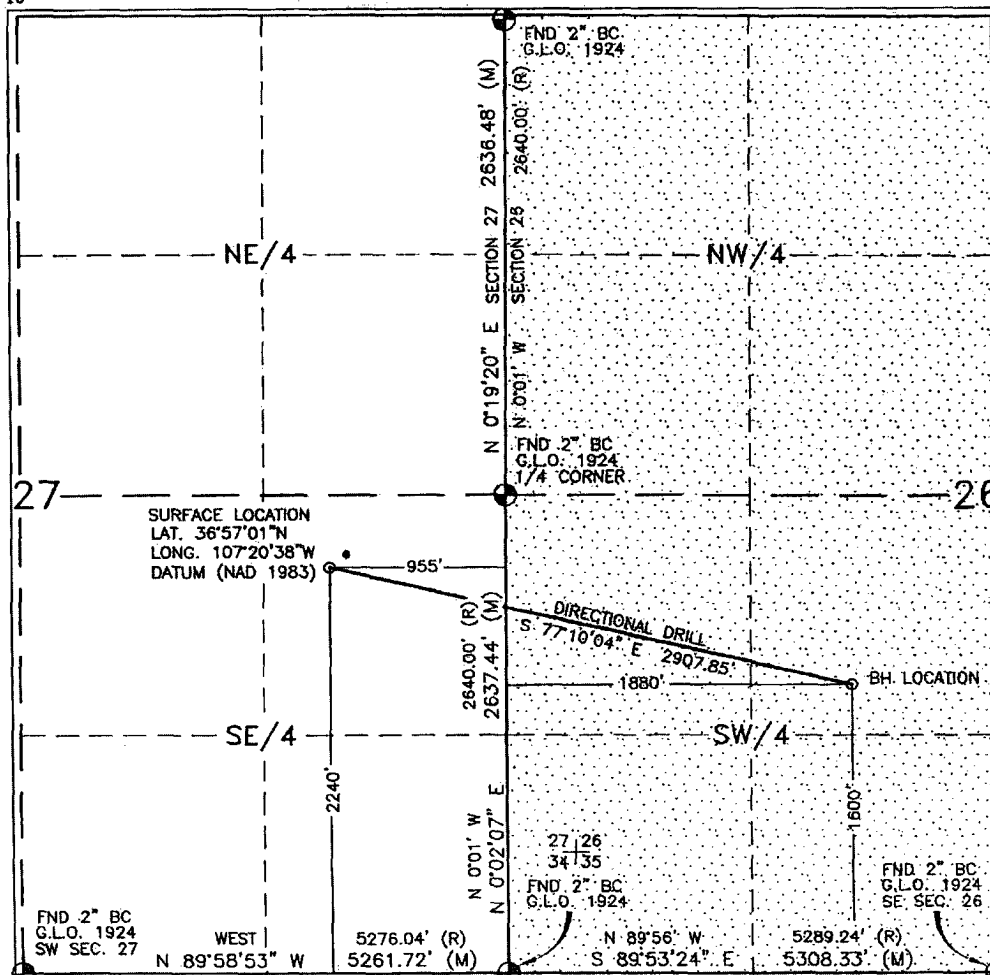
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	26	32N	5W		1600'	SOUTH	1880'	WEST	RIO ARRIBA

¹² Dedicated Acres 320.95 Acres - (W/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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

16



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

2/24/06
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.

NOVEMBER 02, 2005

Date of Survey

Signature and Seal of Professional Surveyor:

DAVID R. RUSSELL
Professional Surveyor
NEW MEXICO
10201

Certificate Number 10201

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. <u>30-039-29821</u>
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. <u>NM 29372</u>
7. Lease Name or Unit Agreement Name: <u>Carracas 26A</u>
8. Well Number <u>11</u>
9. OGRID Number <u>162928</u>
10. Pool name or Wildcat <u>Basin Fruitland Coal</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) <u>7128' GL</u>
Pit or Below-grade Tank Application <input checked="" type="checkbox"/> or Closure <input type="checkbox"/>
Pit type <u>Drill</u> Depth to Groundwater <u>>100'</u> Distance from nearest fresh water well <u>>1000'</u> Distance from nearest surface water <u>>250'</u>
Pit Liner Thickness: <u>12</u> mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

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 <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other
2. Name of Operator <u>Energen Resources Corporation</u>
3. Address of Operator <u>2198 Bloomfield Highway Farmington, NM 87401</u>
4. Well Location Unit Letter <u>I</u> : <u>2240</u> feet from the <u>South</u> line and <u>955</u> feet from the <u>East</u> line Section <u>27</u> Township <u>32N</u> Range <u>5W</u> NMPM County <u>Rio Arriba</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) <u>7128' GL</u>
Pit or Below-grade Tank Application <input checked="" type="checkbox"/> or Closure <input type="checkbox"/>
Pit type <u>Drill</u> Depth to Groundwater <u>>100'</u> Distance from nearest fresh water well <u>>1000'</u> Distance from nearest surface water <u>>250'</u>
Pit Liner Thickness: <u>12</u> 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 Guidelines' as issued on November 1, 2004. Energen anticipates the submittal of a C-144 for closure of this pit in accordance with ELM and 'OCD Pit and Below Grade 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 2/24/06

Type or print name Nathan Smith

E-mail address:

nsmith@energen.com

Telephone No. 505.325.6800

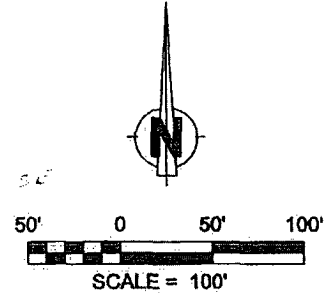
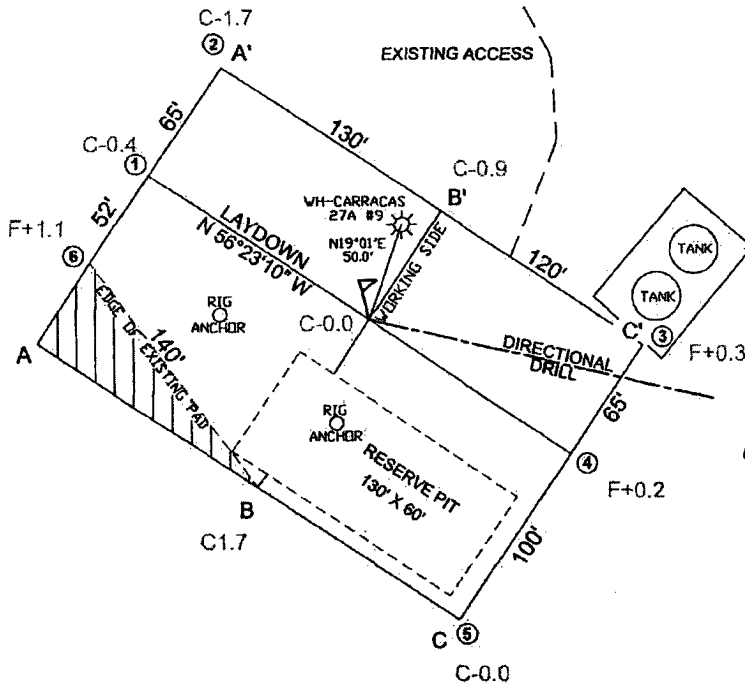
For State Use Only

APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 1 DATE JUN 15 2006

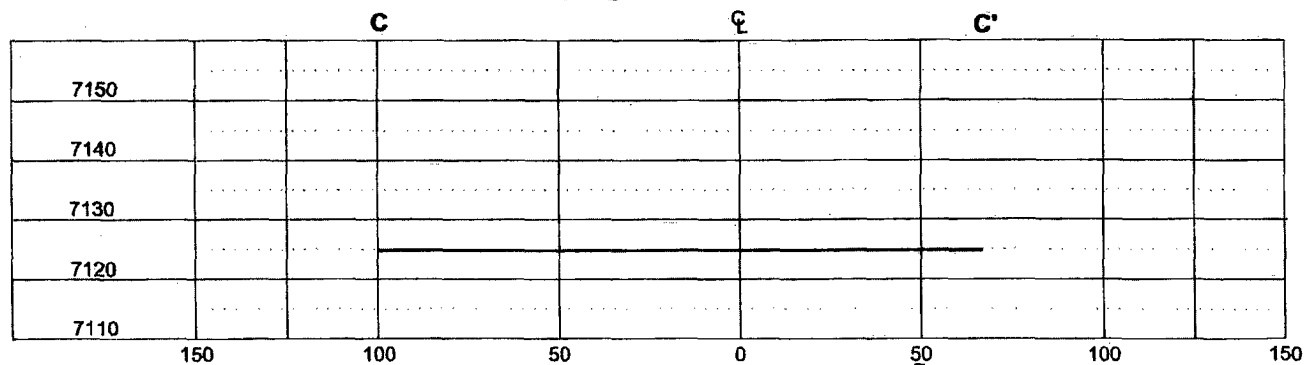
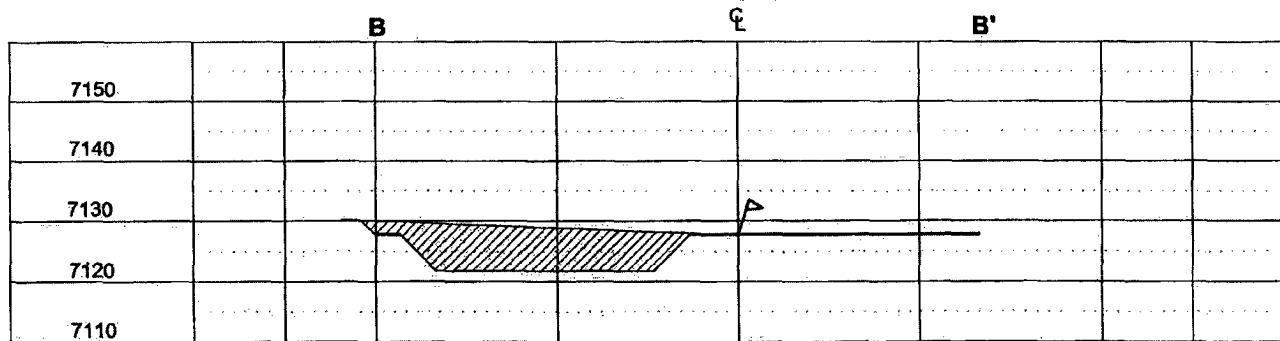
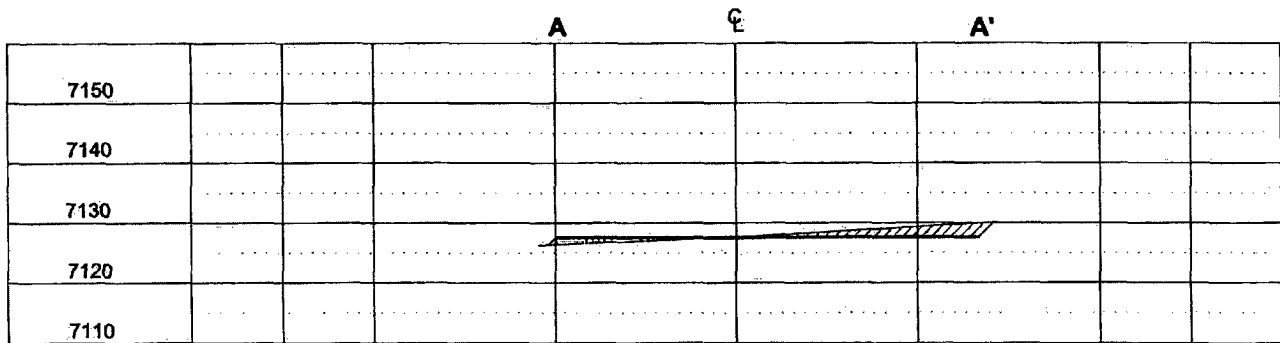
Conditions of Approval, if any:

ENERGEN RESOURCES CORPORATION

CARRACAS 26A #11
2240' FSL & 955' FEL
LOCATED IN THE NE/4 SE/4 OF SEC. 27,
T32N, R5W, N.M.P.M.,
RIO ARriba COUNTY, NEW MEXICO
ELEVATION: 7128', NAVD 88



LATITUDE: 36°57'01"N 36.950 27
LONGITUDE: 107°20'38"W 107.34308
DATUM: NAD 83



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



Russell Surveying
1409 W. Aztec Blvd. #5
Aztec, New Mexico 87410

Operations Plan

February 23, 2006

Carracas 26A #11

General Information

Location	2240' fsl, 955' fel at surface T32N, R5W 1600' fsl, 1880' fwl at bottom T32N, R5W Rio Arriba County, New Mexico
Elevations	7128' GL
Total Depth	3850' (TVD), 6028' (MD),
Formation Objective	Basin Fruitland Coal

Formation Tops

San Jose	Surface
Nacimiento	1942' (TVD)
Ojo Alamo Ss	3213' (TVD), 3300' (MD)
Kirtland Sh	3297' (TVD), 3400' (MD)
Fruitland Fm	3702' (TVD), 4110' (MD)
Top Coal	3824' (TVD), 4600' (MD)
Bottom Coal	3850' (TVD)
Total Depth	3850' (TVD), 6028' (MD)
Pictured Cliffs Ss	3918'

Drilling

The 12 1/4" wellbore will be drilled with a fresh water mud system.

The 8 3/4" 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 8.9 ppg to 9.5 ppg. Kick off point is 2171' TVD.

The 6 1/4" wellbore will be drilled with a fresh water or brine water system depending on reservoir characteristics.

Blowout Control Specifications:

A 2000 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. 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: MWD gamma ray

Mud logs: From kick off point to TD

Natural Gauges: Surface and/or as needed for directional drilling

Tubulars

Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt	Grade
Surface	0'-200'	12 1/4"	9 5/8"	32.3 ppf	H-40 ST&C
Intermediate	0'-3850' (TVD) 4800' (MD)	8 3/4"	7"	23.0 ppf	J-55 LT&C
Production	3824'-3850' (TVD) 4740'-6028' (MD)	6 1/4"	4 1/2"	11.6 ppf	J-55 LT&C
Tubing	0'-4700'		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 and rigid centralizers to optimize standoff. Two turbolating centralizers at the base of the Ojo Alamo are recommended.

Liner: Cement nose guide shoe on bottom of first joint. No centralizers.

Wellhead

3000 psi 11" x 9 5/8" casing head. 9 5/8" x 7" x 2 3/8" 3000 psi Flanged Wellhead .

Cementing

Surface Casing: 125 sks Std (class B) with 2.0 % CaCl₂ and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk ¹⁴⁸130 ft³ of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 600 psi for 30 min.

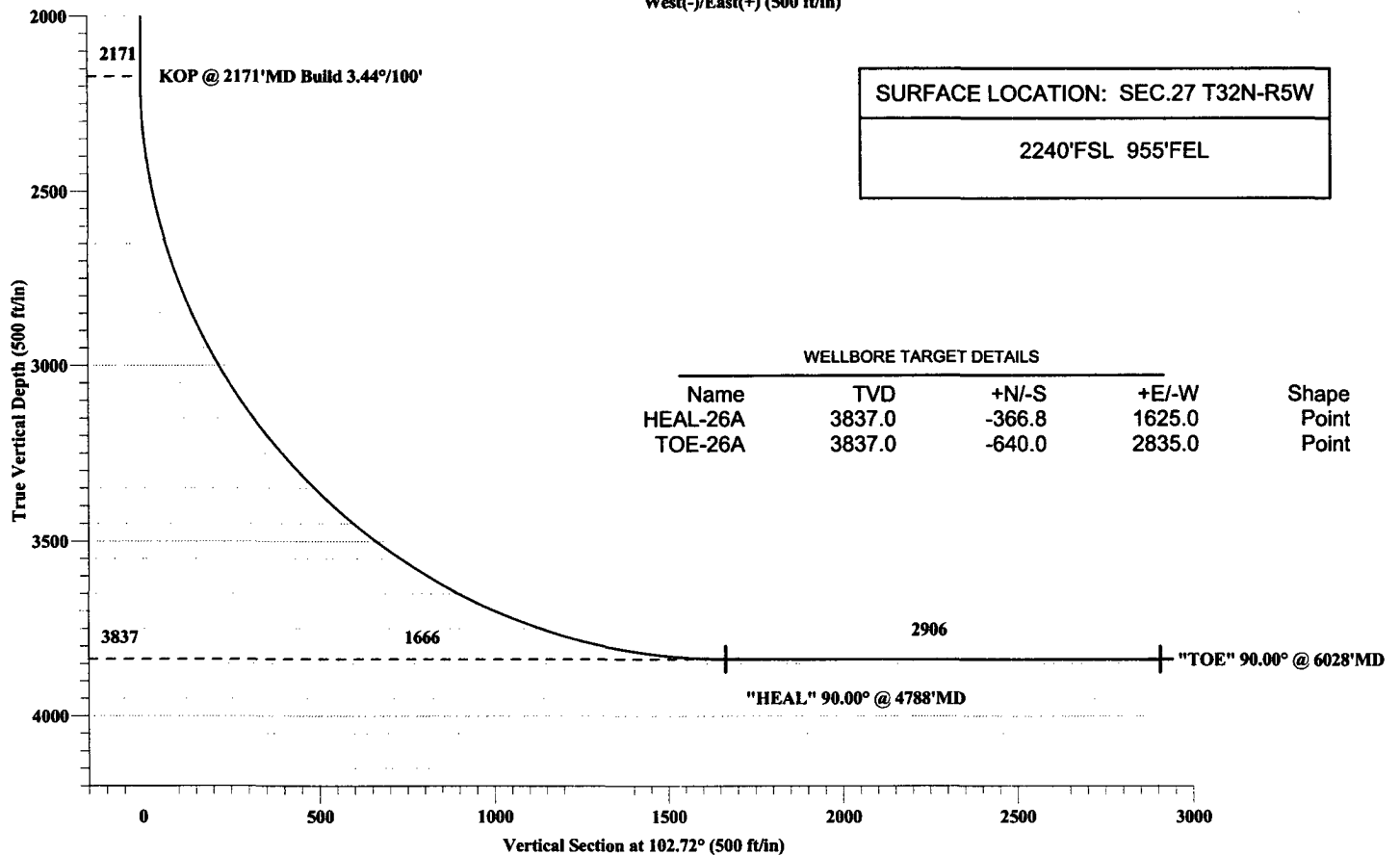
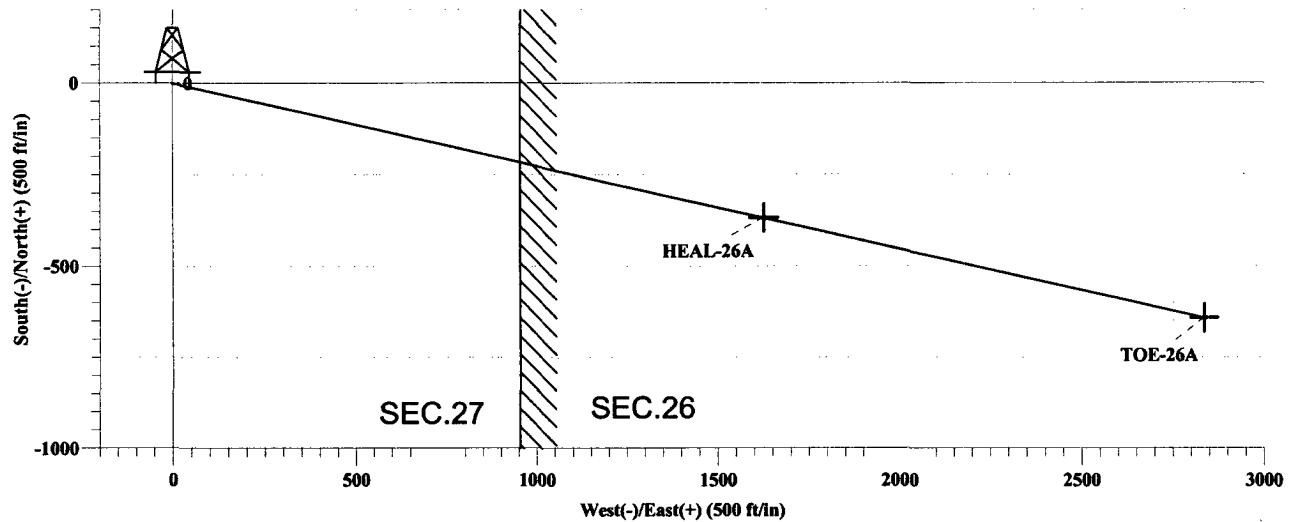
Intermediate Casing: Before cementing, circulate hole at least 1 1/2 hole volumes of mud and reduce funnel viscosity to minimum to aide in hole cleanout. Depending on wellbore conditions, cement may consist of 650 sks 65/35 Std (class B) with 6.0 % Bentonite, 2.0 % CaCl₂, 10 #/sk Gilsonite, and 1/2 #/sk Flocele (12.3 ppg, 1.96 ft³/sk) and a tail of 125 sks Sts (class B) with 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk). (1429 ft³ of slurry, 100 % excess to circulate to surface). Test casing to 1200 psi for 30 min.

Other Information

- 1) This well will be an open hole completion.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. 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 are anticipated, expected BHP is 1200psi. This gas is dedicated.

Energen Resources Corp

CARRACAS 26A-11
SEC.26 T32N-R5W
Rio Arriba, NM



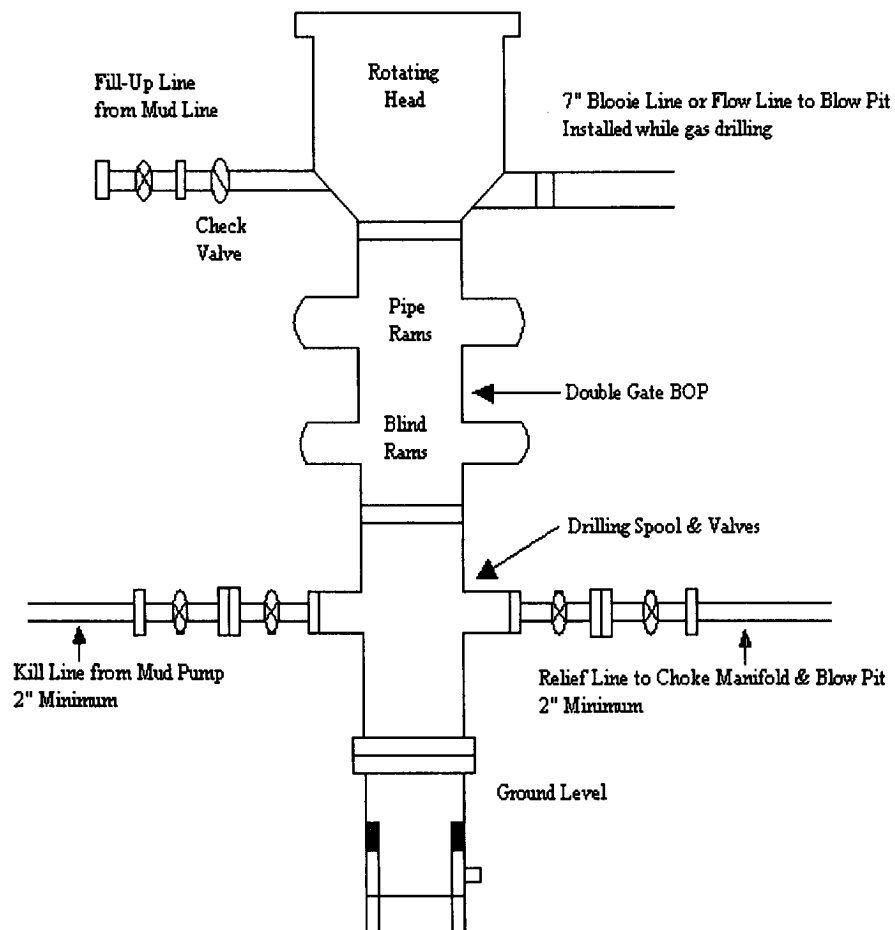
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0	
2	2171.1	0.00		2171.1	0.0	0.0	0.00	0.0	
3	4787.9	90.00	102.72	3837.0	-366.8	1625.0	3.44	102.72	HEAL-26A
4	6028.3	90.00	102.72	3837.0	-640.0	2835.0	0.00	0.00	TOE-26A

Plan: Plan #1 (CARRACAS 26A-11/Wellbore #1)

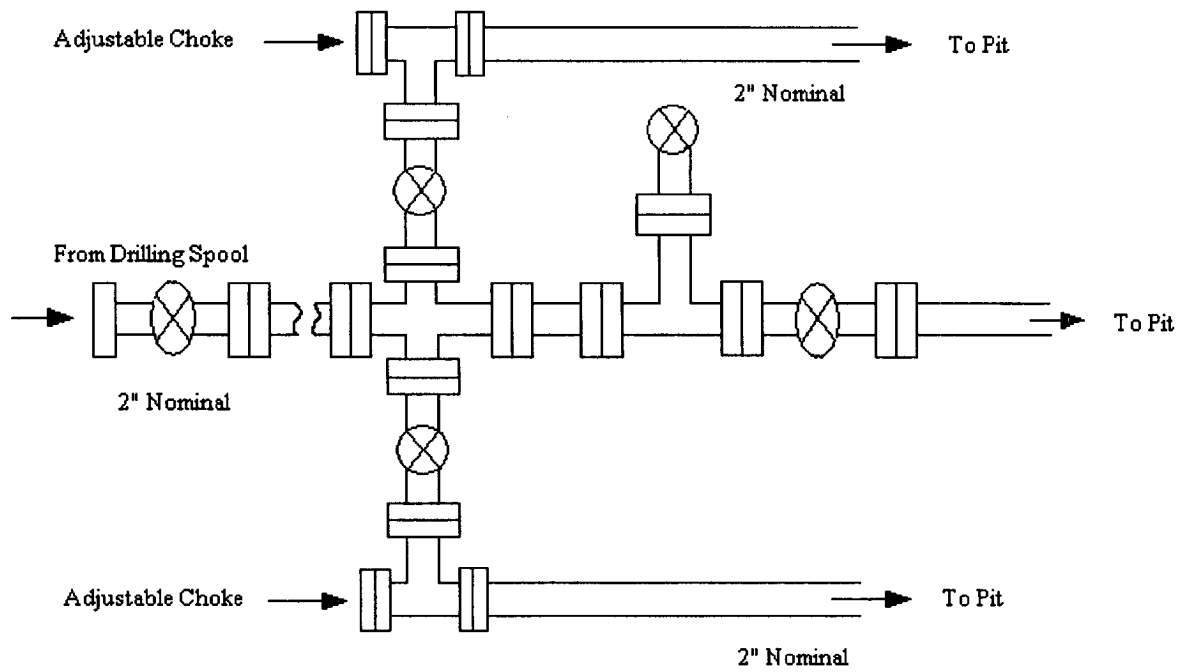
Energen Resources Corporation

Typical BOP Configuration for Gas Drilling



Energen Resources Corporation

Typical 2000 psi Choke Manifold Configuration



Choke manifold installed from surface to TD