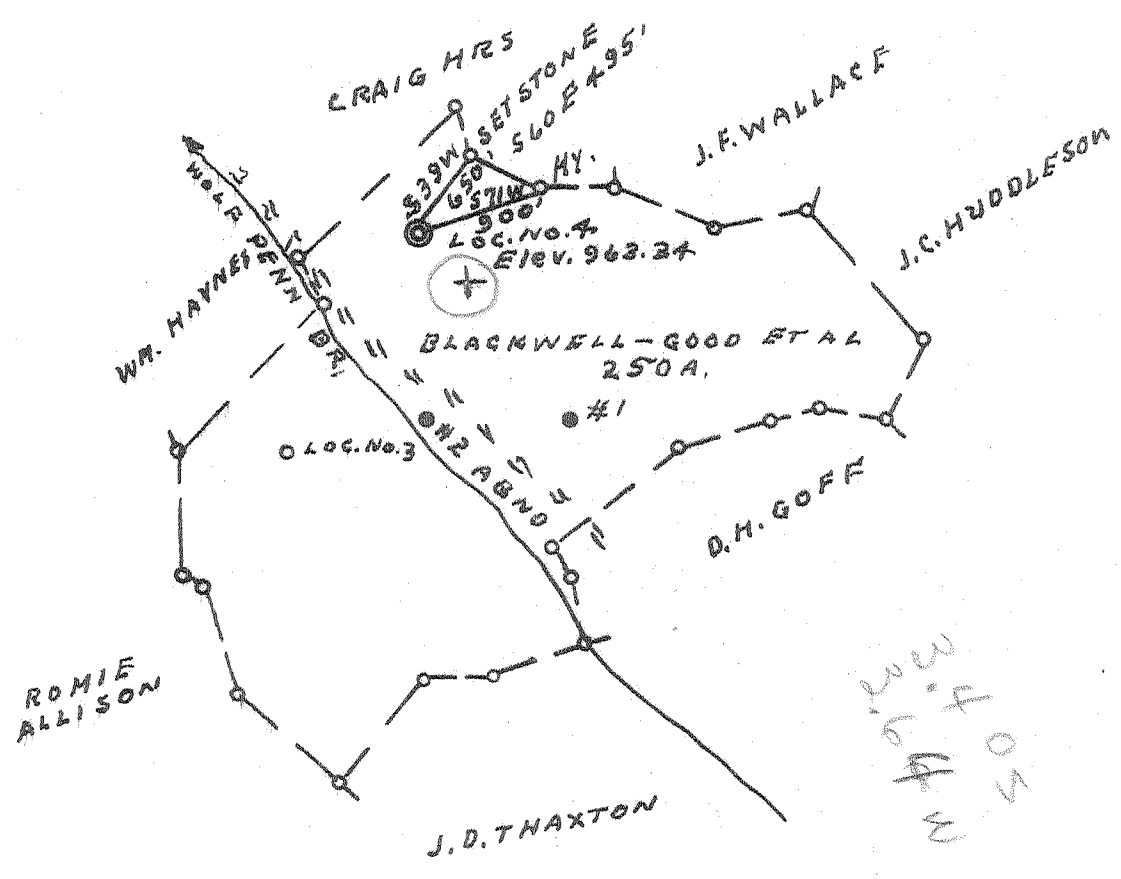


LATITUDE 38° 30'

LONGITUDE 81° 35'



Minimum Error of Closure 1' IN 200'

Source of Elevation WELL NO. 1 711.13

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 paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

- Fracture
- New Location Revised 11-27-67
- Drill Deeper
- Abandonment

Signed: L. F. Dye
 Squares: N S E W

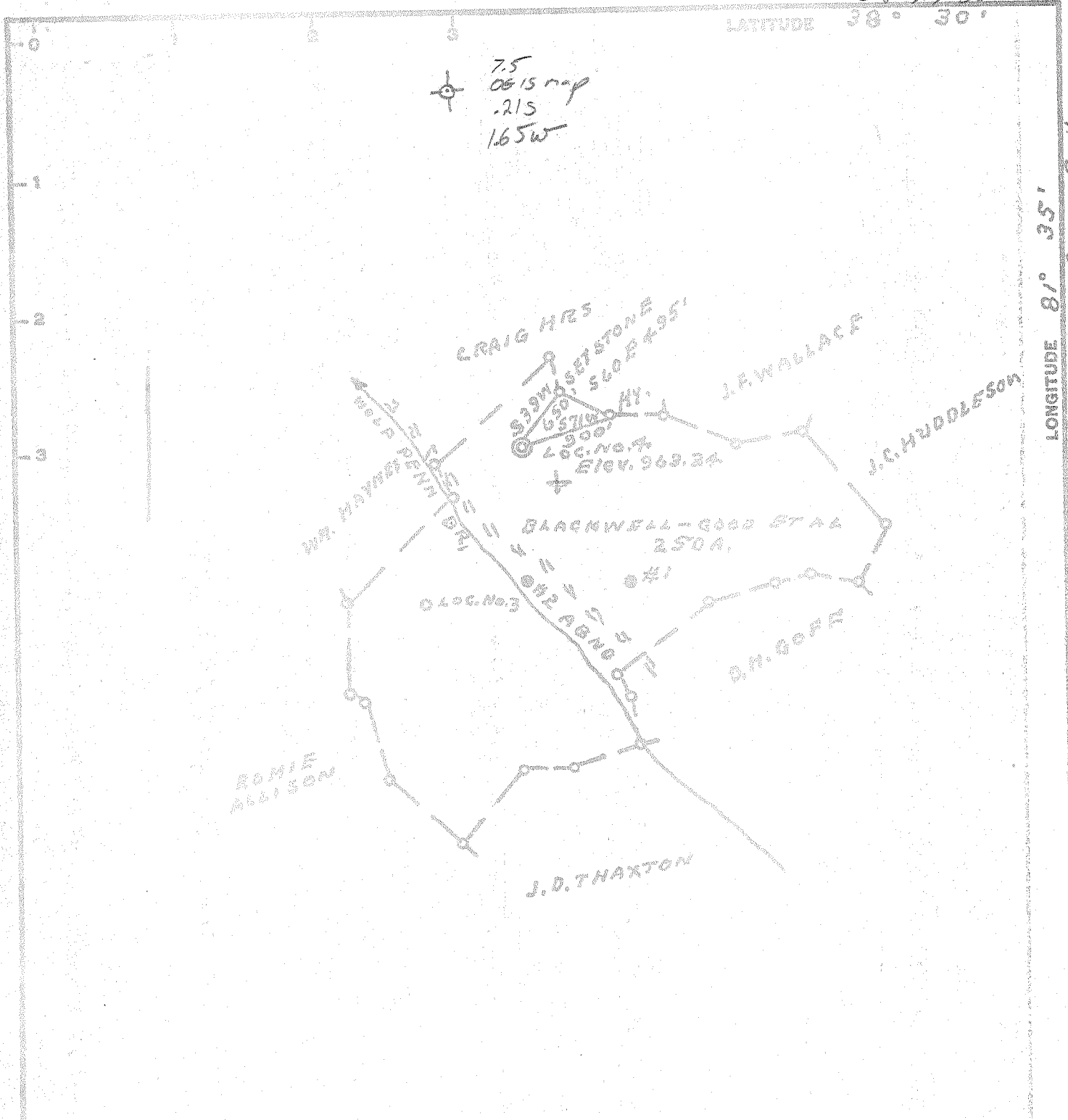
Company M. M. DRILLING
 Address SPENCER, W. VA.
 Farm BLACKWELL-GOOD ET AL
 Tract _____ Acres 250 Lease No. _____
 Well (Farm) No. 3 Serial No. _____
 Elevation (Spirit Level) 963.34
 Quadrangle CHARLESTON NC
 County KANAWHA District UNION
 Engineer L. F. Dye
 Engineer's Registration No. 804
 File No. _____ Drawing No. _____
 Date 11-22-67 Scale 1" = 1320'

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

WELL LOCATION MAP
 FILE NO. KAN-2178-REV.

+ 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.



LATITUDE 38° 30'
LONGITUDE 81° 35'
81° 37' 30"

Minimum Error of Closure 1' IN 200'

Source of Elevation WELL NO. 1 711.13

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 paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Fracture
 Near Location Spencer, W. Va.
 Drill Deeper
 Abandonment 2-16-70 Map No.

Signed: C. J. Dyer
 Squares: N S E W

Company M. G. M. DRILLING
 Address SPENCER, W. VA.
 Farm BLACKWELL - GOOD ET AL
 Tract _____ Acres 2.50 Lease No. _____
 Well (Farm) No. 3 Serial No. _____
 Elevation (Spirit Level) 969.24
 Quadrangle CHARLESTON NC
 County CANAWHA District UNION
 Engineer C. J. Dyer
 Professional Registration No. 004
 File No. _____ Drawing No. _____
 Date 08-07-70 Scale 1" = 1000'

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

WELL LOCATION MAP
 FILE NO. KAN-2178-REV-P

✦ 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.



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

Rotary
Spudder
Cable Tools
Storage

Quadrangle Charleston

Permit No. KAN-2178-REV

WELL RECORD

Oil or Gas Well Gas (KIND)

Company <u>M & M Drilling Company</u>	Casing and Tubing	Used in Drilling	Left in Well	Packers
Address <u>P. O. Box 54, Spencer, W. Va.</u>	Size			
Farm <u>Blackwell - Good et al</u> Acres <u>250</u>	16			Kind of Packer <u>None</u>
Location (waters) <u>Wolf Pen</u>	13 <u>3/8"</u>	252'	252'	Size of
Well No. <u>Three (3)</u> Elev. <u>938</u>	10 <u>9 5/8"</u>	2045'	2045'	Depth set
District <u>Union</u> County <u>Kanawha</u> <u>KB 977</u>	8 1/4			Perf. top <u>None</u>
The surface of tract is owned in fee by	8 3/8 <u>7"</u>	5815'	5815'	Perf. bottom
Address	5 3/16			Perf. top
Mineral rights are owned by	4 1/2			Perf. bottom
Address	3		5850'	
Drilling commenced <u>January 3, 1968</u>	2 Tubing			
Drilling completed <u>January 14, 1968</u>	Liners Used			
Date Shot <u>N.A.</u> From To				
With				
Open Flow /10ths Water in Inch	Attach copy of cementing record.			
/10ths Merc. in Inch	CASING CEMENTED <u>7"</u> SIZE <u>5815'</u> No. Ft. <u>1-13-68</u> Date			
Volume <u>10,000,000</u> Cu. Ft.	Amount of cement used (bags) <u>9 5/8"-150sks./ 7"-150sks</u>			
Rock Pressure <u>N.A.</u> lbs. hrs.	Name of Service Co. <u>Well Service/Dowell</u>			
Oil <u>None</u> bbls., 1st 24 hrs.	COAL WAS ENCOUNTERED AT <u>None</u> FEET INCHES			
WELL ACIDIZED (DETAILS) <u>1,000 gals. Mud Acid</u> FEET INCHES FEET INCHES				
<u>ahead of Frac. Treatment (spearhead)</u> FEET INCHES FEET INCHES				
WELL FRACTURED (DETAILS) <u>Treated with 38,000 gals. waterfrac and 28,000 # sand</u>				
<u>Treated at 25 BPM and 5,500 PSI</u>				
RESULT AFTER TREATMENT (Initial open Flow or bbls.) <u>7,600,000 (UFGC four point test) 7,600 MCFGPD</u>				
ROCK PRESSURE AFTER TREATMENT <u>1712</u> HOURS <u>24</u>				
Fresh Water Feet	Salt Water <u>1300</u> Feet			
Producing Sand <u>Newburg</u> Depth <u>5828-5838'</u>				

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Soil			0	30			
Red rock & shale			30	252			
Shale & sand			252	325			
Br. shale	<i>Brown</i>		325	650			
Sand			650	825			
Gr. shale	<i>Grey</i>		825	1285			
Salt sand	<i>(Salt)</i>		1285	1690	Salt water	1300'	5829 938 4891
Little Lime			1690	1760			
Big lime			1760	1920			
Shale			1920	1940 -20			
Injun sand			1940	1980 -40			
Shale			1980	4958			
Conif. lime			4958	5044			
Oris. sand			5044	5082	Gas		
Lime & dolomite			5080	5828			
Newburg sand			5828	5838	Gas	5829-34'	
Total Depth				5838'			

5828
977
4851

RECEIVED
MAR 23 1970
OIL & GAS DIVISION
DEPT. OF MINES

(over)

MAR 30 1970