

REFERENCE TIE LINES

PROPOSED WELL TO 10" TWIN ASH S24°44'W 96.8'  
 PROPOSED WELL TO 4" WALNUT N88°16'W 156.2'

FILE NO. MSES85-633

DRAWN BY TAL

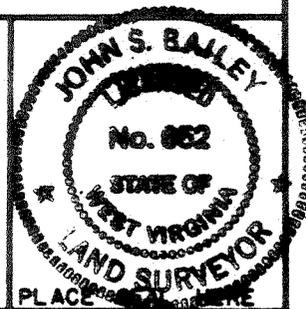
SCALE 1" = 500'

MINIMUM DEGREE OF ACCURACY 1 IN 200

PROVEN SOURCE OF ELEVATION JCT. CO. RTS. 22 & 28 EL. 801' 3500 SW OF LOCATION

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) John S. Bailey  
 R. P. E. \_\_\_\_\_ L. L. S. 652



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FORM IV-6  
(8-78)



Department of Mines  
Oil & Gas Division

DATE APRIL 11, 19 85  
 OPERATOR'S WELL NO. SPENCER NO. 2  
 API WELL NO. 47-017-3434  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS", PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X)

LOCATION: ELEVATION 871.7' WATER SHED WOLFPEN RUN

DISTRICT WEST UNION 8 COUNTY DODDRIDGE

QUADRANGLE WEST UNION 7.5' 1961 (1976) 671 133 EC 6

SURFACE OWNER CLIFFORD H. & SUSAN M. KRAFT ACREAGE 71.5

OIL & GAS ROYALTY OWNER CLIFFORD H. & SUSAN M. KRAFT LEASE ACREAGE 71.5

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 \_\_\_\_\_

TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5230'

WELL OPERATOR Quaker State Oil Refining Corporation DESIGNATED AGENT Samuel Barber

ADDRESS P.O. BOX 1327 721 PARKERSBURG, WV 26101 ADDRESS P.O. BOX 1327 PARKERSBURG, WV 26101

**RECORDED**  
DEPARTMENT OF ENERGY  
OIL AND GAS



IV-35  
(Rev 8-81)

FEB 13 1986

State of West Virginia  
Department of Mines  
Oil and Gas Division

Date August 14, 1985  
Operator's  
Well No. #2  
Farm SILAS SPENCER  
API No. 47 - 017 - 3434

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

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

LOCATION: Elevation: 871.7' Watershed Wolfpen Run  
District: West Union County Doddridge Quadrangle West Union 7.5'

COMPANY QUAKER STATE OIL REFINING CORPORATION

ADDRESS P.O. Box 1327; Parkersburg, WV 26101

DESIGNATED AGENT Samuel F. Barber

ADDRESS P.O. Box 1327; Parkersburg, WV 26101

SURFACE OWNER Clifford & Susan Kraft

ADDRESS Otto Star Route, Box 117-E; Spencer, WV 25276

MINERAL RIGHTS OWNER Silas Smith, et ux

ADDRESS RFD #2; West Union, WV 26456

OIL AND GAS INSPECTOR FOR THIS WORK \_\_\_\_\_

Mike Underwood ADDRESS Rt. 2, Box 114; Salem, WV 26426

PERMIT ISSUED June 05, 1985

DRILLING COMMENCED July 08, 1985

DRILLING COMPLETED July 17, 1985

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

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	203'	203'	145 sx
9 5/8			
8 5/8	1729'	1729'	395 sx
7			
5 1/2			
4 1/2	4949'	4949'	225 sx
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Alexander Depth 5108 feet

Depth of completed well 5243' feet Rotary xx / Cable Tools \_\_\_\_\_

Water strata depth: Fresh \_\_\_\_\_ feet; Salt \_\_\_\_\_ feet

Coal seam depths: N/A Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Benson Pay zone depth 4827-4832 feet

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

Final open flow 60 Mcf/d 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  
(If applicable due to multiple completion--)

Second producing formation Riley Pay zone depth 4385-4431 feet

Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow Co-mingled 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

(Continue on reverse side)

FEB 24 1986

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

Perforated from <sup>Benson</sup> 4839-4843 w/ 9 shots; <sup>Riley</sup> 4397-4406' w/ 19 shots.

Fractured w/ 640 bbls 75% N<sub>2</sub>; 350 sx 20/40 sand. Breakdown @ 2600 PSI.  
Treated @ 3000 PSI. Avg. rate @ 12 BPM. I.S.I.P @ 2850 PSI.

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 & shale			0	1010	
Salt Sands			1010	1648	Salt water
Shale			1648	1738	
Little Lime			1738	1759	
Shale			1759	1782	
Big Lime			1782	1871	
Keener			1871	1912	Gas
Shale			1912	1921	
Big Injun <sup>CR &amp; PO</sup>			1921	1966	Gas
Shale			1966	2109	
Weir			2109	2199	Gas
Shale			2199	2308	
Berea			2308	2324	Gas (slight)
Shale			2324	2526	
Gordon			2526	2552	Gas
Shale			2552	3171	
Warren			3171	3230	Gas (slight)
Shale			3230	4385	
Riley			4385	4431	Gas
Shale			4431	4827	
Benson			4827	4832	Gas
Shale			4832	5109	
Alexander			5109	5151	
Shale			5151	5243	TOTAL DEPTH

(Attach separate sheets as necessary)

OUAKER STATE OIL REFINING CORPORATION  
Well Operator

By: Jeffrey Hill, Geologist *Jeffrey S. Hill*

Date: August 14, 1985

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."

**RECEIVED**  
FILE COPY

MAY 16 1985



1) Date: May 9, 1985  
 2) Operator's Well No. SILAS SPENCER #2  
 3) API Well No. 47 - 017- 3434  
 State County Permit

STATE OF WEST VIRGINIA  
 OIL & GAS DIVISION DEPARTMENT OF MINES, OIL AND GAS DIVISION  
**DEPT. OF MINES APPLICATION FOR A WELL WORK PERMIT**

- 4) WELL TYPE: A Oil        / Gas XX /  
 B (If "Gas", Production XX / Underground storage        / Deep        / Shallow XX /)
- 5) LOCATION: Elevation: 871.7' Watershed: Wolfpen Run 670  
 District: West Union 8 County: Doddridge Quadrangle: West Union 7.5'
- 6) WELL OPERATOR QUAKER STATE OIL REFINING CORP. 7) DESIGNATED AGENT SAMUEL J. BARBER  
 Address P.O. Box 1327 Address P.O. Box 1327  
Parkersburg, WV 26101 Parkersburg, WV 26101
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:  
 Name Harold Mike Underwood Name Lee Smith Drilling  
 Address Route 2, Box 114 Address P.O. Box 150  
Salem, WV 26426 (304) 782-1043 Lawrenceville, IL 62439
- 10) PROPOSED WELL WORK: Drill XX / Drill deeper        / Redrill        / Stimulate         
 Plug off old formation        / Perforate new formation         
 Other physical change in well (specify)
- 11) GEOLOGICAL TARGET FORMATION, Alexander 439
- 12) Estimated depth of completed well, 5230' feet  
 13) Approximate strata depths: Fresh, 141' feet; salt, 397' feet.  
 14) Approximate coal seam depths: 375' Is coal being mined in the area? Yes        / No XX /

15) 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	8 5/8"	H-40	20	X		974'	974'	C.T.S.	
Coal									Sizes
Intermediate									
Production	4 1/2"	J-55	9.5	X		5230'	5230'	400 SX OR AS REQUIRED BY	
Tubing	2"	J	4.5	X		--	5230'	RULE 15:01	
Liners									Perforations: Top Bottom
<b>PIT LINER TO BE USED</b>									

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-017-3434

June 5 19 85

Date

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector, (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires June 5, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>123</u>	Agent: <input checked="" type="checkbox"/>	Plat: <u>MU</u>	Casing <u>MU</u>	Fee <u>13030</u> <del>13027</del>
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*Margaret J. Hasse*  
 Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

File