



FILE NO. _____
 MAP 24 SQS S31-2 W 24
 SCALE 1" = 800'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION Forks of roads SE of location, El. 1071

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) Bernard B. Bowser
 BERNARD B. BOWSER REG. NO 1964

PLACE SEAL HERE

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



DATE July 24, 1982
 FARM M. RADABAUGH NO. 3
 API WELL NO. _____
47 - 013 - 3467
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION ___ STORAGE X DEEP X SHALLOW ___
 LOCATION: ELEVATION 1140 WATER SHED Yellow Creek
 DISTRICT Sherman COUNTY Calhoun
 QUADRANGLE Grantsville 7.5' Arnoldsburg 15' NE
 SURFACE OWNER CHLDE ROBERTS, ET AL ACREAGE 266
 OIL & GAS ROYALTY OWNER Radabaugh Hrs. ET AL LEASE ACREAGE 266
 LEASE NO. _____

PROPOSED WORK: DRILL X 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 ___ DEEP WELL 3-3 Grantsville-Oriskany
 TARGET FORMATION Oriskany ESTIMATED DEPTH 6000'
 WELL OPERATOR BOWSER GAS & OIL CO DESIGNATED AGENT BERNARD B. BOWSER
 ADDRESS 7 FAIRVIEW HTS. PARKERSBURG, W.V. 26101 ADDRESS 7 FAIRVIEW HTS. PARKERSBURG, W.V. 26101
 SEP 17 1982 (171)

FORM IV-35
(Obverse)

Operator's Well No. 3

[08-74]

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

API Well No. 47-013-346
State County Perm

WELL TYPE: Oil X / Gas X / Liquid Injection ___ / Waste Disposal ___
(If "Gas", Production ___ / Underground storage ___ / Deep X / Shallow ___ /)
LOCATION: Elevation: 1140 Watershed: Yellow Creek
District: Center County: Calhoun Quadrangle: Grantsville 7.5'

WELL OPERATOR Bowser Gas & Oil Company DESIGNATED AGENT Bernard B. Bowser
Address #7 Fairview Hgts. Address #7 Fairview Hgts.
Parkersburg, WV 26101 Parkersburg, WV 26101

PERMITTED WORK: Drill X / Convert ___ / Drill deeper ___ / Redrill ___ / Fracture or stimulate ___
Plug off old formation ___ / Perforate new formation ___
Other physical change in well (specify) _____

PERMIT ISSUED ON September 7, 1982

OIL & GAS INSPECTOR FOR THIS WORK:

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

Name Deo Mace
Address Rt. 1, Box 5
Sandridge, WV 25274

GEOLOGICAL TARGET FORMATION: Oriskany Depth 6700 feet
Depth of completed well, 6637 feet Rotary X / Cable Tools ___
Water strata depth: Fresh, 200 feet; salt, ___ feet
Coal seam depths: 1761 to 1866 Is coal being mined in the area? No coal in area.
Work was commenced Sept. 15, 1982, 19___, and completed Sept. 23, 1982

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft	New	Used	For drilling	Left in well		
Conductor									Kinds
Fresh water	12-3/4		50		X		300	300	
Coal									Sizes
Intermediate	8-5/8	H40	24	X			2520	920	
Production	5 1/2	N80	14	X			6637	120	Depths set
Tubing									
Liners									Perforations:
									Top Bottom

OPEN FLOW DATA

Producing formation Oriskany Pay zone depth 6459-6529 feet

Gas: Initial open flow, - Mcf/d Oil: Initial open flow, - Bbl/d

Final open flow, 78 Mcf/d Final open flow, show Bbl/d and wa

Time of open flow between initial and final tests, - hours

Static rock pressure, 2200 psig (surface measurement) after - hours shut in

[If applicable due to multiple completion--]

Second producing formation Shale Pay zone depth 3432-3590 feet

Gas: Initial open flow, show Mcf/d Oil: Initial open flow, - Bbl/d

Final open flow, 750 Mcf/d Final open flow, 11 Bbl/d

Time of open flow between initial and final tests, - hours

Static rock pressure, 775 psig (surface measurement) after - hours shut in

PDF
828 MCF
1180

MAY 7 1984

(Reverse)

[08-78]

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

Oct. 25, 1982: Perforated Oriskany 6459'-6529' with ten holes fractured. 500 gal. 25% HCL -40 lb. Gel system. 30,000# sand.

Feb. 7, 1983: Set 5 1/2" Bridge Plug at 6030 - Per 5480-5482 Rhinestreet

Feb. 14, 1983: Squeeze 500 sks. 50-50 P02, 1st stage - Per 4026', 4046', 4494'-4502', Huron 4516' and 4521' - 21 holes.

Fractured 700 Mcf N₂ - 500 Gel. - 15% HCL

1983 - Set 5 1/2 Bridge Plug at 3650 2nd stage - Perforated 3471'-3474', 3487', 3590' - 3607' 22 holes.] up Dev Huron undiff

Fractured - 700 Mcf N₂ 500 Gel-15 HCL

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Salt & Sand			1683	1738	
Coal			1761	1763	
Coal			1835	1836	
Coal			1865	1866	
Maxton Sand			1891	1916	
Little Lime			1952	1966	
Big Lime			1996	2038	
Big Injun			2038	2134	
Berea Sand			2471	2494	
"Gordon Sand"			2648		
Fifth Sand?			2827	2830	
Riley?			4472	4476	
Benson?			4777	4787	
Alexander			5000	5042	JAVA
Sycamore			5405	5443	
Marcellus			6182	-	
Onondaga Lime			6248	-	
Oriskany Sandstone			6460	6531	U.D. ~ 2494
Helderberg Ls			6531	-	H ~ 3622
T. D. (Logger's)			6637	-	J ~ 4778
					A ~ 4964
					R ~ 5396
					C.S. ~ 5914
					M.S. 6637 6074
					6248 6100
					W.P. ~ 6148
					G - 389. ex 01 ftg
					MARC - 6182

(Attach separate sheets to complete as necessary)

Bowser Gas & Oil Company
Well Operator

By Bernard B. Bowser
Its President

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."



Date: August 2, 19 82

Operator's Well No. 3 3467

API Well No. 47 ~~031~~ 013

State County Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OIL AND GAS DIVISION
OIL AND GAS WELL PERMIT APPLICATION

WELL TYPE: Oil / Gas X /
(If "Gas", Production X / Underground storage / Deep X / Shallow /)

LOCATION: Elevation: 1140 Watershed: Yellow Creek
District: Sherman County: Calhoun Quadrangle Grantsville 7.5

WELL OPERATOR Bowser Gas & Oil Company DESIGNATED AGENT Bernard B. Bowser
Address #7 Fairview Hgts. Address #7 Fairview Hgts.
Parkersburg, WV 26101 Parkersburg, WV 26101

OIL & GAS ROYALTY OWNER Chloe Roberts, et al
Address Rt. 1, Harrisville, WV 26362

COAL OPERATOR No Coal
Address

Acreage 266

COAL OWNER(S) WITH DECLARATION ON RECORD:
Name No Coal

SURFACE OWNER Chloe Roberts, et al
Address Rt. 1, Harrisville, WV 26362

Address

Acreage -

Name

FIELD SALE (IF MADE) TO:
Address

Address

OIL & GAS INSPECTOR TO BE NOTIFIED
Name Deo Mace
Address Rt. 1, Box 5
Sandridge, WV 25274

COAL LESSEE WITH DECLARATION ON RECORD:
Name No Coal
Address

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed / lease X
other contract / dated March 19, 19 82, to the undersigned well operator from Chloe Roberts, et al

(If said deed, lease, or other contract has been recorded:)

Recorded on July 8, 19 82, in the office of the Clerk of the County Commission of Calhoun County, West Va., in Lease Book 081 pages 315, 317, 319, 321, 323, 325, 327, 329, 331, 333, 335, 337 at page . A permit is requested as follows:

PROPOSED WORK: Drill X / Drill deeper / Redrill / Fracture or stimulate /
Plug off old formation / Perforate new formation /
Other physical change in well (specify)

—planned as shown on the work order on the reverse side hereof.

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code §22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the Department. No Coal

Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:
WEST VIRGINIA OIL AND GAS CONSERVATION COMMISSION
1615 WASHINGTON STREET EAST CHARLESTON, WV 25311
TELEPHONE: (304) 348-3092

RECEIVED
AUG 06 1982
OIL & GAS DIVISION
DEPT. OF MINES

BOWSER GAS & OIL COMPANY
Well Operator
By Bernard B. Bowser
Its President

(12-81)

PROPOSED WORK ORDER

Marion Radabaugh #3

THIS IS AN ESTIMATE ONLY:
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

RECEIVED
AUG 05 1982
OIL & GAS DIVISION
DEPT. OF MINES

DRILLING CONTRACTOR (IF KNOWN) _____
Address _____

GEOLOGICAL TARGET FORMATION, Hamilton Limestone

Estimated depth of completed well, 6000 feet Rotary X / Cable tools _____
Approximate water strata depths: Fresh, 50 feet; salt, 1400 feet.
Approximate coal seam depths: No Coal Is coal being mined in the area? Yes _____ / No X /

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft	New	Used	For drilling	Left in well		
Conductor									Kinds
Fresh Water	11-3/4			X		250'	250'	250'	
Coal	No Coal								Sizes
Intermediate	8-5/8		24	X		2500	2500	400'	
Production	5-1/2	J55	17	X		6000	6000		Depths set
Tubing	2-3/8			X					
Liners									Perforations:
									Top Bottom

NOTE: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code § 22-4-12e, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.

THIS PERMIT MUST BE POSTED AT THE WELL SITE
ALL PERMITS MUST BE ISSUED IN ACCORDANCE WITH CHAPTER 22,
ARTICLE 4 OF THE W. VA. CODE, THE LOCATION IS HEREBY
APPROVED FOR drilling. THIS PERMIT SHALL EXPIRE
OPERATIONS SHALL BE COMPLETED BY 5-9-83

[Signature]

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code 22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof.

No Coal WAIVER

The undersigned coal operator _____ / owner _____ / lessee _____ / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: _____, 19 _____

By _____
Its _____