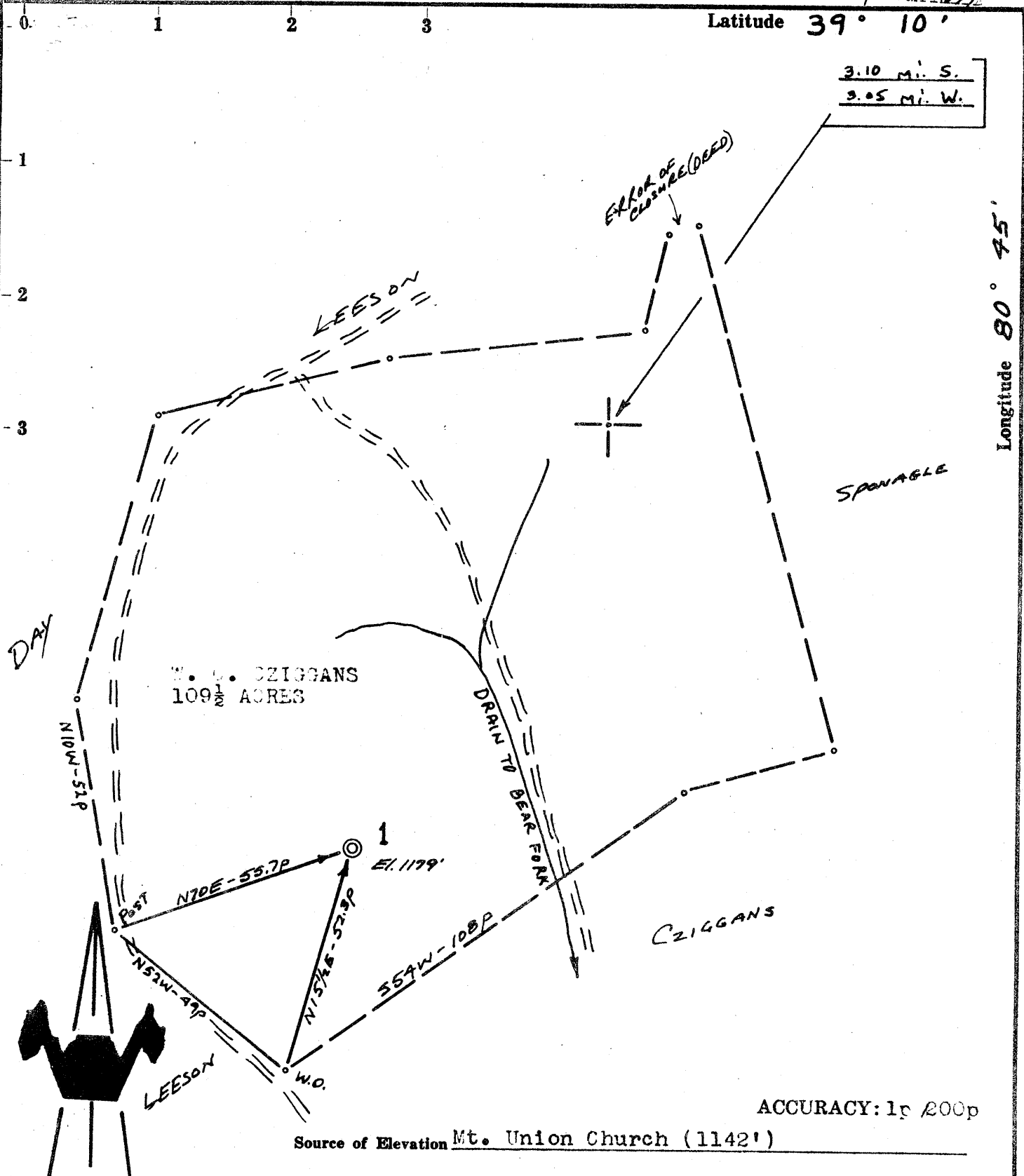


Latitude 39° 10'

3.10 Mi. S.  
3.05 Mi. W.

Longitude 80° 45'



ACCURACY: 1" = 200p

Source of Elevation Mt. Union Church (1142')

- New Location
- Drill Deeper
- Abandonment
- Fracture
- Redrill

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.

*Chet Waterman*

|                             |                            |             |           |
|-----------------------------|----------------------------|-------------|-----------|
| Company                     | WOLF RUN OIL & GAS COMPANY |             |           |
| Address                     | HUNTINGTON, W. VA.         |             |           |
| Farm                        | W. C. ZIGGANS              |             |           |
| Tract                       | Acres                      | 109 1/2     | Lease No. |
| Well (Farm) No.             | 1                          | Serial No.  |           |
| Elevation (Spirit Level)    | 1179'                      |             |           |
| Quadrangle                  | HOLBROOK                   |             | EC        |
| County                      | BODDRIDGE                  | District    | SOUTHWEST |
| Engineer                    | CHET WATERMAN              |             |           |
| Engineer's Registration No. | 3788                       |             |           |
| File No.                    | C8003-13                   | Drawing No. |           |
| Date                        | 2/6/68                     | Scale       | 1" = 30p  |

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

WELL LOCATION MAP

FILE NO. DOD - 1494

+ 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 DIVISION 2

Rotary   
Spudder   
Cable Tools   
Storage

Oil or Gas Well  **Gas & Oil**  
(KIND)

WELL RECORD

Quadrangle Helbrook

Permit No. Dodd 1494

Company Welf Run Oil and Gas Co.  
Address Box 5-Huntington, W. Va.  
Farm W.C. Biggans Acres 109 1/2  
Location (waters) Straight Fork  
Well No. -1- Elev. 1179'  
District Southwest County Doddridge  
The surface of tract is owned in fee by Alta Spurgeon and J.H. Spurgeon Address Auburn, W. Va.  
Mineral rights are owned by Alta Spurgeon and J.H. Spurgeon Address Oxford, W. Va.  
Drilling commenced 3-8-68  
Drilling completed 4-12-68  
Date Shot From To

| Casing and Tubing | Used in Drilling | Left in Well | Packers        |
|-------------------|------------------|--------------|----------------|
| Size              |                  |              | Kind of Packer |
| 16                |                  |              |                |
| 13 5/8"           | 20               | 20           |                |
| 10 3/4"           | 381              | -0-          | Size of        |
| 8 1/4"            | 1018             | -0-          | Depth set      |
| 6 3/4"            |                  |              |                |
| 5 3/16"           |                  | 2698'        | Perf. top      |
| 4 1/2"            | -0-              |              | Perf. bottom   |
| 3                 |                  |              | Perf. top      |
| 2                 |                  |              | Perf. bottom   |
| Liners Used       |                  |              |                |

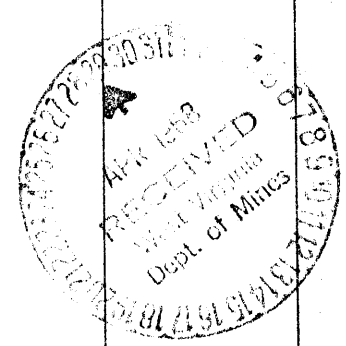
With  
Open Flow /10ths Water in Inch  
/10ths Merc. in Inch  
Volume Cu. Ft.  
Rock Pressure lbs. hrs.  
Oil bbls., 1st 24 hrs.

Attach copy of cementing record.  
CASING CEMENTED 4 1/2 SIZE 2698 No. Ft. 4-20-68 Date  
Amount of cement used (bags) 140 Bags  
Name of Service Co. Lawson Oil and Gas Well Cem. Co.  
COAL WAS ENCOUNTERED AT None FEET INCHES  
FEET INCHES FEET INCHES  
FEET INCHES FEET INCHES

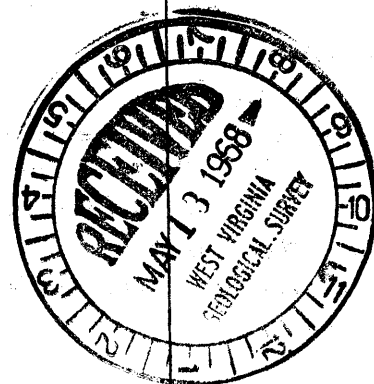
WELL ACIDIZED (DETAILS)  
WELL FRACTURED (DETAILS) 500 gals. regular acid-580000 lbs. sand-1328 bbls. water-4800 horsepower used in frac.

RESULT AFTER TREATMENT (Initial open Flow or bbls.) 5 bbls. 50000 Cubic feet of gas  
ROCK PRESSURE AFTER TREATMENT 510 HOURS 12  
Fresh Water 1 bbl. Feet 5 ft. Salt Water None Feet  
Producing Sand Weir-5th. Sand Depth

| Formation            | Color | Hard or Soft | Top | Bottom | Oil, Gas or Water | Depth | Remarks |
|----------------------|-------|--------------|-----|--------|-------------------|-------|---------|
| Top Soil             |       |              | -0- | 15     |                   |       |         |
| Sand                 |       |              | 15  | 55     |                   |       |         |
| Blue Mud             |       |              | 55  | 68     |                   |       |         |
| Red Rock             |       |              | 68  | 85     |                   |       |         |
| Sand                 |       |              | 85  | 110    |                   |       |         |
| Red Rock             |       |              | 110 | 155    |                   |       |         |
| Lime                 |       |              | 155 | 160    |                   |       |         |
| Sand                 |       |              | 160 | 175    |                   |       |         |
| Slate                |       |              | 175 | 180    |                   |       |         |
| Red Rock and Lime    |       |              | 180 | 230    |                   |       |         |
| Slate Shells         |       |              | 230 | 240    |                   |       |         |
| Sand                 |       |              | 240 | 270    |                   |       |         |
| Red Rock-Lime Shells |       |              | 270 | 295    |                   |       |         |
| Lime-Gritty          |       |              | 295 | 315    |                   |       |         |
| Sand                 |       |              | 315 | 335    |                   |       |         |
| Red Rock             |       |              | 335 | 381    |                   |       |         |
| Slate Shells         |       |              | 381 | 420    |                   |       |         |
| Sand                 |       |              | 420 | 455    |                   |       |         |
| Slate                |       |              | 455 | 460    |                   |       |         |
| Red Rock             |       |              | 460 | 480    |                   |       |         |
| Lime                 |       |              | 480 | 505    |                   |       |         |
| Slate Shells         |       |              | 505 | 550    |                   |       |         |
| Red Rock             |       |              | 550 | 560    |                   |       |         |
| Slate Shells         |       |              | 560 | 625    |                   |       |         |
| Lime                 |       |              | 625 | 650    |                   |       |         |
| Red Rock             |       |              | 650 | 660    |                   |       |         |
| Sand                 |       |              | 660 | 680    |                   |       |         |
| Red Rock Shells      |       |              | 680 | 755    |                   |       |         |
| Sand                 |       |              | 755 | 800    |                   |       |         |



| Formation                    | Color | Hard or Soft | Top z | Bottom | Oil, Gas or Water             | Depth Found | Remarks     |
|------------------------------|-------|--------------|-------|--------|-------------------------------|-------------|-------------|
| Lime-Gritty                  |       |              | 800   | 830    |                               |             |             |
| Slate Shells                 |       |              | 830   | 880    |                               |             |             |
| Red Rock                     |       |              | 880   | 885    |                               |             |             |
| Lime-Gritty                  |       |              | 885   | 900    |                               |             |             |
| Red Rock                     |       |              | 900   | 925    |                               |             |             |
| Slate                        |       |              | 925   | 930    |                               |             |             |
| Lime                         |       |              | 930   | 960    |                               |             |             |
| Slate Shells                 |       |              | 960   | 1000   |                               |             |             |
| Lime                         |       |              | 1000  | 1018   |                               |             |             |
| Sand                         |       |              | 1018  | 1054   |                               |             |             |
| Broken Sand                  |       |              | 1054  | 1075   |                               |             |             |
| Slate                        |       |              | 1075  | 1080   |                               |             |             |
| Lime                         |       |              | 1080  | 1170   |                               |             |             |
| Sand                         |       |              | 1170  | 1200   |                               |             |             |
| Lime                         |       |              | 1200  | 1240   |                               |             |             |
| Slate Shells                 |       |              | 1240  | 1260   |                               |             |             |
| Sand                         |       |              | 1260  | 1280   |                               |             |             |
| Broken Sand                  |       |              | 1280  | 1387   |                               |             |             |
| Sand                         |       |              | 1387  | 1425   |                               |             |             |
| Slate                        |       |              | 1425  | 1435   |                               |             |             |
| Sand                         |       |              | 1435  | 1490   |                               |             |             |
| Slate Shells                 |       |              | 1490  | 1575   |                               |             |             |
| Sand                         |       |              | 1575  | 1585   |                               |             |             |
| Slate                        |       |              | 1585  | 1590   |                               |             |             |
| Broken Sand                  |       |              | 1590  | 1600   |                               |             |             |
| Slate                        |       |              | 1600  | 1618   |                               |             |             |
| Sand                         |       |              | 1618  | 1640   |                               |             |             |
| Slate                        |       |              | 1640  | 1650   |                               |             |             |
| Lime Gritty                  |       |              | 1650  | 1660   |                               |             |             |
| Slate                        |       |              | 1660  | 1685   |                               |             |             |
| Sand                         |       |              | 1685  | 1700   |                               |             |             |
| Lime Gritty                  |       |              | 1700  | 1710   |                               |             |             |
| Slate                        |       |              | 1710  | 1730   |                               |             |             |
| Sand                         |       |              | 1730  | 1760   |                               |             |             |
| Slate                        |       |              | 1760  | 1805   |                               |             |             |
| Lime Gritty                  |       |              | 1805  | 1826   |                               |             |             |
| Broken Lime                  |       |              | 1826  | 1832   |                               |             |             |
| Lime                         |       |              | 1832  | 1845   |                               |             |             |
| Red Lime                     |       |              | 1845  | 1848   |                               |             |             |
| Lime                         |       |              | 1848  | 1860   |                               |             |             |
| Red Lime                     |       |              | 1860  | 1865   |                               |             |             |
| Lime Gritty                  |       |              | 1865  | 1925   |                               |             |             |
| Lime Hard                    |       |              | 1925  | 1982   |                               |             |             |
| Sand <i>Big Iron</i>         |       |              | 1982  | 2074   | Show of Oil                   | 1986-1991   |             |
| Slate Shells                 |       |              | 2074  | 2086   |                               |             |             |
| Lime                         |       |              | 2086  | 2133   |                               |             |             |
| Slate Shells                 |       |              | 2133  | 2150   |                               |             |             |
| Lime Gritty                  |       |              | 2150  | 2183   |                               |             |             |
| Weir Sand                    |       |              | 2183  | 2309   | Oil Show 2188-96 Gas 2200-04- |             |             |
| Lime Gritty                  |       |              | 2309  | 2350   | Oil Show 2230-2233            |             |             |
| Slate                        |       |              | 2350  | 2378   |                               |             |             |
| Sand <i>GANTZ? Berca?</i>    |       |              | 2378  | 2385   |                               |             |             |
| Slate Shells                 |       |              | 2385  | 2464   |                               |             |             |
| Gritty Lime-Hard <i>SOAT</i> |       |              | 2464  | 2479   |                               |             |             |
| Slate Shells                 |       |              | 2479  | 2493   |                               |             |             |
| Lime Gritty Hard <i>SOAT</i> |       |              | 2493  | 2515   |                               |             |             |
| Slate Shells                 |       |              | 2515  | 2548   |                               |             |             |
| Sand <i>GANTZ? Berca?</i>    |       |              | 2548  | 2552   |                               |             |             |
| Slate                        |       |              | 2552  | 2560   |                               |             |             |
| Gritty Lime <i>SOAT?</i>     |       |              | 2560  | 2580   |                               |             |             |
| Slate                        |       |              | 2580  | 2588   |                               |             |             |
| Sand <i>Fifth</i>            |       |              | 2588  | 2612   | Oil show                      | 2588-2612   | Gas Bubbles |
| Slate Shells                 |       |              | 2612  | 2703   |                               |             |             |
|                              |       | Total Depth  | 2703  |        |                               |             |             |



Date 4-27, 1968

APPROVED Welf Run Oil and Gas Co., Owner

By Robert Shaw (Title) Agent