

~~CONFIDENTIAL~~

Form 3160-3
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER


FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. SF - 078049
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
2. Name of Operator CDX Rockies, LLC		7. If Unit or CA Agreement, Name and No. 31037
3a. Address 679 East 2 nd Avenue, Suite #3 Durango, Colorado 81301	3b. Phone No. (include area code) (970)247-4126	8. Lease Name and Well No. BW Federal 33-29-8 #102
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 748' FNL, 660' FEL At proposed prod. zone 748' FNL, 660' FEL, 660' FSL, 660' FWL		9. API Well 30-045-31182
14. Distance in miles and direction from nearest town or post office* 5 miles Southwest of Navajo City, New Mexico		10. Field and Pool, or Exploratory Basin - Fruitland Pool
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660'		11. Sec., T., R., M., or Blk. and Survey or Area A Sec. 33, T29N, R8W, N.M.P.M.
16. No. of Acres in lease 1,920		12. County or Parish San Juan County
17. Spacing Unit dedicated to this well 640 ALL Sec. 33, T29N, R8W, N.M.P.M.		13. State NM
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 300'		19. Proposed Depth 3,063' TVD 30,000' TMD
20. BLM/BIA Bond No. on file		21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,380' GL 6385
22. Approximate date work will start* October 15, 2002		23. Estimated duration 10 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) Alvin R. (Al) Arlian	Date 9/10/02
Title Rocky Mountain Land Manager		
Approved by (Signature) David J. Mankiewicz	Name (Printed/Typed)	Date DEC 30 2002
Title ATM		
Office BLM-FRO		

Application approval does not warrant or certify the 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 reverse)

HOLD C104 FOR Directional Survey
Change in Status to Hughes A #17

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".

NMOCOD

DISTRICT I
1635 N. French Dr., Hobbs, N.M. 88240

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 15, 2000

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

DISTRICT III
1000 Elv Brases Rd., Aztec, N.M. 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, NM 87505

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

2002 SEP 17 AM 10:28 AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-31182	*Pool Code 71629	*Pool Name BASIN FRUITLAND POOL
*Property Code 31037	*Property Name B.W. FED. 33-29-8	*Well Number 102
*OGRD No. 215223	*Operator Name CDX ROCKIES, LLC.	*Elevation 6385

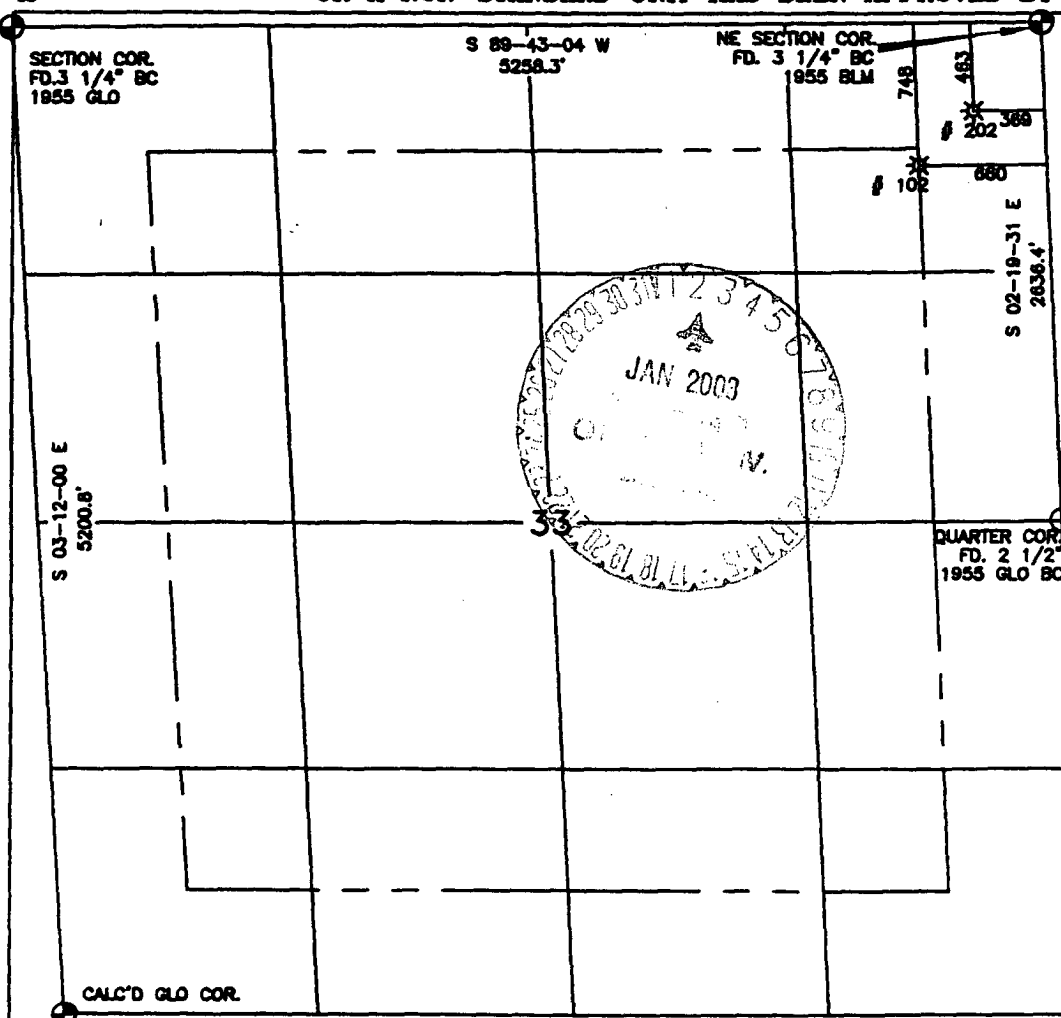
10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	33	29-N	8-W		748	NORTH	660	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
D	33	29-N	8-W		SEE ATTACHED	DEVIATED DRILLING PLANS			
Dedicated Acres 640			Joint or Infill N		Consolidation Code		Order No. NSL 4778		

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



17 OPERATOR CERTIFICATION

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

Signature
ALVIN R. ARLIAN

Printed Name
ROCKY Mtn, LAND MANAGER

Date
9-16-02

18 SURVEYOR CERTIFICATION

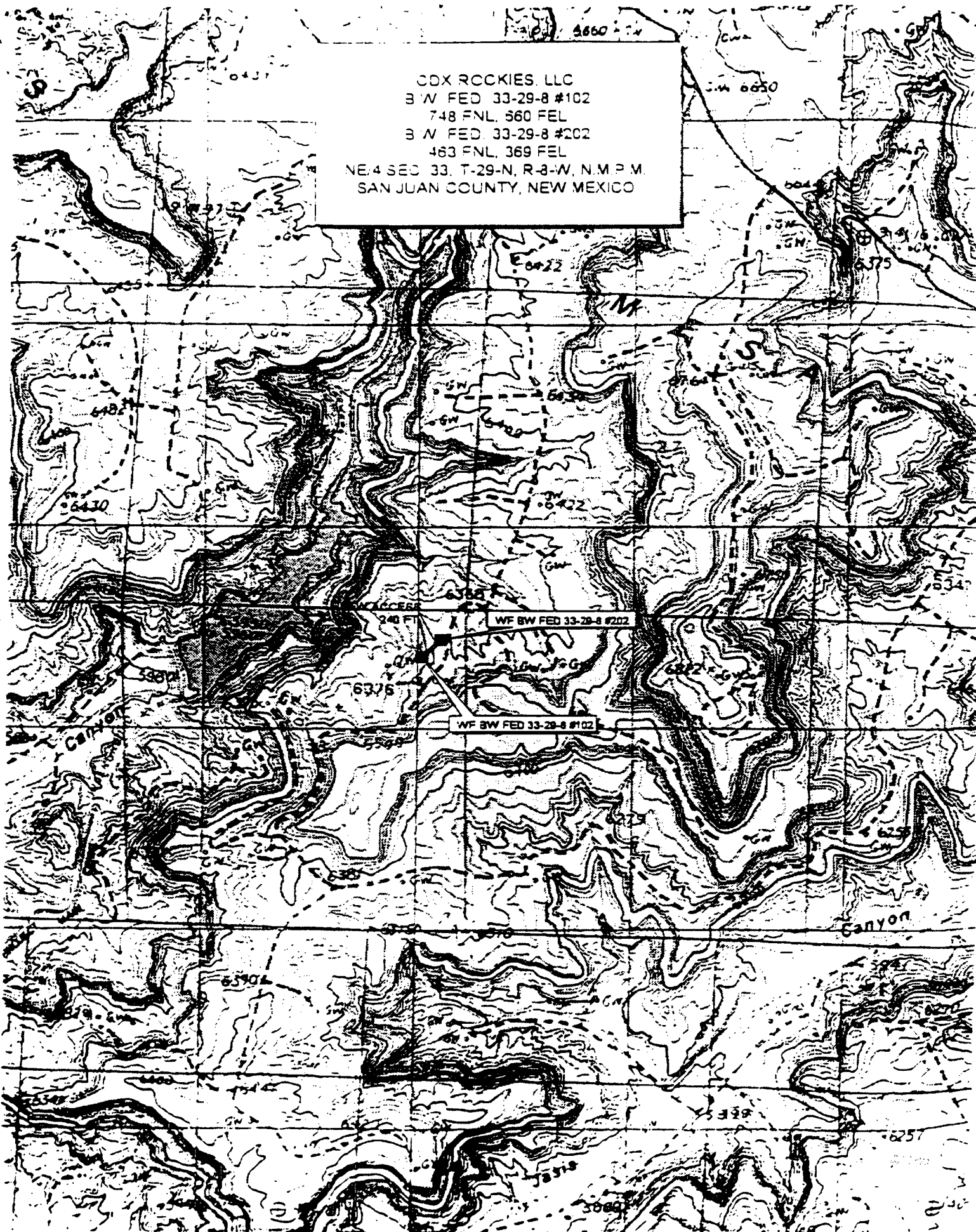
I hereby certify that the well location shown on this plat
was plotted from field notes of actual surveys made by
me or under my supervision, and that the same is true
and correct to the best of my belief.

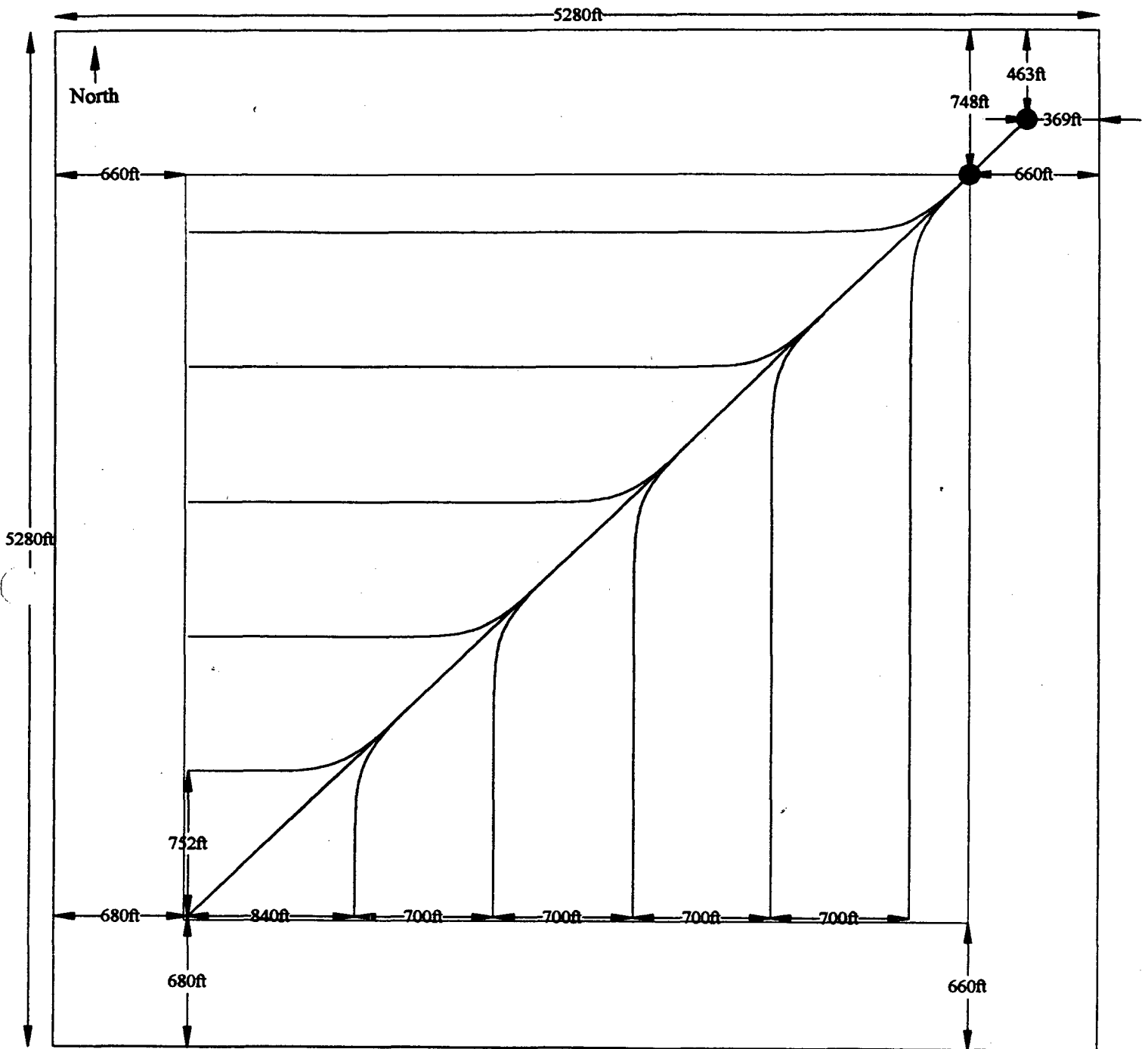
Signature and Seal of Professional Surveyor:
S. A. JOHNSON
NEW MEXICO
14827
REGISTERED PROFESSIONAL SURVEYOR

Certificate Number

NMOCD

CDX ROCKIES, LLC
B W FED 33-29-8 #102
748 FNL, 560 FEL
B W FED 33-29-8 #202
463 FNL, 369 FEL
NE 1/4 SEC 33, T-29-N, R-8-W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO

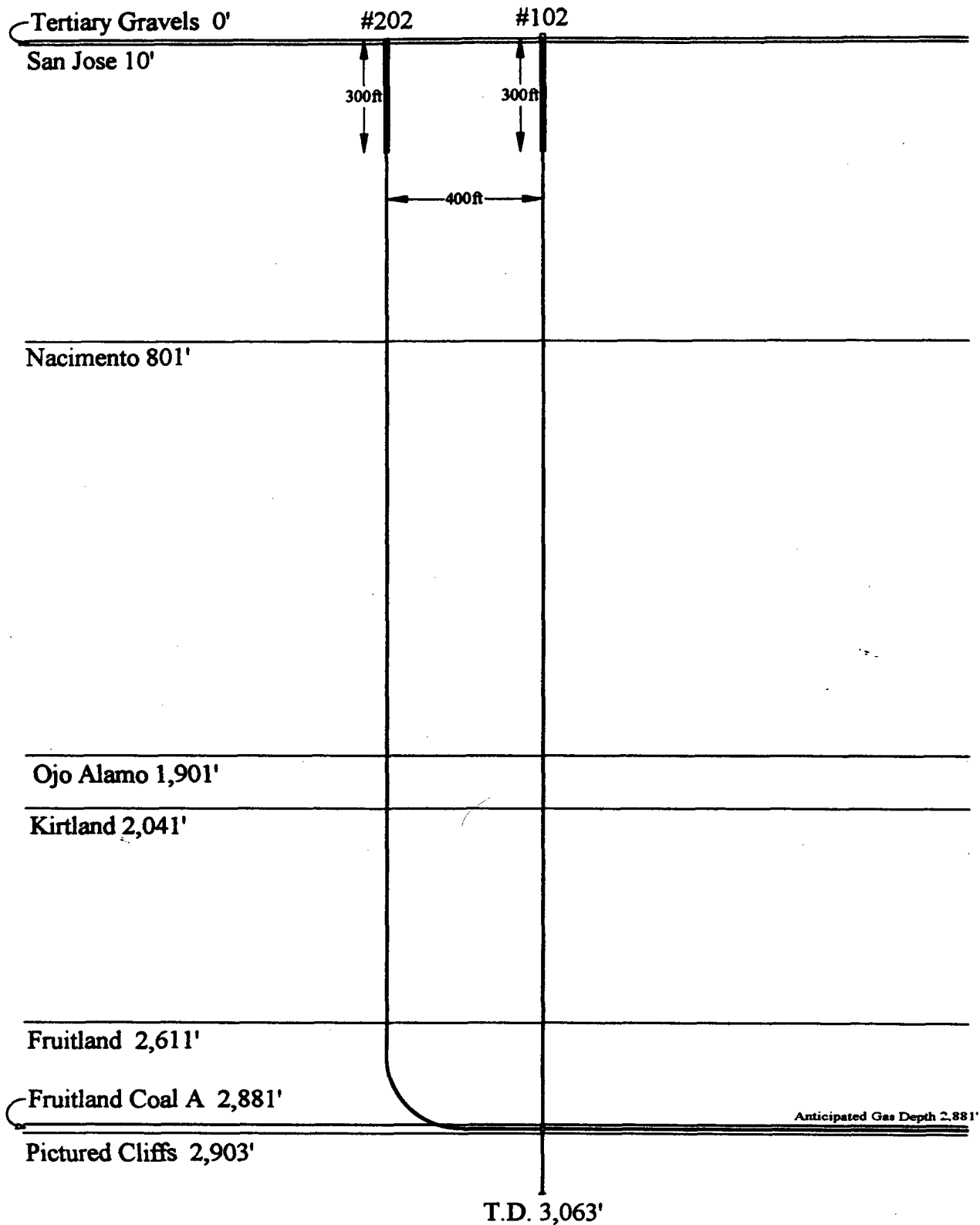




DEVIATED DRILLING PLAN "A" for
 BW Federal 33-29-8 #102 & #202 Wells
 Sr 33 T29N - R8W

Scale
 1" = 750'

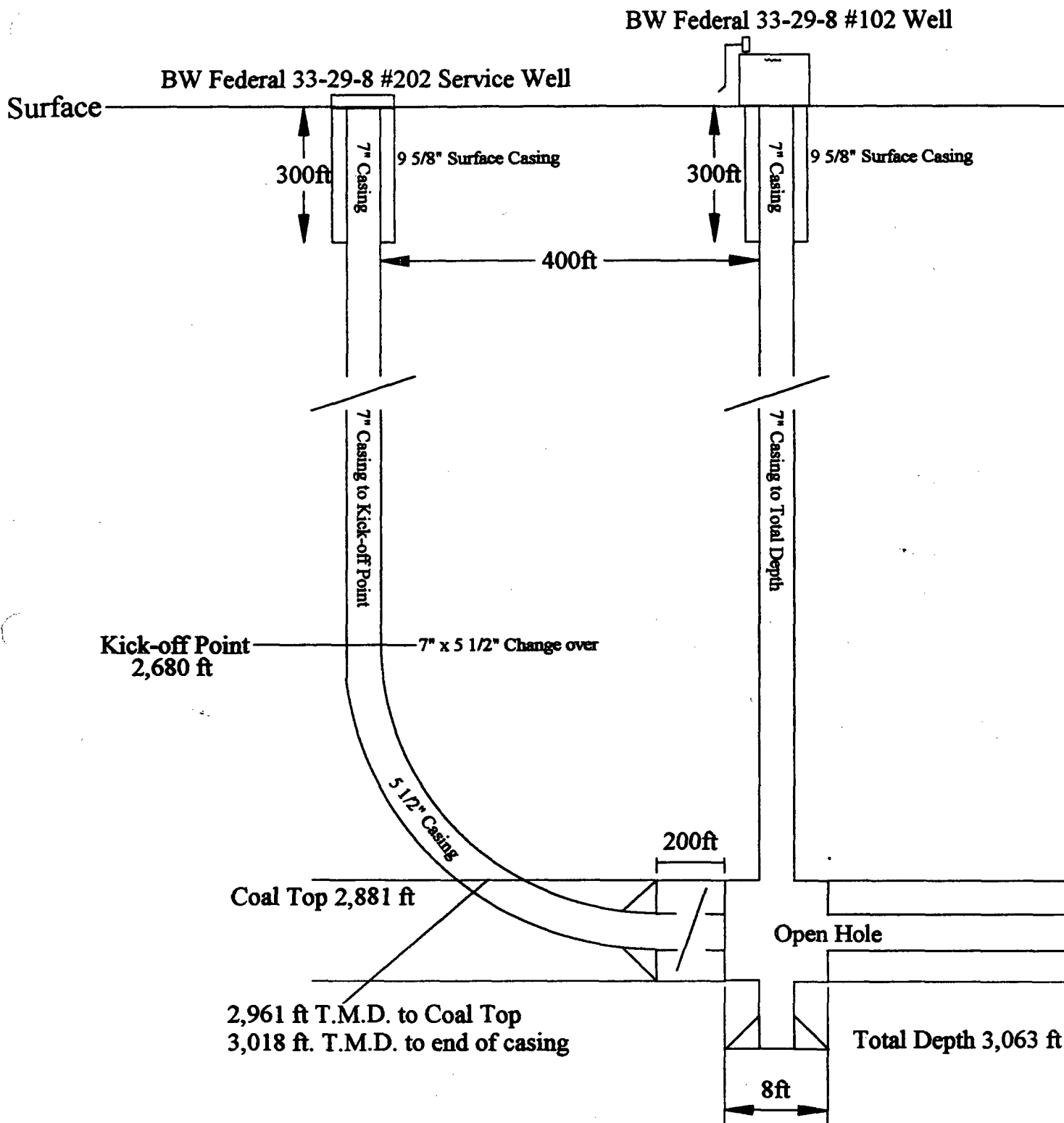
CDX Rockies, LLC
 East Second Ave. #3
 Durango, CO 81301



DEVIATED DRILLING PLAN "C" for
 BW Federal 33-29-8 #102 & #202 Wells
 ALL Sec. 33 T29N - R8W, N.M.P.M.

SCALE
 1" = 392'

CDX Rockies, LLC
 679 East Second Avenue #3
 Durango, Colorado 81301



DEVIATED DRILLING PLAN "B" for
BW Federal 33-29-8 #102 & #202 Wells
Sec. 33 T29N - R8W, N.M.P.M.

**NOT
TO
SCALE**

CDX Rockies, LLC
 679 East Second Avenue #3
 Durango, Colorado 81301

BW Federal 33-29-8 #102
748' FNL and 660' FEL
NENE 33-T9S-R96W
San Juan County, New Mexico

CDX ROCKIES, LLC
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gas shows will be tested to determine commercial potential. **Both the Surface Pipe and Intermediate Case shall be cemented from surface to total depth protecting any possible water (See Paragraph 4. Proposed Casing and Cementing Program, Subparagraph K).**

3. Pressure Control Equipment: (Schematic Attached)

CDX Rockies, LLC's minimum specifications for pressure control equipment are as follows:

- A. Ram Type: 10" Hydraulic double, 3000 psi w.p.
- B. Ram type preventers and associated equipment shall be tested to approved stack working pressure if isolated by test plug or to 70 percent of internal yield pressure of casing. Pressure shall be maintained for at least 10 minutes or until requirements of test are met, whichever is longer. If a test plug is utilized, no bleed-off pressure is acceptable. For a test not utilizing a test plug, if a decline in pressure of more than 10 percent in 30 minutes occurs, the test shall be considered to have failed. Valve on casing head below test plug shall be open during test of BOP stack.
- C. As a minimum, the above test shall be performed:
 - i. when initially installed;
 - ii. whenever any seal subject to test pressure is broken;
 - iii. following related repairs; and
 - iv. at 30-day intervals
- D. Valves shall be tested from working pressure side during BOPE tests with all down stream valves open.
- E. When testing the kill line valve(s) the check valve shall be held open or the ball removed.
- F. Pipe and blind rams shall be activated each trip, however, this function need not be performed more than once a day.

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BW Federal 33-29-8 #102
748' FNL and 660' FEL
NENE 33-T9S-R96W
San Juan County, New Mexico

CDX ROCKIES, LLC
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- G. A BOPE operational meeting shall be conducted weekly for each drilling crew.
- H. All of the above described tests shall be recorded in the drilling log.
- I. Pressure tests will be conducted before drilling out from under casing strings which have been set and cemented in place. Blowout preventer controls will be installed prior to drilling the surface casing plug and will remain in use until well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection will be recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs.
- J. The District Office should be notified, with sufficient lead time, in order to have the BLM representative on location during pressure testing.
 - i. The size and rating of the BOP stack is shown on the attached diagram. Although a rig has not been chosen to drill this well, most of the equipment for this depth of hole in the area use a 3000 psi working pressure blowout preventer.
 - ii. A choke line and a kill line are to be properly installed. The kill line is not to be used as a fill-up line.
 - iii. The accumulator system shall have a pressure capacity to provide for repeated operation of hydraulic preventers.
 - iv. Drill string safety valve(s), to fit all tools in the drill string, are to be maintained on the rig floor while drilling operations are in progress.

4. Proposed Casing and Cementing Program:

- A. The proposed casing and cementing program shall be conducted as approved to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. The casing setting depth shall be calculated to position the casing seat opposite a competent formation which will contain

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BW Federal 33-29-8 #102
748' FNL and 660' FEL
NENE 33-T9S-R96W
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the maximum pressure to which it will be exposed during normal drilling operations. Determination of casing setting depth shall be based on all relevant factors, including; presence/absence of hydrocarbons; fracture gradients; usable water zones; formation pressures; lost circulation zones; other minerals; or other unusual characteristics. All indications of usable water shall be reported.

- B. Casing design shall assume formation pressure gradients of 0.44 to 0.50 psi per foot for exploratory wells (lacking better data).
- C. Casing design shall assume fracture gradients from 0.70 to 1.00 psi per foot for exploratory wells (lacking better data).
- D. Casing collars shall have a minimum clearance of 0.422 inches on all sides in the hole/casing annulus, with recognition that variances can be granted for justified exceptions.
- E. All waiting on cement times shall be adequate to achieve minimum of 500 psi compressive strength at the casing shoe prior to drilling out.
- F. All casing shall be new or reconditioned and tested used casing that meets or exceeds API standards for new casing.
- G. The surface casing shall be cemented back to surface either during the primary cement job or by the remedial cementing.
- H. All indications of usable water shall be reported to the authorized officer prior to running the next string of casing or before plugging orders are requested, whichever occurs first.
- I. Centralizers will be run on the bottom three joints of the surface casing with a minimum of 1 centralizer per joint starting with the shoe joint.
- J. All Casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string length or 1,500 psi, whichever is greater, but not to exceed 70 percent of the minimum internal yield. If pressure declines more than 10 percent in 30 minutes, corrective action shall be taken.

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BW Federal 33-29-8 #102
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K. The proposed casing program will be as follows:

<u>Purpose</u>	<u>Depth</u>	<u>Hole Size</u>	<u>O.D.</u>	<u>Weight</u>	<u>Grade</u>	<u>Type</u>	<u>New or Used</u>
Surface	0-300' TVD	12.250"	9.625"	36.0#	J-55	ST&C	New
Intermediate	0-3,063' TVD	8.750"	7.000"	23.0#	J-55	LT&C	New
Production	2,881'-2,903' TVD	96.000"	—OPEN HOLE COMPLETION—				
Production	2,903'-3,063' TVD	8.750"	7.000"	23.0#	J-55	LT&C	New
Production	2,890'-10,000' TMD	4.750"	—OPEN HOLE COMPLETION—				

Casing design subject to revision based on geologic conditions encountered.

L. The cement program will be as follows:

<u>Depth</u>	<u>Type and Amount</u>
0 - 300' TVD	*225 sxs Premium (Yield 1.17) with 2% CaCl, 1/4#/sk celloflake (or sufficient to circulate to surface).

<u>Depth</u>	<u>Type and Amount</u>
0 - 3,063' TVD	*340 sacks Lite (Yield - 3.85) with 12% gel, 10% salt, 1/4#/sk celloflake followed by *290 sacks Premium (Yield - 1.20) with 50/50 Poz, 2% gel, 5% salt, 1/4#/sk celloflake (or sufficient to circulate to surface).

*Actual volumes to be calculated from caliper log.

<u>Depth</u>	<u>Type and Amount</u>
2,881'-2,903' TVD	cavity - (Open Hole)

2,890'-10,000' +/- TMD Laterals - (Open Hole)

M. Anticipated cement tops will be reported as to depth; not the expected number of sacks of cement to be used. The District Office should be notified, with sufficient lead time, in order to have a BLM representative on location while running all casing strings and cementing.

N. After cementing but before commencing any test, the casing string shall stand cemented until the cement has reached a compressive strength of at least 500 psi at the shoe. WOC time shall be recorded in the driller's log.