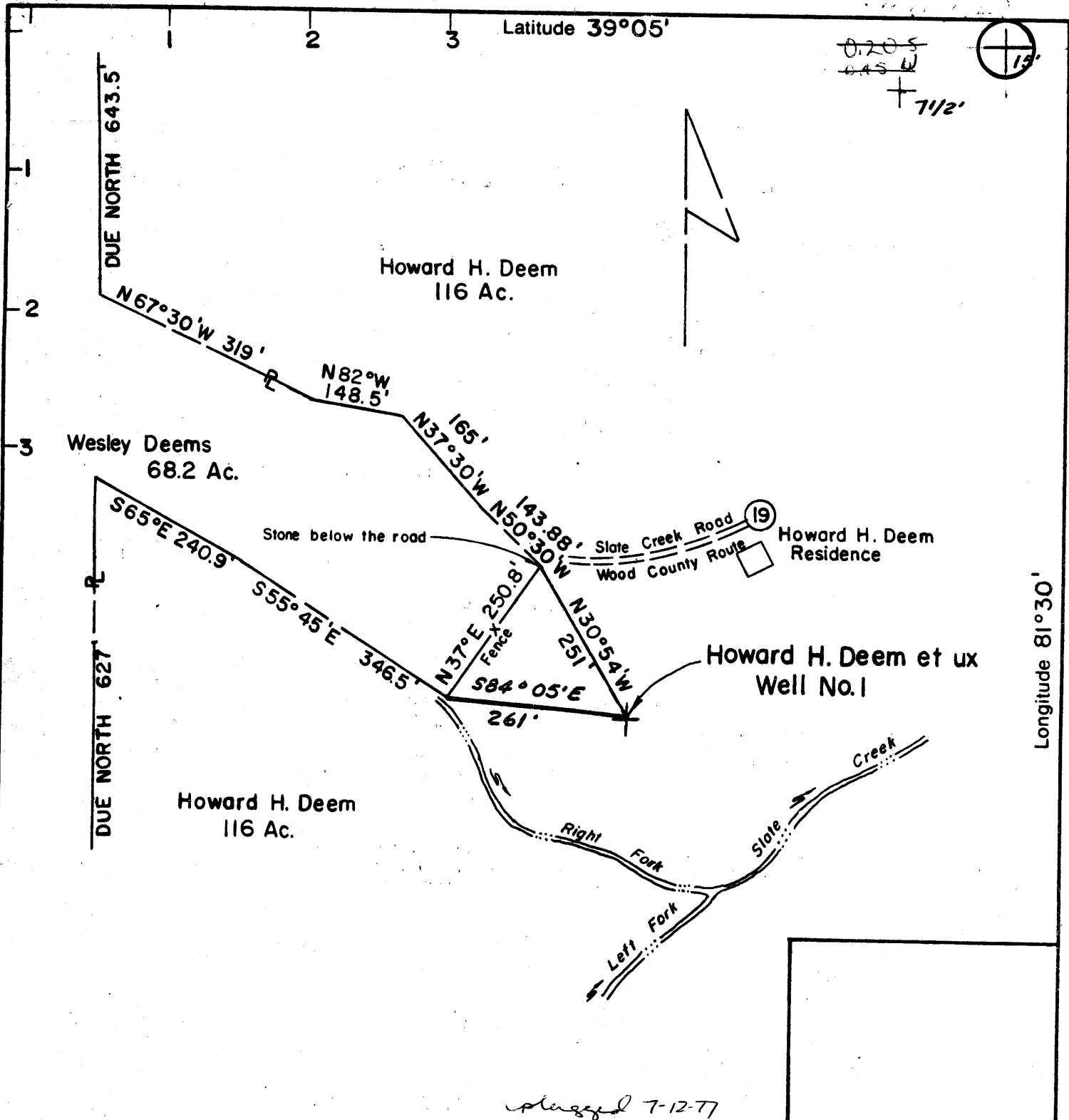


Latitude 39°05'

0.205
0.45 W
+ 7 1/2'



Longitude 81°30'

LOWE ENGINEERS
Consulting Engineers
CHARLESTON, W.VA.

B.M.V-91 0.95 Mi. NE on U.S. 21 from Rockport;
0.8 Mi. ENE on gravel road; N142' along dirt
road; 13' E of road; Disk in rock face. El. 916.179

- New Location
 - Storage
 - Drill Deeper
 - Abandonment
 - Re-Drill/Fracture
- DEC 8, 1976

"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 Feet

Signed _____
Robert F. Rogers W. Va. L.L.S. No. 142

Company EXXON CORPORATION
Address Box 60626, New Orleans, Louisiana 70160
Farm HOWARD H. DEEM
Lease HOWARD H. DEEM ET UX Acres 116
HOWARD H. DEEM ET UX
Well Farm No. 1 Ser. No. _____
Elevation - Spirit Level 694.2 SE
Quadrangle ROCKPORT, W.VA. SE 1/4 Belleville
15 Quadrangle
Township or District Steele District
County Wood
Sec., Lot, Qr. _____ T. _____ R. _____
Coordinates N217,762.10 E1,429,844.74
File No. _____ Dwg. No. 1 of 1
Date August 16, 1976 Scale 1" = 200'

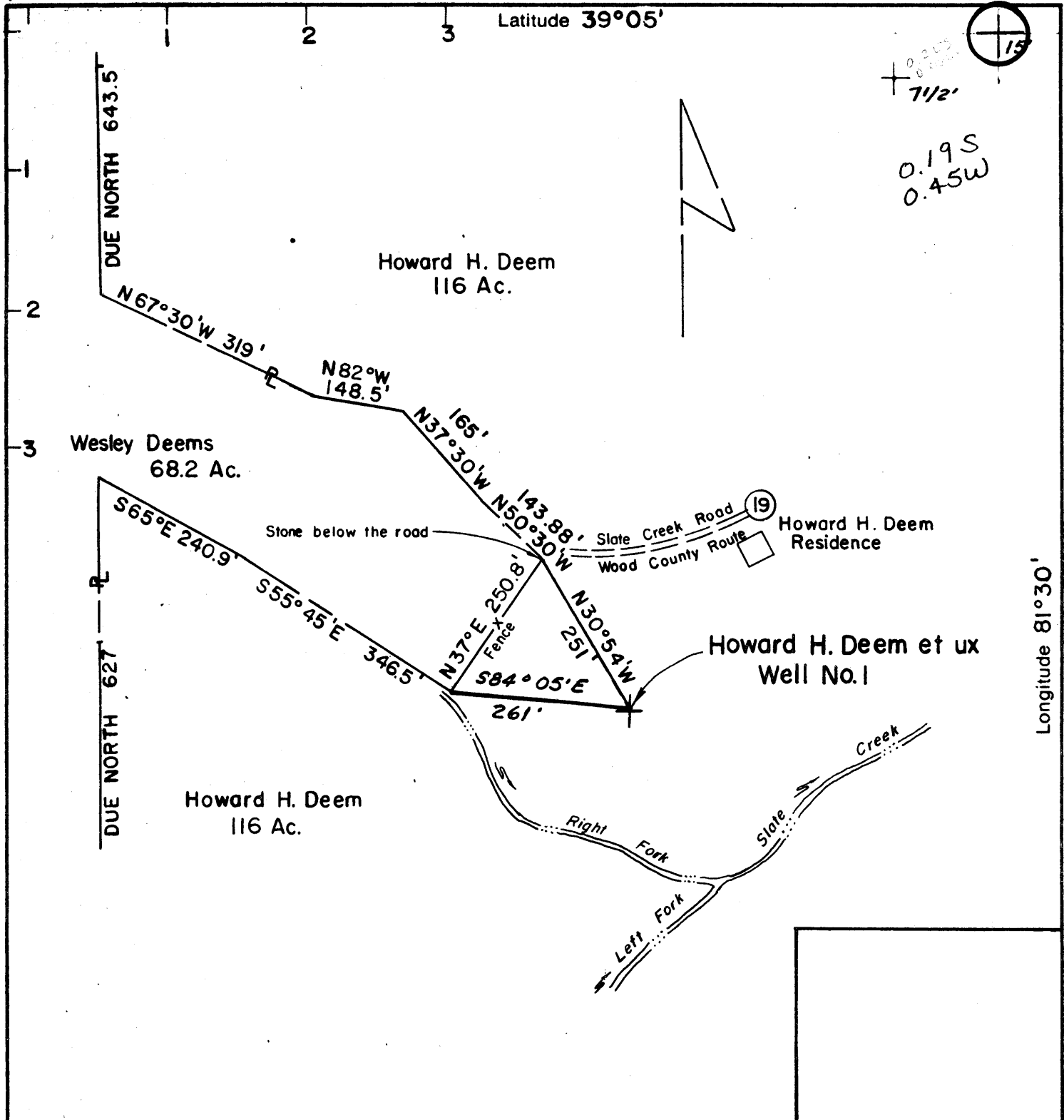
STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION
CHARLESTON

WELL LOCATION MAP
FILE NO. W00-756-P

+ Denotes location of Well on United States Topographic Maps scale 1 to 24,000 latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing. **47-107** SEP 11 1978

14. + to location Deem Well.



Longitude 81°30'

Latitude 39°05'

LOWE ENGINEERS
Consulting Engineers
CHARLESTON, W.VA.

B.M.V-91 0.95 Mi. NE on U.S. 21 from Rockport;
0.8 Mi. ENE on gravel road; N142' along dirt
road; 13 E Q road; Disk in rock face. El. 916.179

- 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 200 Feet

Signed _____
Robert F. Rogers W. Va. L. L. S. No. 142

Company EXXON CORPORATION
 Address Box 60626, New Orleans, Louisiana 70160
 Farm HOWARD H. DEEM
 Lease HOWARD H. DEEM ET UX Acres 116
 HOWARD H. DEEM ET UX
 Well Farm No. 1 Ser. No. _____
 Elevation - Spirit Level 694.2
 Quadrangle ROCKPORT, W.VA. SE 1/4 Belleville 15'
 15' Quadrangle
 Township or District Steele District
 County Wood
 Sec., Lot, Qr. _____ T _____ R _____
 Coordinates N217,762.10 E1,429,844.74
 File No. _____ Dwg. No. 1 of 1
 Date August 16, 1976 Scale 1" = 200'

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION
CHARLESTON

WELL LOCATION MAP
FILE NO. W00-756

+ Denotes location of Well on United States Topographic Maps scale 1 to 24,000 latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing. **47-107 AUG 30 1976**

14. Deep Well 1-0



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FEB 28 1977

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

OIL & GAS DIVISION
DEPT. OF MINES

Oil and Gas Division

WELL RECORD

Rotary Oil _____
Cable _____ Gas _____
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ Dry Hole _____
(Kind)

Quadrangle Rockport, W. Va. (SE/4 Belleville 15' Quadrangle)

Permit No. W00-756
47-107

Company <u>Exxon Corporation</u>	Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Address <u>P.O. Box 60626, New Orleans, La. 70160</u>	Size			
Farm <u>Howard H. Deem</u> Acres <u>116</u>	20-16			
Location (waters) <u>Slate Creek</u>	Cond. <u>16"</u>	<u>64'</u>	<u>64'</u>	<u>cmt. to surface</u>
Well No. <u>1</u> Elev. <u>694.2'</u>	<u>13-10"</u>	<u>13-3/8"</u>	<u>2400'</u>	<u>cmt. to surface</u>
District <u>Steele</u> County <u>Wood</u>	<u>9 5/8</u>	<u>10-3/4"</u>	<u>8700'</u>	<u>cmt. to 4,900'</u>
The surface of tract is owned in fee by _____	<u>8 5/8</u>			
<u>Howard H. Deem</u>	<u>7</u>			
Address <u>Box 14360, Cincinnati, Ohio 45214</u>	<u>5 1/2</u>			
Mineral rights are owned by <u>Howard H. Deem</u>	<u>4 1/2</u>			
Address <u>Box 14360, Cincinnati, Ohio 45214</u>	<u>3</u>			
Drilling Commenced <u>10/8/76</u>	<u>2</u>			
Drilling Completed <u>12/6/76**</u>	Liners Used			
Initial open flow <u>Dry Hole</u> cu. ft. _____ bbls.				
Final production _____ cu. ft. per day _____ bbls.				
Well open _____ hrs. before test _____ RP.				

Attach copy of cementing record.

Coal was encountered at none recognized Feet _____ Inches _____
Fresh water surface Feet 0' Salt Water at Feet 1700
Producing Sand None Depth _____

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Upper Pennsylv.	Light	Hard	Surf	1647		All formation tops are based on rock samples and electric log markers.
Pottsville Salt	Light	Hard	1647	1983	Water/salty	
sd	Light	Soft	1983	2315		
Pocono	Dark	Soft	2315	5013		
Dev. Sh	Light	Hard	5013	5164		
Onondaga	Light	Hard	5164	5203	Tight	
Oriskany SS	Dark	Hard	5203	5400		
Helderberg LS	Light	Hard	5400	6016	Show H ₂ S gas	
Salina Dol	Light	Hard	6016	6054	Tight	
Williamsport SS	Light	Hard	6054	6370		
McKenzie Dol	Light	Hard	6370	6391	Tight	Drilled w/air to 11590.
Keefer SS	Red	Soft	6391	6800		
Rose Hill Sh	Light	Hard	6800	6883	Tight	Drilled w/water 11590 to TD
Fuscarora SS	Red	Soft	6883	7468		
Juniata Sh	Dark	Soft	7468	8540		
Martinsburg Sh	Light	Hard	8540	8766		
Trenton LS	Dark	Hard	8766	9650		
Black River LS	Light	Hard	9650	9724		
Chazy Dol	Light	Hard	9724	9866		
St. Peter SS	Light	Hard	9866	10628		
Knox Dol	Light	Hard	10628	10730		
Rose Run SS	Light	Hard	10730	11355		
Copper Ridge Dol	Light	Hard				

(continued)

(over)

* Indicates Electric Log tops in the remarks section.

**Final annulus plug has not yet been set.

Formation	Color	Hard or Soft	Top Feet <i>g</i>	Bottom Feet	Oil, Gas or Water	* Remarks
Conasauga Sh- SS-Dol <u>Basement</u> TD	Dark Red	Hard Hard	11355 13254 13266	13254	Water	

Date February 23, 19 77

APPROVED *A. Kaulon?* Owner

By Oil & Gas Acctng. Superv.

(Title)



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

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AUG 19 1976

DEPT. OF MINES
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

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

DATE August 13, 1976

Surface Owner Howard H. Deem

Company Exxon Corporation

Address Box 14360, Cincinnati, Ohio 45214

Address P.O. Box 60626, New Orleans, La. 70160

Mineral Owner Howard H. Deem

Farm Howard H. Deem Acres 116

Address see above

Location (waters) Slate Creek

Coal Owner None

Well No. 1 Elevation 694.2'

Address ---

District Steele County Wood

Coal Operator None

Quadrangle Rockport Quadrangle

Address ---

SE/4 Belleville 15' Quadrangle

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 12-31-76.

[Signature]
Deputy Director - Oil & Gas Division

INSPECTOR TO BE NOTIFIED Paul Goodnight

GENTLEMEN:

PH: 477-2455 ADDRESS Smithville, W. Va.

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 April 21 19 76 by Howard H. Deem made to Exxon Corporation and recorded on the unrecorded day of 19, in --- County, Book --- Page ---

--- 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.

"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."

Signed by: [Signature]

Very truly yours,
(Sign Name) [Signature]
Well Operator

Address of Well Operator

P. O. Box 60626
Street
New Orleans
City or Town
Louisiana 70160
State

PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:
West Virginia Geological and Economic Survey
P. O. Box 879
Martinsburg, W. Va. 26505

*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 ROAD

254

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AUG 19 1976

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

PROPOSED WORK ORDER TO X DRILL DEEPEN FRACTURE-STIMULATE
DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT: *
NAME Helmerich & Payne NAME Bowles, Kauffelt, McDavid & Graff
ADDRESS Utica at Twenty-First, Tulsa, Oklaho- ADDRESS Box 1386, Charleston, W. Va. 25325
TELEPHONE 742-5531 ma TELEPHONE 344-9621
ESTIMATED DEPTH OF COMPLETED WELL: 14,000'± ROTARY X CABLE TOOLS
PROPOSED GEOLOGICAL FORMATION: Pre-Cambrian
TYPE OF WELL: OIL GAS X COMB. STORAGE DISPOSAL
RECYCLING WATER FLOOD OTHER

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16 16"		200'	Cement to surface
13 - 10 13-3/8"		2,500'	Cement to surface
9 - 5/8 9-5/8"		10,500'	400 sacks
8 - 5/8			
7			
5 1/2			
4 1/2			
3			Perf. Top
2			Perf. Bottom
Liners 7-5/8"		2,500'	Perf. Top
		if needed	Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 0 FEET 800 SALT WATER 800 FEET 14,000'±
APPROXIMATE COAL DEPTHS None that we know of.
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.

MRH/sk

* Agent for process serving only: W. M. Woodrow, 1200 Charleston National Plaza, Charleston, West Virginia 25301 Telephone 346-0441

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

EXXON - DEEM - WOOD Co. 756

Per John Cramer 7/7/82

Deem #1 KB 726

Drilled 1 mile east of 1st fault. 3,000' of throw

TR	8540-7814
Blk River	8766-8040
Chazy	9650-8924
St. Peter	9724-8998
Knox	9866-9140

9866 to 10150 micritic dolomite

10150 to 10628 rexlized, coarser xlin.

Rose Run 10628 to 10730 100% sand

Copper Ridge 10930

Conasauga 11355 to 11510 50% ss, 50% dol.

Honaker 11510 to 11820 solid dol., mostly micritic & same grain rock

11820 to 12280 high energy dol. grainstone w. some interbedded ss.

Rome 12280 to 12450 100% f to mg ss.

Core 12445 to 12501 1 ft. sand, 3.4 Ø, no k 54½ feet silty shale

12501 to 12970 mixed rexlized dol. and f to mg sand. 10 to 20% siltstone, occasional shale

12970 to 13250 100% ss, red

13250 ign. basement

DST #11 12175 to 12185 open 3 hours 16 bbls sw cut mud

DST #12 12875 to 13266 open 8 hours 65 bbls sw

12930 to TD Rest log analysis 130' 5% Ø density log

55' 5% Ø density log

Drilled on air to 11590'

Drilled on gell-H₂O to TD