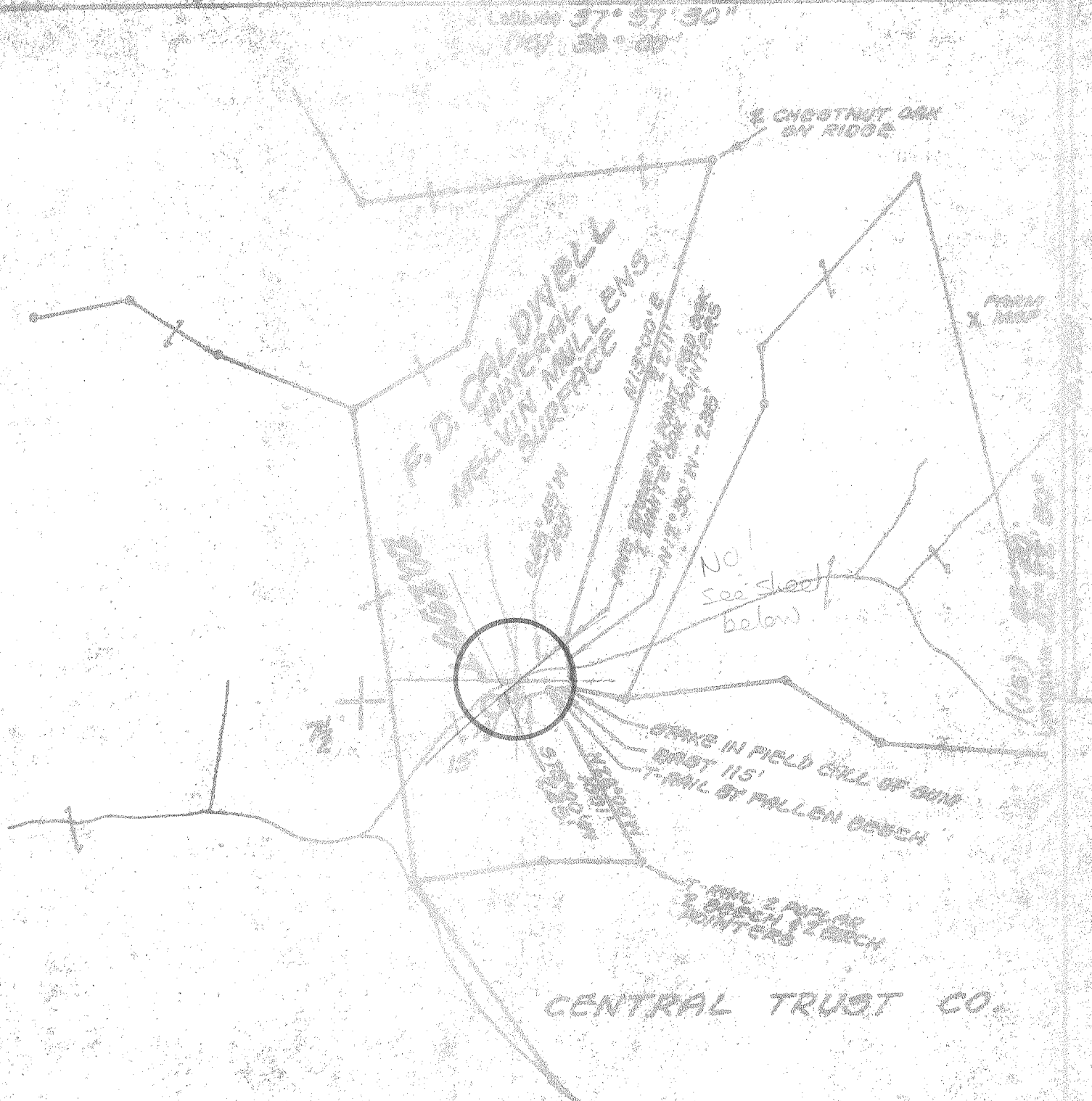


13028'

57° 57' 30"
79° 38' 00"



BENCH MARK DESCRIPTION

X-127 DISK SET VERTICALLY IN FACE OF ROCK BY DRIVEWAY ENTERING U.S. ROUTE 55 ALONG BULL CREEK. ELEVATION 625.83

Parent Log Starts

- New Location
- Storage
- Drill Deeper
- Abandonment
- Re-Drill/Fracture

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by the rules and regulations of the oil and gas section of the mining laws of WEST VIRGINIA. Minimum degree of accuracy is one part in 250.

ENGR REG. NO. 2330
BOX 1273 CHARLESTON, W.V.

Signed *[Signature]*

Company COLUMBIA GAS TRANSM. CORP.
 Address BOX 1273 CHARLESTON, W.V.
 Farm F.D. CALDWELL NEVINT 10000
 Lease 38002 Acres 13.900
 Well Farm No. _____ Ser. No. 16-200-T
 Elevation - Spirit Level 734.8' NC
 Quadrangle WEBB, W.V. - KY. 15
 Township or District LINCOLN
 County WAYNE
 Sec., Lot, Gr. _____
 Coordinates LAT. 37° 55' 50" LONG. 81° 20' 00"
 File No. 18-20 Dwg. No. _____
 Date 9-20-77 Scale 1" = 600'

COLUMBIA GAS SYSTEM
 COLUMBIA GAS TRANSMISSION CORPORATION
 WELL LOCATION MAP

STATE OF WEST VIRGINIA

Denotes Values Of Well On United States Topographic Maps

WAYNE - 1607-PP

Scale 15' 7 1/2'

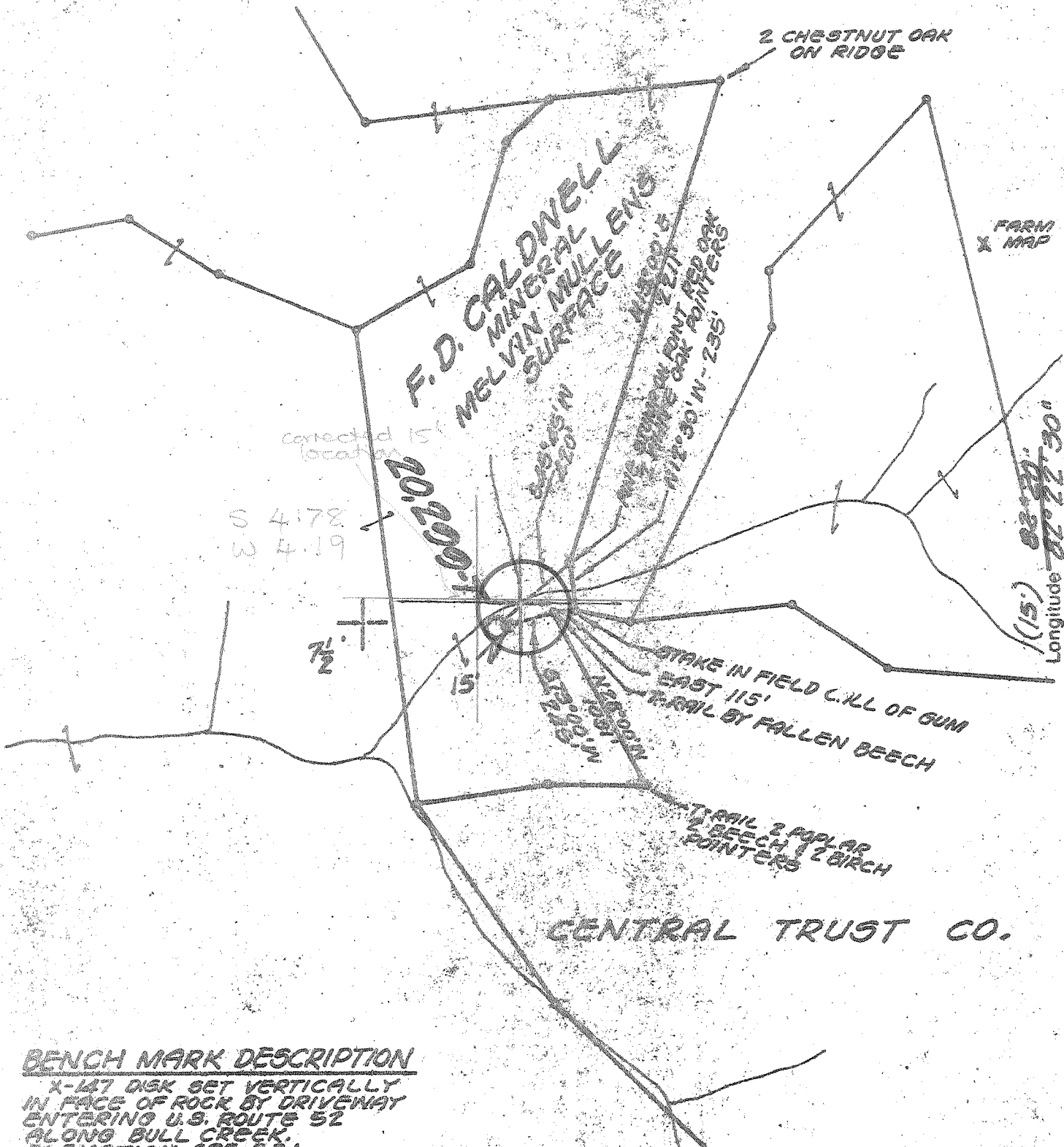
Deep Well

47-099

OCT 22 1979

Latitude $37^{\circ}57'30''$
 (US) $38^{\circ}01'$

10025' 8 46



BENCH MARK DESCRIPTION

X-147 DISK SET VERTICALLY
 IN FACE OF ROCK BY DRIVEWAY
 ENTERING U.S. ROUTE 52
 ALONG BULL CREEK.
 ELEVATION 625.83'

- New Location
- Storage
- Drill Casing
- Abandonment
- Re-Drill/Fracture

"I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by the rules and regulations of the oil and gas section of the mining laws of WEST VIRGINIA. Minimum degree of accuracy is one part in 200

ENGR. REG. NO. 2350
 BOX 1273 CHARLESTON, W.VA.

Signed *Oliver E. ...*

Company COLUMBIA GAS TRANS. CORP.
 Address BOX 1273 CHARLESTON, W.VA.
 Farm F.D. CALDWELL MELVIN MULLENS
 Lease 38002 Acres 13.500
 Well Farm No. _____ Ser. No. 20,200-T
 Elevation - Spirit Level 734.81'
 Quadrangle WEBB, W.VA. - KY. NAUBATUCK 15'
 Township or District LINCOLN
 County WAYNE
 Sec., Lot, Gr. _____ T _____ R _____
 Coordinates LAT. 37°55'50" LONG. 82°24'35"
 File No. 18-20 Dwg. No. _____
 Date 9-20-77 Scale 1" = 600'

FORM 1496 CE 4 CSD

COLUMBIA GAS SYSTEM
 COLUMBIA GAS TRANSMISSION CORPORATION
 WELL LOCATION MAP

STATE OF WEST VIRGINIA

NC (+) Denotes Values Of Well On United States Topographic Maps

WAYNE - 1607

Scale 15' 7 1/2'

Deep Well

47-099

MAR 29 1978



SEP 27 1979

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

OIL & GAS DIVISION
DEPT. OF MINES

Cable Tools
Storage

Quadrangle Webb, WV-KY
Permit No. Way-1607

WELL RECORD

Oil or Gas Well Gas (KIND)

Company Columbia Gas Transmission Corporation
Address P. O. Box 1273 - Charleston, WV
Farm F. D. Caldwell Acres 13,500
Location (waters) Bull Creek
Well No. 20299-T Elev. 734.81'
District Lincoln County Wayne
The surface of tract is owned in fee by Mahala Mullins,
et al Address _____
Mineral rights are owned by Wayne Co. Land and
Mineral Company Address Huntington, WV
Drilling commenced 9-23-78
Drilling completed 9-30-78
Date Shot _____ From _____ To _____
With _____

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
13 3/8	64.03	64.03	
10			Size of
8 5/8 8 5/8	1289.20	1289.20	Depth set
6 1/2			
4 1/2 4 1/2	3854.05	705	Perf. top <u>1442</u>
4 1/4	2169.55	2874.55	Perf. bottom <u>1454</u>
3			Perf. top _____
2 3/8	1399.65	1399.65	Perf. bottom _____
Liners Used			

Open Flow _____ /10ths Water in _____ Inch
_____ /10ths Merc. in _____ Inch
Volume _____ Cu. Ft.
Rock Pressure _____ lbs. _____ hrs.
Oil _____ bbls., 1st 24 hrs.
WELL ACIDIZED (DETAILS) _____

Attach copy of cementing record.
CASING CEMENTED 8 5/8 SIZE 1289 No. Ft. 9-27-78 Date
Amount of cement used (bags) 320 sacks
Name of Service Co. Dowell
COAL WAS ENCOUNTERED AT 20 FEET 36 INCHES
40 FEET 24 INCHES FEET INCHES
FEET INCHES FEET INCHES

WELL FRACTURED (DETAILS) Foam fractured Injun on 6-6-79 with 500 gallons 15% Acid,
338,000 scf N₂, 30,000# 80/100 sand, 30,000# 20/40 sand
RESULT AFTER TREATMENT (Initial open Flow or bbls.) (353 MCF) - 6 hrs.
ROCK PRESSURE AFTER TREATMENT 400# HOURS 48
Fresh Water _____ Feet _____ Salt Water _____ Feet _____
Producing Sand Injun Depth 1440-1460

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Soil Sand			0	10			
Sand & Shale			10	20			
Coal			20	23			
Sand			23	40			
Coal			40	42			
Sand & Shale			42	564			
Salt Sand			564	785	Show Gas	590'	
Sand & Shale			785	965			
Maxon			965	981			
Shale & Sand			981	1070			
Shale			1070	1100			
B. Lime			1100	1440	Gas- 21 MCF	1432'	
Injun			1440	1460			
Shale			1460	1974			
Berea			1974	2068			
Shale			2068	3206	Gas- 94 MCF	2800'	
Lime (Corniferous)			3206	3925	Gas - 152 MCF	3890'	
Shale <u>Silurian</u> ? <u>Rose Hill</u>			3925	3956	H ₂ S-1700 ppm		
T.D.				3956			



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

RECEIVED

MAR 14 1978

OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

DATE March 9, 1978

Surface Owner Melvin & Mahalia Mullins
Address _____

Company Columbia Gas Trans. Corp.
Address P.O. Box 1273, Charleston, W. Va.

Mineral Owner Wayne Co. Land & Mineral Co.
Address Rm. 1115, First Nat'l. Bank Bldg.
Huntington, W. Va.

Farm F.D. Caldwell Acres 13,500
Location (waters) Bull Creek

Coal Owner Same as above
Address _____

Well No. 20299-T Elevation 734.81'
District Lincoln County Wayne

Coal Operator Not Operated
Address _____

Quadrangle Webb, W. Va. - Kentucky

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22,
of the W. Va. Code, the location is hereby approved
for drilling. This permit shall expire if
operations have not commenced by 7-16-78.

INSPECTOR
TO BE NOTIFIED Kenneth Butcher

ADDRESS RFD #1, Barboursville, W. Va.

PHONE 736-4885

Robert H. [Signature]
Deputy Director - Oil & Gas Division

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated May 1 1931 by F.D. Caldwell made to United Fuel Gas Co. and recorded on the _____ day of _____ 19____, in Wayne County, Book 16 Page 350

NEW WELL _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE
_____ OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. *

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY TO:

Very truly yours,
(Sign Name) [Signature]
Director, Exploration & Development
P.O. Box 1273

W. VA. OIL & GAS CONSERVATION COMMISSION
1613 WASHINGTON STREET, EAST
CHARLESTON, WEST VIRGINIA 25311

Address _____ Street _____
of _____
Well Operator _____
Charleston _____
City or Town _____
West Virginia 25325 _____
State _____

*SECTION 3 If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

BLANKET BOND

WAY-1607 PERMIT NUMBER

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

47-099

Signed by [Signature]
Director, Exploration and Development

THIS IS AN ESTIMATE ONLY
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) _____ RESPONSIBLE AGENT: _____
 NAME _____ NAME Joe Campbell
 ADDRESS _____ ADDRESS P.O. Box 2946, Huntington, W. Va
 TELEPHONE _____ TELEPHONE 529-4173
 ESTIMATED DEPTH OF COMPLETED WELL: 3850' ROTARY CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Basal Corniferous
 TYPE OF WELL: OIL _____ GAS COMB. _____ STORAGE _____ DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT LIFT UP OR SACKS - CUBIC FT.
20 - 16			
XXXX 11-3/4	70'		Cement to surface
9 - 5/8			
8 - 5/8	1100'		Cement to surface
7			
5 1/2			
4 1/2	3700'		
3			Perf. Top
2-3/8	3850'		Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS _____ FEET _____ SALT WATER _____ FEET _____
 APPROXIMATE COAL DEPTHS _____
 IS COAL BEING MINED IN THE AREA? No BY WHOM? _____

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for _____ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the _____ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

For Coal Company

Official Title