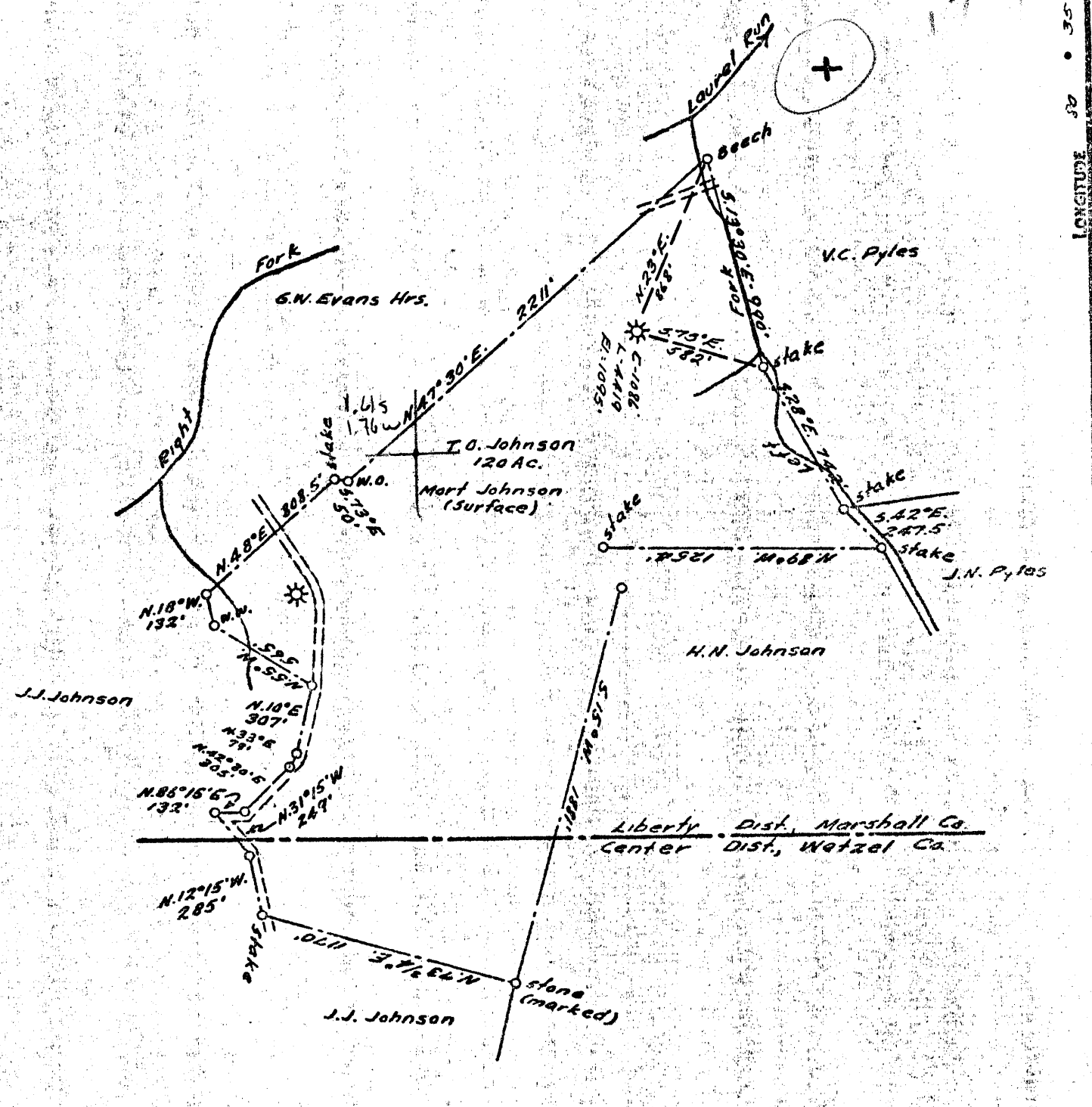


1.655
1.700



COAL OWNED BY _____
 REDRILL
 FRACTURE 8-29-69
 NEW LOCATION
 DRILL DEEPER
 ABANDONMENT

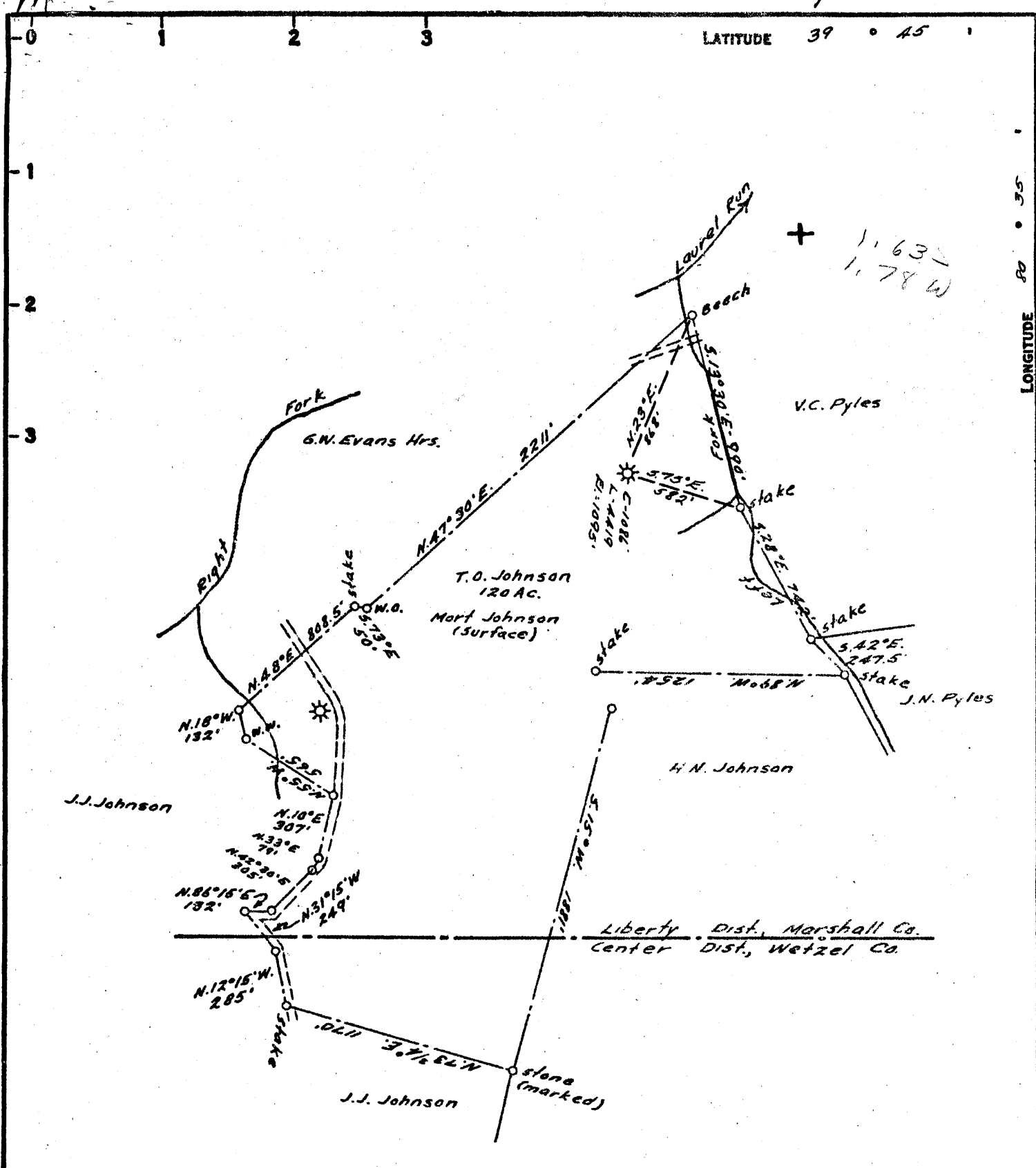
COMPANY THE MANUFACTURERS LIGHT & HEAT
 ADDRESS 800 UNION TRUST BLDG. PCH. PA.
 FARM T. O. JOHNSON
 TRACT _____ ACRES 120 LEASE NO. 28913
 WELL (FARM) NO. 1 SERIAL NO. C-1086 4419
 ELEVATION (SPIRIT LEVEL) 1095'
 QUADRANGLE LITTLETON NC
 COUNTY MARSHALL DISTRICT LIBERTY
 ENGINEER Information from C.N.G.Co. Robert M. Hill
 ENGINEER'S REGISTRATION NO. 361-E
 FILE NO. _____ DRAWING NO. Y-15-649
 DATE 30 SEPT. 1957 SCALE 1" = 660'

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

WELL LOCATION MAP

FILE NO. MARS-316-Redrill-Fracture

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. SCALE 1 TO 42,800. LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.
 --- DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.



COAL OWNED BY REDRILL

NEW LOCATION
 DRILL DEEPER
 ABANDONMENT

COMPANY THE MANUFACTURERS LIGHT & HEAT
 ADDRESS 800 UNION TRUST BLDG. PGH. PA.
 FARM T. O. JOHNSON
 TRACT _____ ACRES 120 LEASE No. 28913
 WELL (FARM) No. 1 SERIAL No. C-1086
4419
 ELEVATION (SPIRIT LEVEL) 1095'
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 ENGINEER Information from C.N.G. Co.
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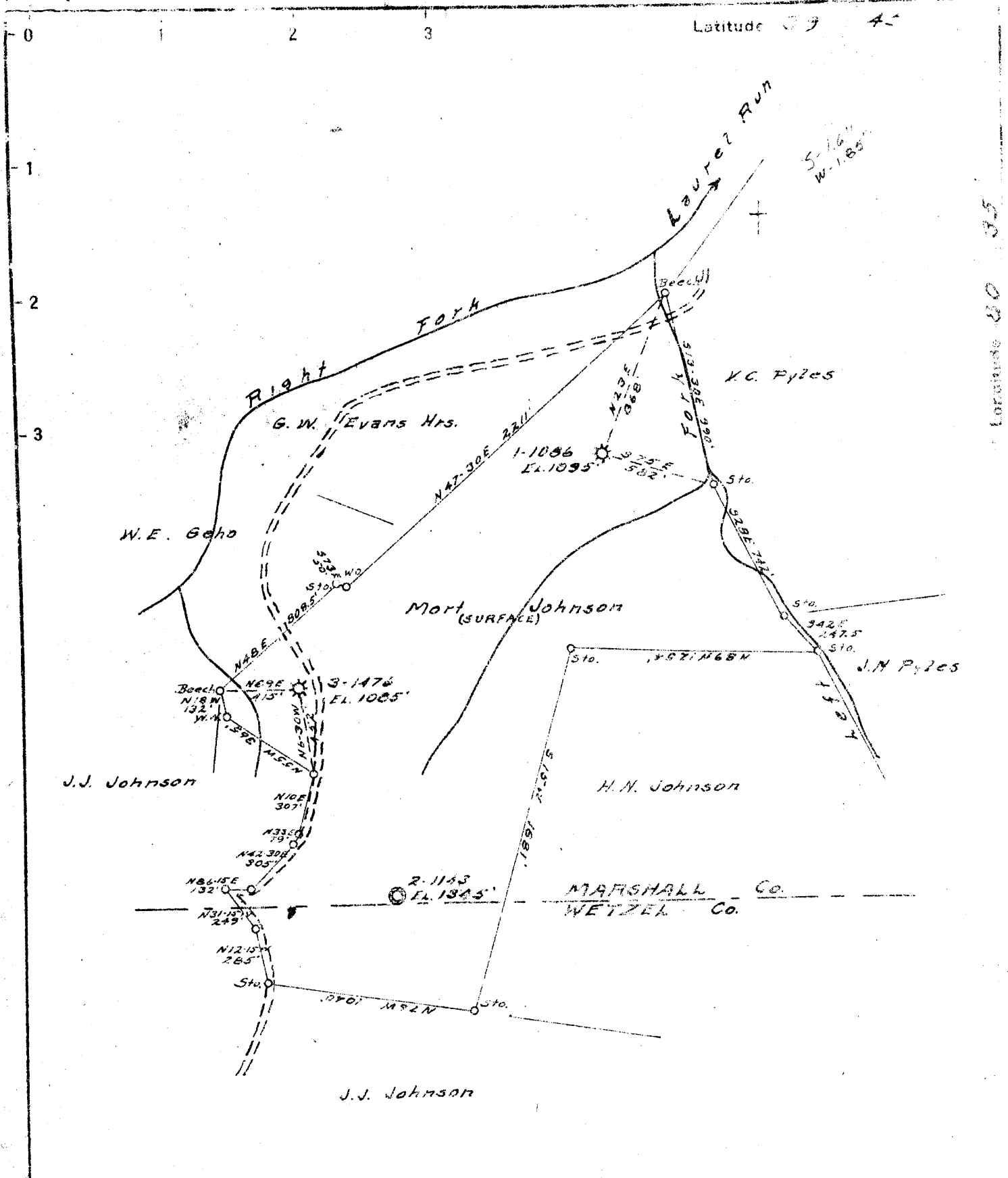
STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP

FILE No. MARS-316-REDRILL

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPO-
 GRAPHIC MAPS, SCALE 1 TO 62,500. LATITUDE AND LONGITUDE
 LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.
 --- DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL
 TRACING.

OWWO 9-0 Kausoath (25)



PGH. COAL: MORT JOHNSON, CAMERON, W.Va.

- New Location
- Drill Deeper
- Abandonment

Company	CARNEGIE NATURAL GAS
Address	PITTSBURGH Pa.
Farm	T.O. JOHNSON
Tract	Acres 120 Lease No. E-10637
Well (Farm) No.	1 Serial No. E-1086
Elevation (Spirit Level)	1095'
Quadrangle	LITTLETON N.E.
County	MARSHALL District LIBERTY
Engineer	<i>[Signature]</i>
Engineer's Registration No.	1850
File No.	Drawing No.
Date	4-8-22 Scale 1" = 800'

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

WELL LOCATION MAP
FILE NO. MARS-236-D 316
CANC. 09/12/1952

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.



RECEIVED

JAN 17 1972

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

- Rotary [] Spudder [] Cable Tools [x] Storage [x]

WELL RECORD

Oil or Gas Well Gas (KIND)

Location Littleton Permit No. MARS-316-RED-Frac.

Company Columbia Gas Transmission Corp. Address 800 Union Trust Bldg., Pgh., Pa. Owner T. O. Johnson Acres 120 Well No. L-4419 Elev. 1095' District Liberty County Marshall

Table with columns: Casing and Tubing, Used in Drilling, Left in Well, Packers. Includes data for casing sizes (16, 13, 10 3/4, 8 5/8, 6, 5 1/2, 4 1/2, 3, 2) and packer depths (2108, 2116, 2122, 2124).

Mineral rights are owned by... Reconditioning-fracture 7-21-69 Fracture-reconditioning 10-6-69 Date Shot... With Before fracturing... Open Flow 17 /10ths Water in... Volume 2,600 MCF/day... Rock Pressure 578 lbs. 841 hrs.

Attach copy of cementing record. See below CASING CEMENTED... Amount of cement used (bags) See below Name of Service Co. See below COAL WAS ENCOUNTERED AT... FEET... INCHES

WELL ACIDIZED (DETAILS)... WELL FRACTURED (DETAILS) Treatment-25,000#sand; 18,500 gal. water; 500 gal. acid; Max. press.-3300 psig; Avg. Press.-2829 psig; Injection Rate-29.1 bbls/min. RESULT AFTER TREATMENT (Initial open flow or bbls.) 2,720 MCF/day 580 psig

ROCK PRESSURE AFTER TREATMENT... Fresh Water... Salt Water... Producing Sand Big Injun

Main well log table with columns: Formation, Color, Hard or Soft, Top, Bottom, Oil, Gas or Water, Depth, Remarks. Includes entries for Pittsburgh Coal, Big Injun, and various casing/liner depths.



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Quadrangle Littleton

WELL RECORD

Permit No. MARS-316-Redrill

Oil or Gas Well GAS
(KIND)

Company The Manufacturers Light and Heat Company
Address 800 Union Trust Building, Pgh. 19, Penna.

Farm T. O. Johnson Acres 120

Location (waters) _____

Well No. 4419 Elev. 1095'

District Liberty County Marshall

The surface of tract is owned in fee by _____

Address _____

Mineral rights are owned by _____

Address _____

Drilling commenced September 13, 1957

Drilling completed December 31, 1957

Date Shot From _____ To _____

With _____

Open Flow /10ths Water in _____ Inch

/10ths Merc. in _____ Inch

Volume _____ Cu. Ft.

Rock Pressure 105 lbs. 48 hrs.

Oil _____ bbls., 1st 24 hrs.

Fresh water _____ feet

Salt water _____ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer _____
18			
10"	293'		Size of _____
8 1/4"	1391'		
6"			Depth set _____
5 3/16"	2067'		
3			Perf. top _____
2			Perf. bottom _____
Liners Used _____			Perf. top _____
			Perf. bottom _____

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____

COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

Formation	Color	Hardness	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Schlumberger Well Survey							All pipe measured over threads.
Pittsburg Coal		7'	940'	947'			Original 10-3/4" Casing not pulled and not cemented. Run 1239' of 8-5/8" Casing Sm. Gr. J-55 24# and connected to 152' of original 8-5/8" casing with an 8" Steel Die Nipple. Cemented 8-5/8" Casing with 290 bags cement, 14.8 lbs. per gallon, good return of cement back to surface. Run 2067' of 5-1/2" Casing Sm. Gr. J-55 17# on a steel shoe set at 2052' and cemented with 380 bags cement, 14.2 lbs. per gallon. Good return of cement back to surface. Well cleaned out to depth of 2113' and drilled deeper to a total depth of 2309'. Six (6) 5-1/2" X 8-5/8" Casing Centralizers placed at depths of 400', 570', 837', 1109', 1627' and 1965' feet.
Maxton Sand			?	?			
Big Injun Sand			2100'	?			
Total Depth			2100' 1095' 1095'	2309'			

