

UNITED STATES
DEPARTMENT OF THE INTERIOR

SUBMIT IN TRIPLICATE*
(Other instructions on
reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

BUREAU OF LAND MANAGEMENT *30-039-25049*

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1A. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

B. TYPE OF WELL

OIL
WELL ☐

GAS
WELL ☒

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Blackwood & Nichols Co., Ltd. *Jointed Partnership*

3. ADDRESS OF OPERATOR

P.O. Box 1237, Durango, Colorado, 81302-1237

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

At surface 2560'FSL - 1695'FWL, Section 20, T30N, R7W

At proposed prod. zone 1750'FNL - 54'FEL, Section 19, T30N, R7W

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

10 miles NE of Blanco, New Mexico

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drig. unit line, if any)

54'

16. NO. OF ACRES IN LEASE

166.76

17. NO. OF ACRES ASSIGNED
TO THIS WELL

E/ 320

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

NA

19. PROPOSED DEPTH

3368'TVD, 4205'MD

20. ROTARY OR CABLE TOOLS

Rotary

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

6405' GL This section is subject to technical and
proceeds of review pursuant to 43 CFR 3155.3

22. APPROX. DATE WORK WILL START*
January 15, 1991

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
14 3/4"	10 3/4"	40.5#, WC-50	300' - 300'	673 cuft., circ. to surface
9 7/8"	7 5/8"	29.7#, N-80	3095' - 3932'	1508 cuft., circ. to surface
6 3/4"	5 1/2"	23#, N-80	2995' - 3832'	see below
			3368' 4205'	

Propose to spud in the San Jose formation. Will drill a 14 3/4" vertical hole to a TD of 300' Run and cement surface casing with cement returns to surface. WOC 12 hours. Test to 600 psi for 30 mins. Drill a 9 7/8" vertical hole to a TD of 375'. Pick up directional tools and drill a directional hole to a TVD of 1022' (MD=1121') on a N-61°-W bearing with a build angle of 7° per 100'. Drill next section of hole to a TVD of 1943' (MD=2626') holding angle at 52°. Drill final section of hole to a TVD of 3095' (MD=3932') dropping angle at the rate of 4 1/2° per 100' until the hole returns to vertical at MD = 3786'. The 9 7/8" hole will be drilled with a fresh water/ polymer system. No abnormal pressures or poisonous gases are anticipated. Run and cement intermediate casing with cement returns to surface. WOC 12 hours. Test to 1500 psi for 30 mins. Drill a 6 3/4" vertical hole to a TVD of 3368' (MD=4205') using water and air. A mud logging unit will be used while drilling this interval. Run a 5 1/2" production liner. The liner will be cemented if the wells natural flow capacity indicates the need for fracture stimulation. Surface is Bureau of Reclamation and Fee.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, 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 *R.W. Williams*

TITLE Administrative Manager

DATE 12/21/90

(This space for Federal or State use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

OIL CON. DIV.
DIST. 3

APPROVED
AS AMENDED

JAN 25 1991
AREA MANAGER

*See Instructions On Reverse Side

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 Blackwood & Nichols Co, A Limited Partnership			Lease Northeast Blanco Unit		Well No. 475
Unit Letter K	Section 1920	Township 30N	Range 7W	County NMPM	Rio Arriba
Actual Footage Location of Well: Bottom Hole: 1750' FNL - 54' FEL, Section 19					
ce: 2560 feet from the South line and 1695 feet from the West line Section 20					
Ground level Elev. 6405'	Producing Formation Fruitland Coal		Pool Basin Fruitland Coal	Dedicated Acreage: 320 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.

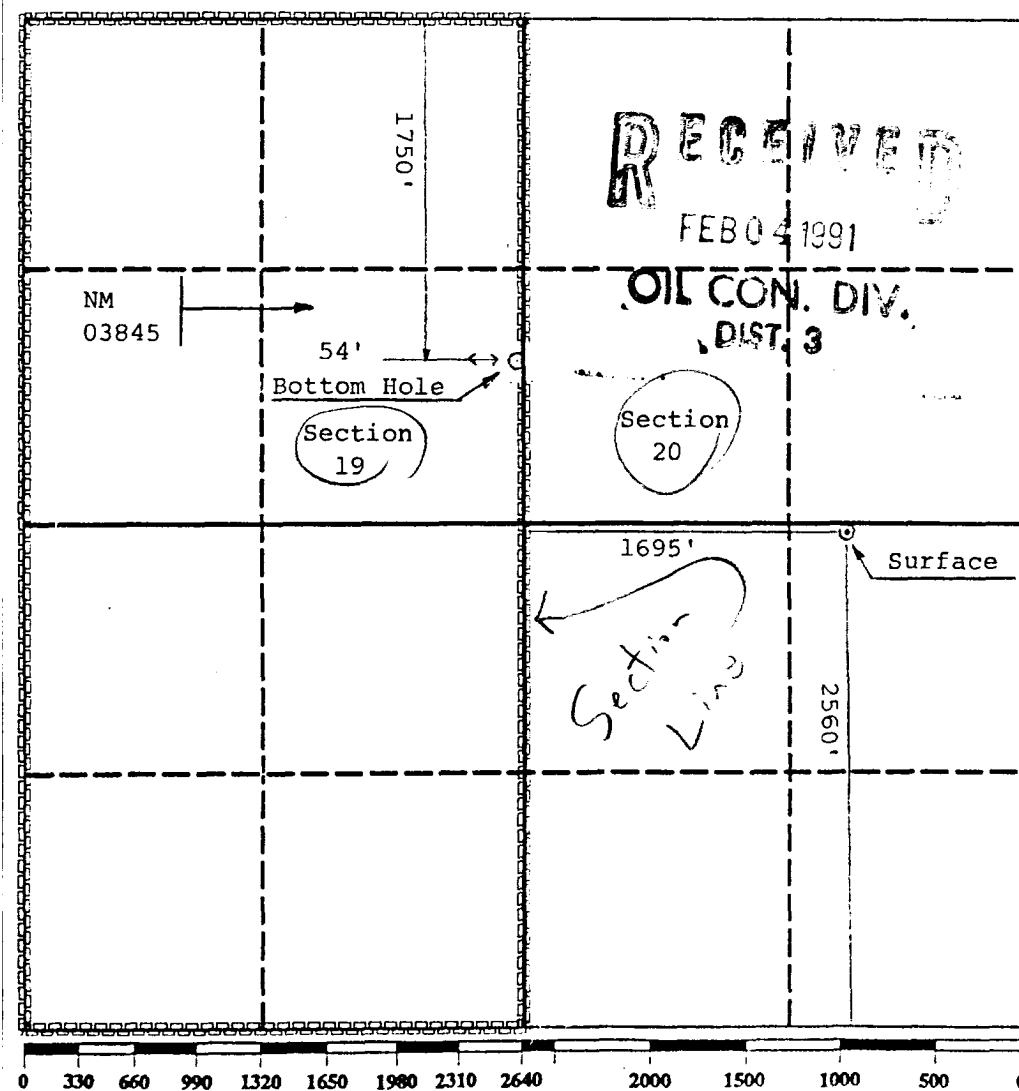
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communization, unitization, force-pooling, etc.?

☒ Yes ☐ No If answer is "yes" type of consolidation Unitization

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 communization, unitization, force-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: *Roy W. Williams*
Printed Name: Roy W. Williams
Position: Administrative Manager
Company: Blackwood & Nichols Co, A Limited Partnership
Date: 12/17/90

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. 12/10/90

Date Surveyed: *12/10/90*
Signature: *[Signature]*
Professional Surveyor
New Mexico
6857
REGISTERED LAND SURVEYOR
Neale Edwards

Blackwood & Nichols Co., Ltd.
Northeast Blanco Unit No. 475
Location, Surface: 2560' FSL-1695' FWL
Section 20, T30N, R7W, NMPM
Location, Bottomhole: 1750' FNL- 54' FEL
Section 19, T30N, R7W, NMPM
San Juan Co., New Mexico

Field: Basin Fruitland Coal

Elevation: 6405'GL

Geology:

Formation Tops:

	MD	TVD
San Jose	Surface	Surface
Ojo Alamo	2883'	2120'
Kirtland	2985'	2200'
Fruitland	3862'	3025'
Intermediate TD	3932'	3095'
Total Depth	4205'	3368'

Logging Program: No logs will be run at Intermediate TD.
A one man mud logging unit will be run from
Intermediate TD to total depth.

Drilling:

Contractor: Big A Well Service-Rig 23 Toolpusher:

Operator's Representative: M. L. Smith

Mud Program:

MD
0 - 300' :Spud mud of lime and gel.

300'- 2850': Fresh water, gel, PHPA polymer, &
Drispac with prehydrated 20 bbl. gel
sweeps every 200' or as hole
conditions dictate.
MW: 8.6-9.0 ppg.
Visc: 32-35 sec./qt.
Water Loss: 6-8 cc/30 mins.
PH: 9.0-9.5

2850'- 3652': Reduce water loss to 4-6 cc/30 mins.
HPHT < 20cc. Increase viscosity with
prehydrated gel slurry to 40-45
sec./qt.

3652'- 3932': Increase mud weight to 9.0-9.5 ppg as
necessary to control well.

3932'- 4129': Water and air.

Materials:

Casing Program:

Hole Size	Depth(TVD)	Depth(MD)	Casing Size	Wt. & Grade
14 3/4"	300'	300'	10 3/4"	40.5#,WC-50
9 7/8"	3095'	3932'	7 5/8"	29.7#,N-80
6 3/4"	2995-3368'	3832'-4205'	5 1/2"	23# , N-80

Float Equipment:

- 10 3/4" surface casing - Texas Pattern Guide Shoe. Threadlock shoe and first collar.
- 7 5/8" Intermediate casing- Cement Nose Guide Shoe. Self fill insert float valve run one joint above the shoe. Fifty centralizers: 37 run in tangent section of hole, one on each joint, 3 run in drop angle section of hole to top of Ojo Alamo, one on every other joint, 10 run from top of Kirtland to Intermediate TD, one every other joint. Five turbolizers, run one on each joint from top of Ojo Alamo to top of Kirtland. Threadlock shoe, insert float valve, and first collar.
- 5 1/2" liner - Geyser guide shoe. Threadlock shoe. Right hand rotating, left hand set liner hanger with lead seal ring packoff.

Wellhead Equipment:

- 10 3/4"X 10" 3000# casing head with 7 5/8" automatic slips.
- 10" 3000 X 6" 3000# tubing head with a 2 7/8" EUE tubing hanger.

Cement Program:

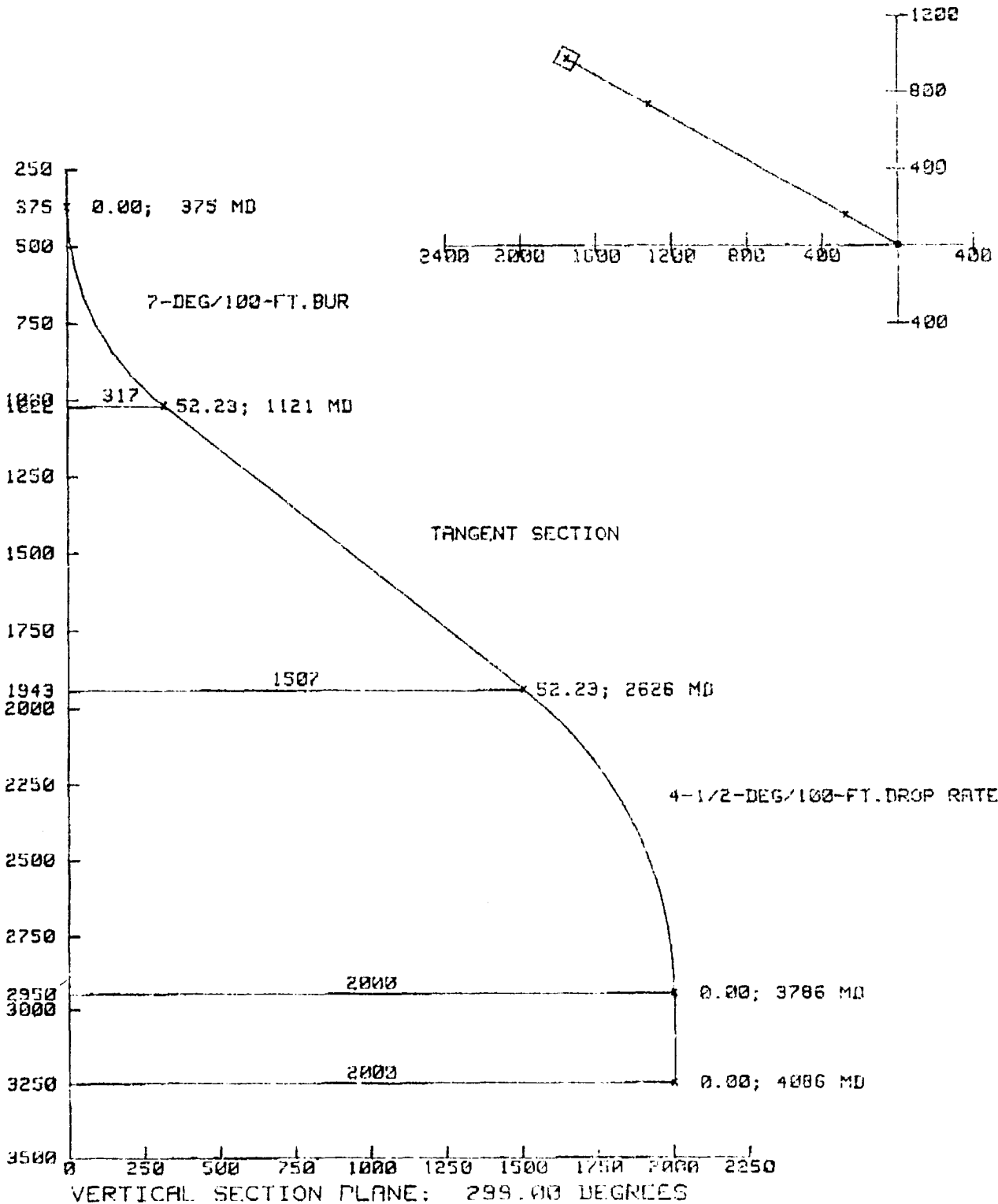
- 10 3/4" surface casing -570 sacks(673 cu ft) of Class B w/ 2% CaCl and 1/4# flocele per sack. 300 % excess to circulate to surface. WOC 12 hours. Pressure test to 600 psi/30 minutes prior to drilling surface casing shoe.
- 7 5/8" Intermediate casing- 895 sacks(1360 cuft) of Howco Lite with 1/4# flocele per sack, 1.2% HA22, and 2% CaCl, followed by 125 sacks(148 cuft) of Class B with 1/4 # flocele per sack, 0.4% CFR3, and 0.4% HA 344, 50% excess to circulate to surface. WOC 12 hours. Run temperature survey after 8 hours if cement does not circulate. Pressure test to 1500 psi for 30 mins. prior to drilling shoe.
- 5 1/2" liner -Liner will be uncemented unless natural flow capacity indicates need for fracture stimulation.

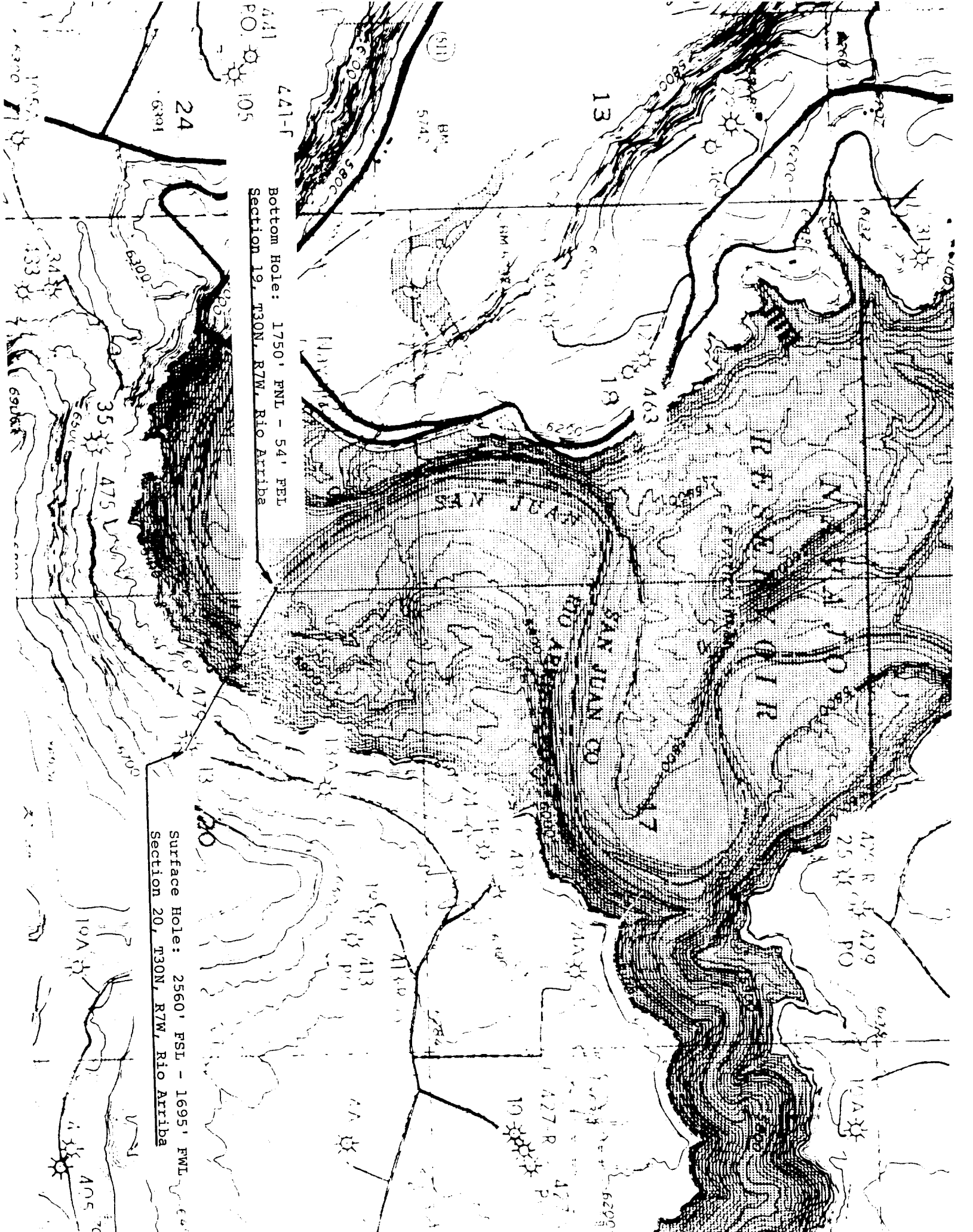
BLACKWOOD AND NICHOLS
N/E BLANCO UNIT #475
SECTION-20-T30N-R7W
NEW MEXICO

DATA DRILL

VERTICAL PLAN
SCALE: 250 FEET/DIVISION

HORIZONTAL PLAN
SCALE: 400 FEET/DIVISION





441
PO 105
441-f
Bottom Hole: 1750' FNL - 54' FEL
Section 19, T30N, R7W, Rio Arriba

Surface Hole: 2560' FSL - 1695' FWL
Section 20, T30N, R7W, Rio Arriba