



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 400'
 MINIMUM DEGREE OF ACCURACY 1/200
 PROVEN SOURCE OF ELEVATION JUNCTION OF ROADS ON PROPERTY ELEV. 770'

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES
 (SIGNED) Gregory A. Smith
 R.P.E. _____ L.L.S. 677

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6 (8-78)



DATE 8 - 30 19 80
 OPERATOR'S WELL NO. 2A
 API WELL NO. 47-085-4935
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION STORAGE _____ DEEP _____ SHALLOW
 LOCATION: ELEVATION 950' WATERSHED OTTERS SLIDE RUN
 DISTRICT UNION 4 562 COUNTY RITCHIE
 QUADRANGLE PULLMAN 7.5 HOLBROOK 15' WC 058
 SURFACE OWNER L.E. & THELMA RICHARDS ACREAGE 56.38
 OIL & GAS ROYALTY OWNER L.E. & THELMA RICHARDS et. al. LEASE ACREAGE 56.38
 LEASE NO. _____
 PROPOSED WORK: DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE _____ PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
 PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION INJUN ESTIMATED DEPTH 2100
 WELL OPERATOR G W F CORPORATION DESIGNATED AGENT BILL K. PAGE
 ADDRESS 6172 BUSCH BLVD. SUITE 2021 ADDRESS 824 LAKEVIEW DRIVE 306-I
COLUMBUS, OHIO 43229 PARKERSBURG, W.V. 26101

RECEIVED
JUL 06 1987



State of West Virginia

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

DEPARTMENT OF ENERGY
Oil and Gas Division

Date JUNE 30, 1987
Operator's _____
Well No. #2-A
Farm L. E. RICHARDS
API No. 47 - 085 - 4935

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil XX / Gas XX / Liquid Injection / Waste Disposal /
(If "Gas," Production XX / Underground Storage / Deep / Shallow XX /)

LOCATION: Elevation: 950' Watershed OTTERSLIDE CREEK
District: UNION County RITCHIE Quadrangle PULLMAN 7.5'

COMPANY G.W.F. CORPORATION

ADDRESS 6172 BUSCH BLVD. SU 3003 COLUMBUS, OH 43229

DESIGNATED AGENT BILL KNIGHT

ADDRESS RT. #1, BOX 44C, BURNSVILLE, WV 26335

SURFACE OWNER L. E. RICHARDS

ADDRESS RT. #1, BOX 71, BEREA, WV 26327

MINERAL RIGHTS OWNER L. E. OR THELMA RICHARDS

ADDRESS RT. #1, BOX 71, BEREA, WV 26327

OIL AND GAS INSPECTOR FOR THIS WORK SAM

HERSHMAN ADDRESS PO BOX 66, SMITHVILLE, WV 26178

PERMIT ISSUED 9/30/80

DRILLING COMMENCED 10/27/80

DRILLING COMPLETED 10/31/80

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED CN

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"			
9 5/8			
8 5/8	429'	429'	50 sks.
7			
5 1/2			
4 1/2		2030'	60 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION INJUN Depth 1937-1972 feet

Depth of completed well 2030' feet Rotary XX / Cable Tools _____

Water strata depth: Fresh _____ feet; Salt _____ feet

Coal seam depths: _____ Is coal being mined in the area? NO

OPEN FLOW DATA

Producing formation INJUN Pay zone depth 1937-1972 feet

Gas: Initial open flow 5 Mcf/d Oil: Initial open flow 1 Bbl/d

Final open flow 25' Mcf/d Final open flow 3 Bbl/d

Time of open flow between initial and final tests 6 hours

Static rock pressure 660 psig (surface measurement) after 12 hours shut in
(If applicable due to multiple completion--)

Second producing formation _____ Pay zone depth _____ feet

Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d

Final open flow _____ Mcf/d Oil: Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ hours

Static rock pressure _____ psig (surface measurement) after _____ hours shut in

AUG 03 1987

(Continue on reverse side)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

INJUN FRACED W/540 BBLs WATER, 30 M# SAND, BREAKDOWN 2100 PSI., TREATED 1800 PSI.
 SHUT IN 1600 PSI. PERFED 1937-1972

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DIVISION OF OIL & GAS
 DEPARTMENT OF ENERGY

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
SAND			430	449	
RED ROCK			449	462	
SLATE			462	472	
RED ROCK			472	523	
SAND			523	535	
RED ROCK			535	547	
SAND			547	574	
SLATE			574	620	
RED ROCK			620	637	
SAND			637	660	
SAND & SLATE			660	665	
RED ROCK			665	680	
SAND			680	692	
RED ROCK			692	740	
SLATE			740	849	
RED ROCK			849	950	
SHALE			950	1000	
SAND			1000	1029	
RED ROCK			1029	1048	
SAND			1048	1110	
SLATE			1110	1141	
SAND			1141	1176	
SLATE			1176	1196	
RED ROCK			1196	1235	
SAND			1235	1265	
SLATE			1265	1350	
SAND			1350	1429	
SLATE			1429	1483	
SAND			1483	1525	
SLATE			1525	1607	
SAND			1607	1640	
SHALE			1640	1722	
SAND			1722	1752	
SHALE			1752	1815	
SAND			1815	1825	
SLATE			1825	1834	
SAND			1834	1850	
LIME			1850	1937	
SAND ^{Injun}			1937	1972	O&G SHOW
SHALE			1972	2030	(Attach separate sheets as necessary)
				2030 T.D.	

G. W. F. CORPORATION

Well Operator

By:

Connie Paul V.P.

Date:

6-30-87

Note: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OIL & GAS DIVISION

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

RECEIVED
SEP 25 1980

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

Surface Owner L. E. Richards
Address _____
Mineral Owner L. E. Richards
Address _____
Coal Owner L. E. Richards
Address _____
Coal Operator None
Address _____

DATE September 11, 1980
Company G.W.F. Corporation
Address 6172 Busch Blvd., Columbus, OH.
Farm L. E. Richards Acres 56 AC.
Location (waters) _____
Well No. 2-A Elevation 770'
District Union County Ritchie
Quadrangle Pullman 7.5'

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 5-26-81.

Fred Broughton
Deputy Director - Oil & Gas Division

INSPECTOR
TO BE NOTIFIED Paul Goodnight
ADDRESS _____
PHONE 477-3660

GENTLEMEN:

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 _____ 19__ by D.W.W. HARDMAN D.B.A. DRILCO made to G.W.F. Corporation and recorded on the _____ day of _____ 19__, in RITCHIE County, Book 130 Page 349

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.

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND
ECONOMIC SURVEY
P. O. BOX 879
MORGANTOWN, WEST VIRGINIA 26505
AC-304 - 292-6331

Address
of
Well Operator

Very truly yours, G.W.F. CORPORATION
(Sign Name) Murphy W. Puckey, agent
Well Operator
6172 Busch Blvd.
Street
Columbus
City or Town
Ohio 43229
State

*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 BOND

47-085-4935

PERMIT NUMBER

"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 Murphy W. Puckey, agent

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 _____ NAME B. K. Page
ADDRESS _____ ADDRESS 824 Lakeview Dr., Parkersburg, W. Va.
TELEPHONE _____ TELEPHONE 422-6891
ESTIMATED DEPTH OF COMPLETED WELL: 2100' ROTARY X CABLE TOOLS _____
PROPOSED GEOLOGICAL FORMATION: Injun
TYPE OF WELL: OIL _____ GAS _____ COMB. X 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			
13 - 10			
9 - 5/8			
8 - 5/8	200'	200'	Surface
7			
5 1/2			
4 1/2	2100'	2100'	50 SKS.
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS _____ FEET _____ SALT WATER _____ FEET _____
APPROXIMATE COAL DEPTHS _____
IS COAL BEING MINED IN THE AREA? _____ 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.

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