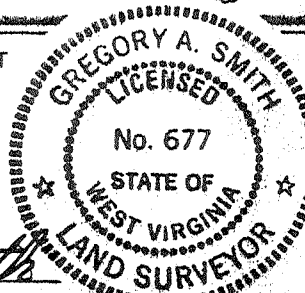
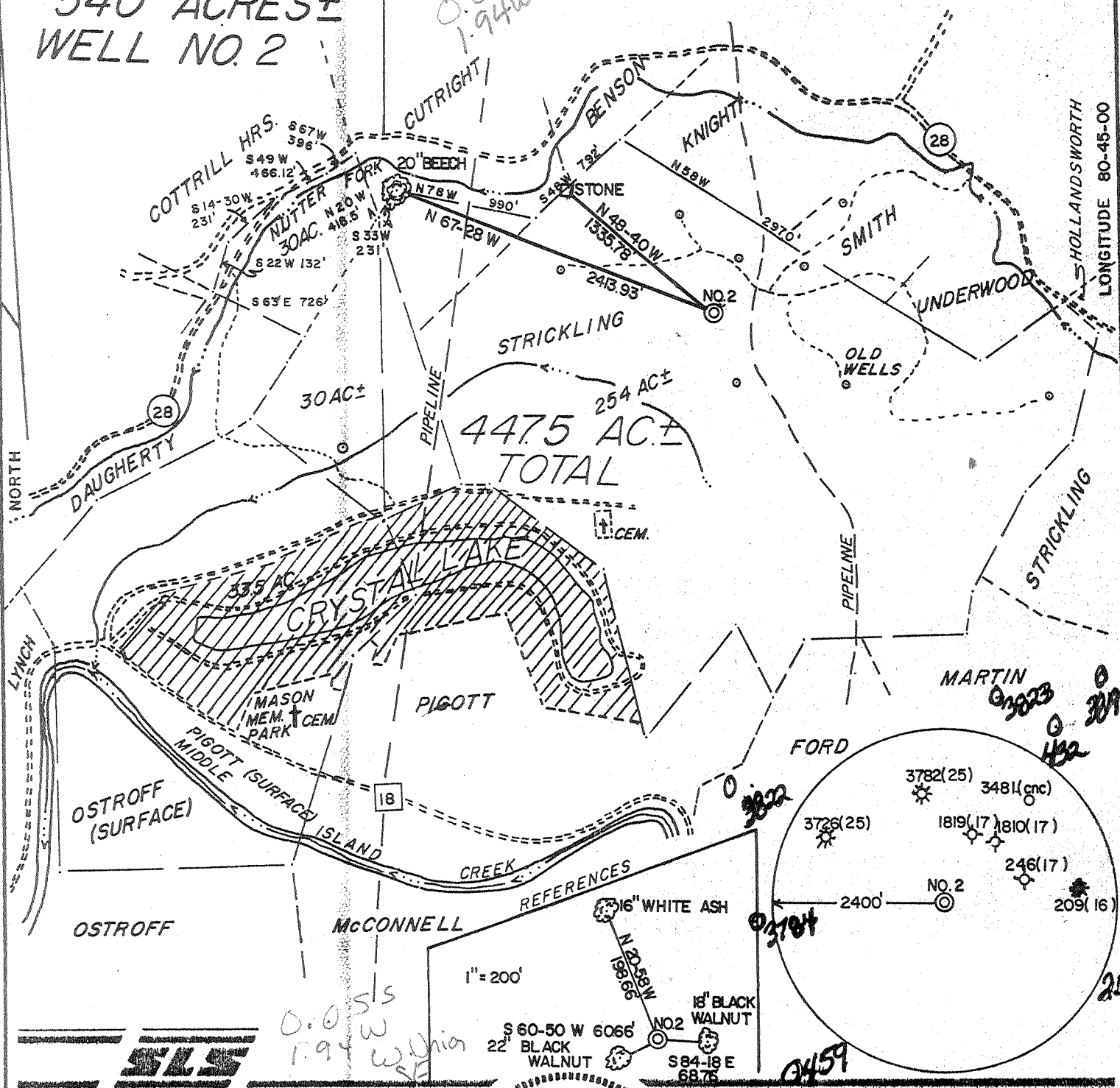


# FREEMAN LEASE 540 ACRES± WELL NO. 2

*Janie 0.055  
1.94W*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS,  
 DATE AUGUST 14, 19 89  
 OPERATORS WELL NO. FREEMAN NO.2  
 API WELL NO. 47 - 017 - 3856  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 2181 (28-64)  
 PROVEN SOURCE OF ELEVATION JUNCTION OF ROAD ELEV. 801' SCALE 1"=1000'

**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENERGY  
**OIL AND GAS DIVISION**

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  "GAS" PRODUCTION  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION 1084' WATERSHED NUTTER FORK  
 DISTRICT WEST UNION COUNTY DODDRIDGE QUADRANGLE WEST UNION 7.5'

SURFACE OWNER EARL STRICKLING ACREAGE 357.75  
 ROYALTY OWNER JOSEPH FREEMAN HEIRS LEASE ACREAGE 357.75 OF 540

PROPOSED WORK: LEASE NO. \_\_\_\_\_  
 DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION   
 PERFORATE NEW FORMATION  PLUG AND ABANDON  CLEAN OUT AND REPLUG  OTHER \_\_\_\_\_  
 PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ TARGET FORMATION BENSON-ALEXANDER  
 ESTIMATED DEPTH 5500'

WELL OPERATOR QUAKER STATE CORP. DESIGNATED AGENT FRANK ROTUNDA  
 ADDRESS 1226 PUTNAM-HOWE DR. BELPRE, OHIO 45714 ADDRESS PO. BOX 823 PARKERSBURG, W.V. 26101

*G.G. Wilbur (092)*

State of West Virginia  
DEPARTMENT OF ENERGY  
Division of Oil and Gas

Reviewed TMG  
Recorded \_\_\_\_\_

Well Operator's Report of Well Work

Farm name: STRICKLING, EARL Operator Well No.: FREEMAN 20 4 91

LOCATION: Elevation: 1084.00 Quadrangle: WEST UNION

District: WESTUNION County: DODDRIDGE  
Latitude: 470 Feet South of 39 Deg. 20Min. 0 Sec.  
Longitude 10300 Feet West of 80 Deg. 45 Min. 0 Sec.

Company: QUAKER STATE CORPORATION  
P.O. BOX 189/1226 PUTNAM HOWE  
BELPRE, OH 45714-0189

Agent: FRANK R. ROTUNDA

Inspector: MIKE UNDERWOOD  
Permit Issued: 10/03/90  
Well work Commenced: 11/08/90  
Well work Completed: 11/25/90  
Verbal Plugging  
Permission granted on: N/A  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth (feet) 5108  
Fresh water depths (ft) 144, 258

Salt water depths (ft) \_\_\_\_\_

Is coal being mined in area (Y/N)? N  
Coal Depths (ft): N/A

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
9"	478'	478'	C.T.S. 155 sx.
7"	1285'	1285'	C.T.S. 205 sx.
4 1/2"	5092'	5092'	200 sx.

OPEN FLOW DATA

Producing formation Benson Pay zone depth (ft) 5016-5020  
Gas: Initial open flow show MCF/d Oil: Initial open flow --- Bbl/d  
Final open flow 80 MCF/d Final open flow --- Bbl/d  
Time of open flow between initial and final tests --- Hours  
Static rock Pressure 1750 psig (surface pressure) after 24 Hours

Second producing formation Riley Pay zone depth (ft) 4566-4608  
Gas: Initial open flow --- MCF/d Oil: Initial open flow --- Bbl/d  
Final open flow commingled MCF/d Final open flow --- Bbl/d  
Time of open flow between initial and final tests --- Hours  
Static rock Pressure --- psig (surface pressure) after --- Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: Frank Rotunda  
QUAKER STATE CORPORATION

By: Frank R Rotunda  
Date: 11/15/91

PERF INFORMATION:

1st stage: perforated in the Benson from 5016' - 5020' with 17 shots, .39 hole  
2nd stage: perforated in the Riley from 4566' - 4608' with 18 shots, .39 hole

FRAC INFORMATION:

1st stage: frac'd with 750 bbl. fluid, 50 sx. 80/100 sand and 400 sx. 20/40 sand, and 146,000 SCF N<sub>2</sub>. Average pressure: 2138 PSI, breakdown at 2100 PSI, average rate: 21 BPM, ISIP: 1650  
2nd stage: frac'd with 171 bbl. fluid, 50 sx. 80/100 and 169 sx. 20/40 sand, and 455,000 SCF N<sub>2</sub>. Average pressure: 2979 PSI, average rate: 20 bbl/foam, ISIP: 2975

LOG INFORMATION:

surface	0 - 30
shale	30 - 310
sand	310 - 390
shale	390 - 595
sand	595 - 650
sand/shale	650 - 860
shale	860 - 1225
sand	1225 - 1250
shale	1250 - 1500
sand with shale	
stringers	1500 - 1662
shale	1662 - 1680
sand	1680 - 1800
shale	1800 - 1970
Big Lime	1970 - 2043
Big Injun	2043 - 2160
shale	2160 - 2306
Weir	2306 - 2404
silt/shale	2404 - 5108

112511



1) Date: September 4, 1990  
2) Operator's well number  
Freeman #2  
3) API Well No: 47 - 017 - 3856  
State - County, - Permit

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

RECEIVED  
Division of Energy  
OCT 0 1 90  
Permitting  
Oil and Gas Section

4) Surface Owner(s) to be served:  
(a) Name Earl Srtickling  
Address Starr Route  
West Union, WV 26456  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Harold Mike Underwood  
Address Rt. 2, Box 114  
Salem, WV 26426  
Telephone (304)-782-1043

5) (a) Coal Operator:  
Name N/A  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name N/A  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name N/A  
Address \_\_\_\_\_

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

\_\_\_\_\_ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR  
XX Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)  
I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_\_\_ on the above named parties, by:  
X Personal Service (Affidavit attached)  
\_\_\_\_\_ Certified Mail (Postmarked postal receipt attached)  
\_\_\_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.  
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.  
I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Quaker State Corporation  
By: Frank Rotunda  
Its: Designated Agent  
Address P.O. Box 823  
Parkersburg, WV 26102  
Telephone (614)423-9543

Subscribed and sworn before me this 26th day of September, 1990

My commission expires \_\_\_\_\_  
Tina J. Russell Notary Public