

Form 3160-3  
(December 1990)

1 OCD in Aztec 1 OCD in Santa Fe

SUBMIT IN TRIPPLICATE\*  
(Other instructions on  
reverse side)

Form approved.  
Budget Bureau No. 1004-0136  
Expires: December 31, 1991

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED  
BLM

30-039-25230

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL  
WELL ☐

GAS  
WELL ☒

OTHER

SINGLE  
ZONE ☒

MULTIPLE  
ZONE ☐

2. NAME OF OPERATOR

NASSAU RESOURCES, INC. 15515

3. ADDRESS AND TELEPHONE NO.

P O Box 809, Farmington, N.M. 87499

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*

At surface

Surface Location:

1123' FSL & 790' FWL

At proposed prod. zone

Bottom Hole Location:

1090' FSL & 990' FWL (within 100' radius)

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

± 32 miles NE of Gobernador, N.M.

10. DISTANCE FROM PROPOSED\* Bottom Hole

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any) 990'

16. NO. OF ACRES IN LEASE

2,522.12

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

160.0

18. DISTANCE FROM PROPOSED LOCATION\*

TO NEAREST WELL, DRILLING, COMPLETED, 300' to a

OR APPLIED FOR, ON THIS LEASE, FT.

Fr. Coal well

19. PROPOSED DEPTH

4240' VD, 4262' MD

20. ROTARY OR CABLE TOOLS

TD

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

7045' GL, 7057' RKB

This action is subject to technical and  
procedural review pursuant to 43 CFR 3165.3  
and proposed pursuant to 43 CFR 3165.6 PROGRAM

22. APPROX. DATE WORK WILL START\*

9/20/92

23.

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

| SIZE OF HOLE | GRADE SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT        |
|--------------|----------------------|-----------------|---------------|---------------------------|
| 12-1/4"      | 9-5/8"               | 36#             | 250'          | 150 cu.ft. circ. to surf. |
| 7-7/8"       | 5-1/2"               | 15.5#           | 4262' MD      | 924 cu.ft. circ. to surf. |

Plan to drill directionally with spud mud to set 250' of surface casing. Will then drill with water and gel-chem. mud to test the Pictured Cliffs coal zone at +4240' VD. Will run DIL-GR-SP and FDC-CNL-GR Caliper and directional survey. If well appears productive, will set 5-1/2" casing at TD, cement in 1 stage, selectively perforate, frac, clean out after frac and complete with 2-7/8" tubing.

NOTE: The surface location will be on the present location of the Carracas Unit 26 B #13 (Fruitland Coal) well.

GAS IS NOT DEDICATED.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

Eran Perrin

TITLE Regulatory Liaison

DATE 9/3/92

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED  
AS AMENDED

Application approval does not warrant or certify that applicant holds legal or equitable title to those rights in the subject lease which would authorize drilling or other operations thereon.  
CONDITIONS OF APPROVAL ARE:

APPROVED BY

OCT 02 1992

TITLE

NMOCD

SEP 30 1992

AREA MANAGER

\*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes 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.

Submit to Appropriate  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

|                                                                                                   |                                        |                      |                                        |                                   |                |
|---------------------------------------------------------------------------------------------------|----------------------------------------|----------------------|----------------------------------------|-----------------------------------|----------------|
| Operator<br>Nassau Resources, Inc.                                                                |                                        |                      | Lease<br>Carracas Unit- <i>PC</i> 26 B |                                   | Well No.<br>13 |
| Unit Letter<br>M                                                                                  | Section<br>26                          | Township<br>32 North | Range<br>4 West                        | County<br>Rio Arriba              |                |
| Actual Footage Location of Well:<br>1123 feet from the South line and 790 feet from the West line |                                        |                      |                                        |                                   |                |
| Ground level Elev.<br>7045 Est.                                                                   | Producing Formation<br>Pictured Cliffs |                      | Pool<br>Undesignated Pictured Cliffs   | Dedicated Acreage:<br>160.0 Acres |                |

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communalization, unitization, force-pooling, etc.?  
☒ Yes ☐ No If answer is "yes" type of consolidation Unitization - Carracas Unit  
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)  
No allowable will be assigned to the well until all interests have been consolidated (by communalization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.

OPERATOR CERTIFICATION

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

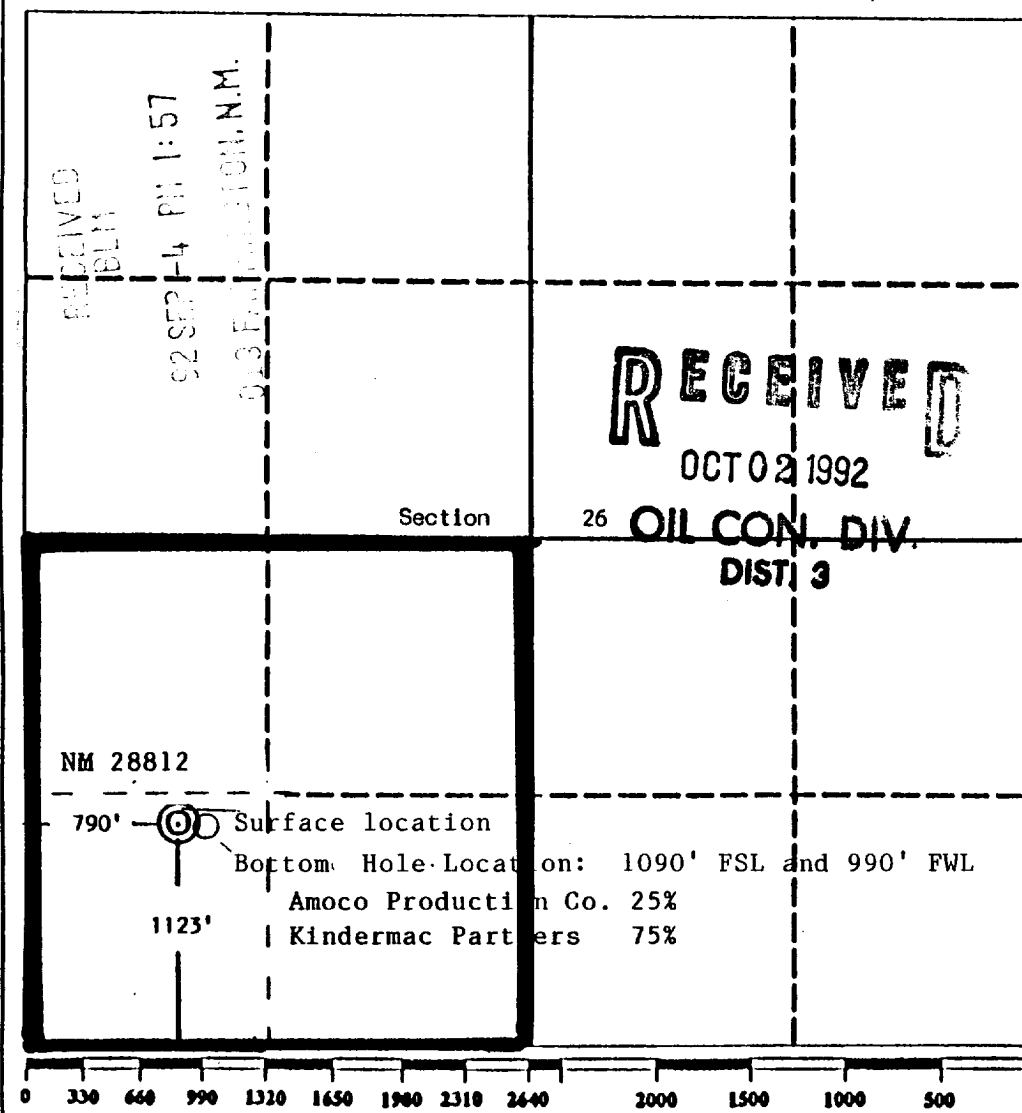
Signature  
*Fran Perrin*  
Printed Name  
Fran Perrin  
Position  
Regulatory Liaison  
Company  
Nassau Resources, Inc.  
Date  
9/3/92

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 knowledge and belief.

Date Surveyed  
September 2, 1992

Signature & Seal of Professional Surveyor  
*Edgar R. Risenhoover*  
Certificate No. 5979  
Edgar R. Risenhoover, P



## OPERATIONS PLAN

OPERATOR: NASSAU RESOURCES, INC.  
WELL NAME: Carracas Unit-PC 26 B #13  
FIELD: Undesignated Pictured Cliffs  
LOCATION: Surface Location: 1123' FSL & 790' FWL  
Bottom Hole Location: 1090' FSL & 990' FWL  
Sec. 26, T32N, R4W, NMPM  
Rio Arriba County, New Mexico  
ELEVATION: 7045' GL, 7057' RKB

| EXPECTED FORMATION TOPS: | <u>Vertical Depth</u> | <u>Measured Depth</u> |
|--------------------------|-----------------------|-----------------------|
| Ojo Alamo                | 3384'                 | 3385'                 |
| Kirtland                 | 3510'                 | 3511'                 |
| Fruitland                | 3760'                 | 3765'                 |
| Fruitland Coal           | 3968'                 | 3978'                 |
| Pictured Cliffs          | 4040'                 | 4053'                 |
| Total Depth              | 4240'                 | 4262'                 |

LOGGING PROGRAM: DIL-GR-SP & FDC-CNL-GR-Caliper & Directional Survey

SAMPLES: Catch samples every 10' from 3960' MD to TD.

### CASING PROGRAM:

| Hole<br>Size                                                                               | Depth | Csg.<br>Size | Wt./Ft. | Grade &<br>Condition |
|--------------------------------------------------------------------------------------------|-------|--------------|---------|----------------------|
| 12-1/4"                                                                                    | 250'  | 9-5/8"       | 36#     | J-55, New            |
| Cement: 125 sx Class "B" w/ 2% CaCl (150 cu.ft.)                                           |       |              |         |                      |
| 7-7/8"                                                                                     | 4262' | 5-1/2"       | 15.5#   | K-55, New            |
| Cement: 637 sx 50/50 poz w/ 2% gel, 6-1/4#/sk gilsonite<br>& 1/4#/sk flowseal (924 cu.ft.) |       |              |         |                      |

Regarding the cementing of 5-1/2" casing, centralizers will be placed on each joint through usable water zones with turbulators installed just below and into the base of the Ojo Alamo. A chronological log of the cement job will be kept.

WELLHEAD EQUIPMENT: 9-5/8" x 11" 600 series Bradenhead &  
11" x 7-1/16" 600 series, 2000 psi working pressure well  
head.

### TECHNICAL PERSONNEL:

Murphy Brasuel, Field Supt.  
Nassau Resources, Inc.  
P O Box 809  
Farmington, NM 87499  
(505) 326-7793 Office  
(505) 289-3335 Home

Gary Johnson, Petroleum Engr.  
Nassau Resources, Inc.  
650 South Cherry St. #1225  
Denver, CO 80222  
(303) 321-2111 Office  
(303) 688-9864 Home

# NASSAU RESOURCES

Structure : SEC. 26 T32N-R4W

Well : PRELIMINARY

Field : WILDCAT

Location : RIO ARRIBA, NEW MEXICO

## WELL PROFILE DATA

| POINT        | MO   | INC   | DIR   | FVS  | NORTH | EAST |
|--------------|------|-------|-------|------|-------|------|
| TIE ON       | 0    | 0.00  | 99.37 | 0    | 0     | 0    |
| KOP          | 3011 | 0.00  | 99.37 | 3011 | 0     | 0    |
| END OF BUILD | 4211 | 18.00 | 80.37 | 4192 | -30   | 184  |
| TARGET       | 4262 | 18.00 | 99.37 | 4248 | -33   | 208  |

SCALE 1 : 10.00

East -->

South ---  
Call : 0244

**TRUE**

N



**EASTMAN  
TELECO**

DRAWN BY: ALLEN HENNO

DATE: 6-7-98

**TYPE REFERENCE NO.**

**DENVER, COLORADO**

PHONE: (305) 860-0301

NASSAU RESOURCES, INC.  
Carracas Unit-PC 26 B #13  
Exhibit B  
Page 2

SCALE 1 : 30.00

Vertical Section on 99.37 azimuth with reference 0.00 N, 0.00 E from slot #1

NASSAU RESOURCES  
SEC. 26 T32N-R4W, PRELIMINARY  
WILDCAT, RIO ARRIBA, NEW MEXICO

PROPOSAL LISTING Page 2  
Your ref : PRELIMINARY#2  
Last revised : 2-Sep-92

Comments in wellpath

| MD      | TVD     | Rectangular Coords. |          | Comment                    |
|---------|---------|---------------------|----------|----------------------------|
| 3011.16 | 3011.16 | 0.00 N              | 0.00 E   | KOP                        |
| 3384.59 | 3384.00 | 2.97 S              | 18.00 E  | OJALAMO                    |
| 3511.43 | 3510.00 | 5.32 S              | 32.28 E  | KIRTLAND                   |
| 3764.88 | 3760.00 | 12.07 S             | 73.13 E  | FRUITLAND                  |
| 3978.30 | 3968.00 | 19.83 S             | 120.16 E | FRUITLAND COAL             |
| 4052.86 | 4040.00 | 22.98 S             | 139.28 E | PICTURE CLIFF              |
| 4211.16 | 4191.51 | 30.44 S             | 184.46 E | END OF 1.5 DEG./100' BUILD |
| 4262.14 | 4240.00 | 33.00 S             | 200.00 E | TOTAL DEPTH                |

Targets associated with this wellpath

| Target name | Position      | T.V.D. Local rectangular coords. Date revised |        |                  |
|-------------|---------------|-----------------------------------------------|--------|------------------|
| TARGET      | not specified | 4240.00                                       | 33.00S | 200.00E 2-Sep-92 |

All data is in feet unless otherwise stated  
Coordinates are from slot #1 and TVDs are from wellhead.  
Slot coordinates are 0.00 N 0.00 E.  
Bottom hole distance is 202.70 on azimuth 99.37 degrees from wellhead.  
Total Dogleg for wellpath is 18.00 degrees.  
Vertical section is from wellhead on azimuth 99.37 degrees.  
Calculation uses the minimum curvature method.

NASSAU RESOURCES, INC.  
Carracas Unit-PC 26 B #13  
Exhibit B  
Page 3

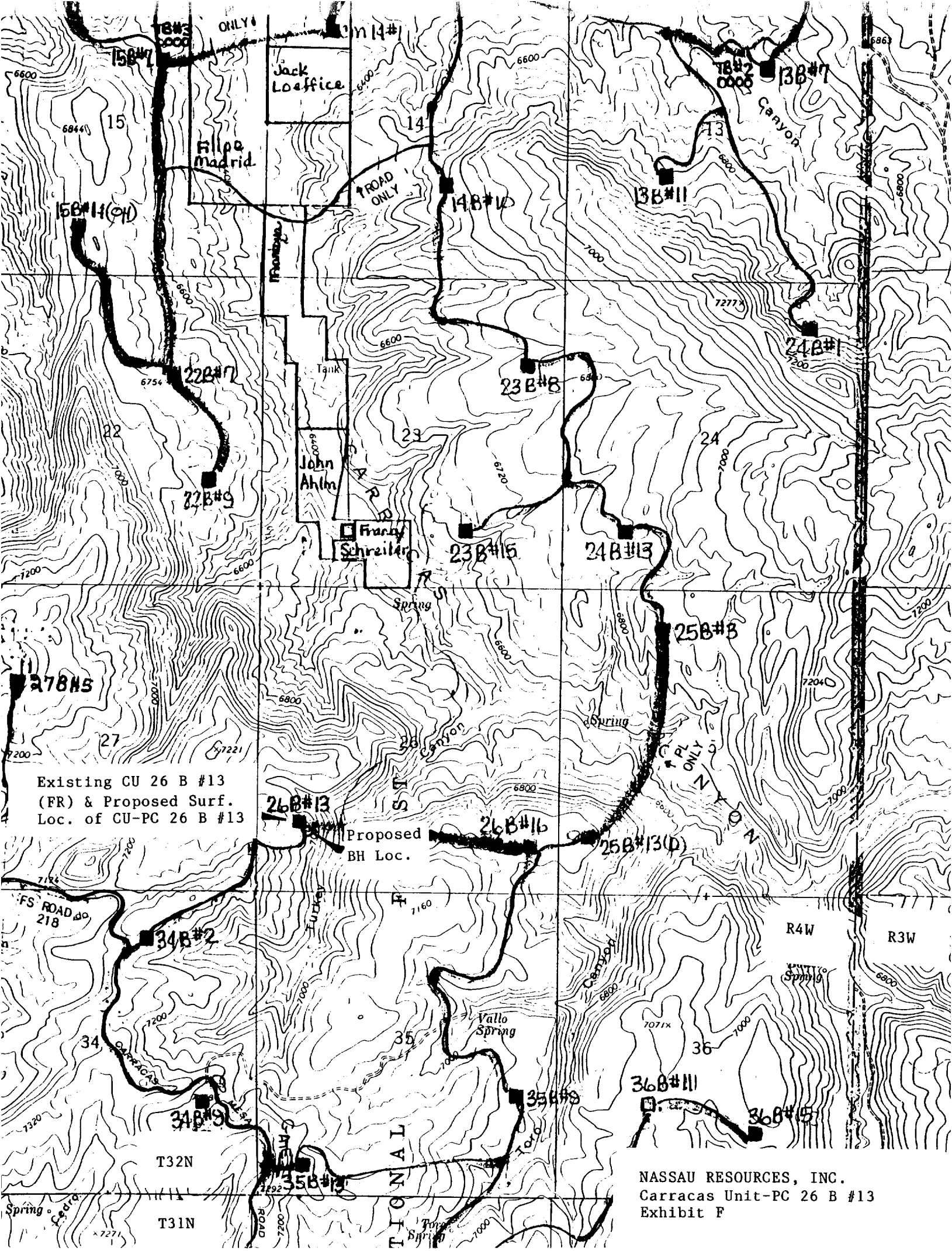
NASSAU RESOURCES  
SEC. 26 T32N-R4W, PRELIMINARY  
WILDCAT, RIO ARRIBA, NEW MEXICO

PROPOSAL LISTING Page 1  
Your ref : PRELIMINARY#2  
Last revised : 2-Sep-92

| Measured<br>Depth | Inclin.<br>Degrees | Azimuth<br>Degrees | True Vert.<br>Depth | R E C T A N G U L A R<br>C O O R D I N A T E S |          |      | Dogleg<br>Deg/100Ft | Vert<br>Sect               |
|-------------------|--------------------|--------------------|---------------------|------------------------------------------------|----------|------|---------------------|----------------------------|
| 0.00              | 0.00               | 99.37              | 0.00                | 0.00 N                                         | 0.00 E   | 0.00 | 0.00                |                            |
| 500.00            | 0.00               | 99.37              | 500.00              | 0.00 N                                         | 0.00 E   | 0.00 | 0.00                |                            |
| 1000.00           | 0.00               | 99.37              | 1000.00             | 0.00 N                                         | 0.00 E   | 0.00 | 0.00                |                            |
| 1500.00           | 0.00               | 99.37              | 1500.00             | 0.00 N                                         | 0.00 E   | 0.00 | 0.00                |                            |
| 2000.00           | 0.00               | 99.37              | 2000.00             | 0.00 N                                         | 0.00 E   | 0.00 | 0.00                |                            |
| 2500.00           | 0.00               | 99.37              | 2500.00             | 0.00 N                                         | 0.00 E   | 0.00 | 0.00                |                            |
| 3000.00           | 0.00               | 99.37              | 3000.00             | 0.00 N                                         | 0.00 E   | 0.00 | 0.00                |                            |
| 3011.16           | 0.00               | 99.37              | 3011.16             | 0.00 N                                         | 0.00 E   | 0.00 | 0.00                |                            |
| 3111.16           | 1.50               | 99.37              | 3111.14             | 0.21 S                                         | 1.29 E   | 1.50 | 1.31                | KOP                        |
| 3211.16           | 3.00               | 99.37              | 3211.06             | 0.85 S                                         | 5.16 E   | 1.50 | 5.23                |                            |
| 3311.16           | 4.50               | 99.37              | 3310.85             | 1.92 S                                         | 11.62 E  | 1.50 | 11.77               |                            |
| 3384.59           | 5.60               | 99.37              | 3384.00             | 2.97 S                                         | 18.00 E  | 1.50 | 18.24               | OJALAMO                    |
| 3411.16           | 6.00               | 99.37              | 3410.42             | 3.41 S                                         | 20.64 E  | 1.50 | 20.92               |                            |
| 3511.16           | 7.50               | 99.37              | 3509.73             | 5.32 S                                         | 32.24 E  | 1.50 | 32.68               |                            |
| 3511.43           | 7.50               | 99.37              | 3510.00             | 5.32 S                                         | 32.28 E  | 1.50 | 32.71               | KIRTLAND                   |
| 3611.16           | 9.00               | 99.37              | 3608.69             | 7.66 S                                         | 46.40 E  | 1.50 | 47.03               |                            |
| 3711.16           | 10.50              | 99.37              | 3707.24             | 10.41 S                                        | 63.11 E  | 1.50 | 63.96               |                            |
| 3764.88           | 11.30              | 99.37              | 3760.00             | 12.07 S                                        | 73.13 E  | 1.50 | 74.12               | FRUITLAND                  |
| 3811.16           | 12.00              | 99.37              | 3805.32             | 13.59 S                                        | 82.36 E  | 1.50 | 83.47               |                            |
| 3911.16           | 13.50              | 99.37              | 3902.85             | 17.18 S                                        | 104.13 E | 1.50 | 105.54              |                            |
| 3978.30           | 14.51              | 99.37              | 3968.00             | 19.83 S                                        | 120.16 E | 1.50 | 121.79              | FRUITLAND COAL             |
| 4011.16           | 15.00              | 99.37              | 3999.77             | 21.19 S                                        | 128.42 E | 1.50 | 130.15              |                            |
| 4052.86           | 15.62              | 99.37              | 4040.00             | 22.98 S                                        | 139.28 E | 1.50 | 141.17              | PICTURE CLIFF              |
| 4111.16           | 16.50              | 99.37              | 4096.02             | 25.61 S                                        | 155.20 E | 1.50 | 157.30              |                            |
| 4211.16           | 18.00              | 99.37              | 4191.51             | 30.44 S                                        | 184.46 E | 1.50 | 186.95              | END OF 1.5 DEG./100' BUILD |
| 4262.14           | 18.00              | 99.37              | 4240.00             | 33.00 S                                        | 200.00 E | 0.00 | 202.70              | TOTAL DEPTH                |

All data is in feet unless otherwise stated  
Coordinates are from slot #1 and TVDs are from wellhead.  
Vertical section is from wellhead on azimuth 99.37 degrees.  
Calculation uses the minimum curvature method.

NASSAU RESOURCES, INC.  
Carracas Unit-PC 26 B #13  
Exhibit B  
page 4



Existing CU 26 B #13  
(FR) & Proposed Surf.  
Loc. of CU-PC 26 B #13

Proposed  
BH Loc.

NASSAU RESOURCES, INC.  
Carracas Unit-PC 26 B #13  
Exhibit F