



FILE NO. 8400-26
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1" IN 2000'
 PROVEN SOURCE OF ELEVATION EL. 815.5 FROM USGS
 TOPO. MAP @ INTERSECTION OF GOBBY RUN & 1ST. RIGHT FORK OF GOBBY RUN

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) J Bruce Jason
 R.P.E. _____ L.L.S. 577

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE JUNE 15, 19 84
 OPERATOR'S WELL NO. W.F. SMITH NO. 4
 API WELL NO. 47-017-3344
 STATE COUNTY PERMIT

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WELL TYPE: OIL GAS _____ LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION _____ STORAGE _____ DEEP _____ SHALLOW _____
 LOCATION: ELEVATION 827.1' WATER SHED GOBBY RUN OF NUTTER FORK OF MIDDLE ISLAND CREEK
 DISTRICT WEST UNION COUNTY DODDRIDGE
 QUADRANGLE WEST UNION 7.5' 171 + 15' EC 6 132
 SURFACE OWNER KERMIT & NELLIE BENSON ACREAGE 246.7
 OIL & GAS ROYALTY OWNER W.F. SMITH ET AL LEASE ACREAGE 360
 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 ALEXANDER 231 ESTIMATED DEPTH 5200'
 WELL OPERATOR QUAKER STATE OIL RECORDS DESIGNATED AGENT CARL J. CARLSON
 ADDRESS P.O. BOX 1327 ADDRESS P.O. BOX 1327
PARKERSBURG, W.V. 26101 6-6 Wilbur (92) PARKERSBURG, W.V. 26101

H. T. HALL & SONS
 FORM IV-6 (8-78)

JUN 20 1984



State of West Virginia
Department of Mines
Oil and Gas Division

Date OCTOBER 15, 1984
Operator's
Well No. W.F. SMITH #4
Farm W.F. SMITH, et al
API No. 47 - 017 - 3344

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 ___ / Underground Storage ___ / Deep ___ / Shallow ___ /)

LOCATION: Elevation: 827' Watershed GORBY RUN OF NUTTER FORK OF MIDDLE ISLAND CREEK
District: WEST UNION County DODDRIDGE Quadrangle WEST UNION

COMPANY QUAKER STATE OIL REFINING CORP.
ADDRESS P.O. BOX 1327; PARKERSBURG, WV 26101
DESIGNATED AGENT CARL J. CARLSON
ADDRESS P.O. BOX 1327; PARKERSBURG, WV 26101
SURFACE OWNER KERMIT & NELLIE BENSON, RT. 2
ADDRESS WEST UNION, WV 26456
MINERAL RIGHTS OWNER W.F. SMITH, et al
ADDRESS c/o UNION NAT'L BANK; P.O. BOX 1450
OIL AND GAS INSPECTOR FOR THIS WORK CLARKSBURG, WV VA 26302
MIKE UNDERWOOD ADDRESS RT 2, BOX 114; SALEM, WV
PERMIT ISSUED AUGUST 15, 1984 26426
DRILLING COMMENCED SEPTEMBER 12, 1984
DRILLING COMPLETED SEPTEMBER 18, 1984
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"	---	30'	---
9 5/8			
8 5/8	926'	926'	130 SX
7			
5 1/2			
4 1/2	4920'	4920'	430 SX
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION ALEXANDER Depth 5030-5095 feet
Depth of completed well 5311 feet Rotary XX / Cable Tools _____
Water strata depth: Fresh N/A feet; Salt N/A feet
Coal seam depths: N/A Is coal being mined in the area? NO

OPEN FLOW DATA

Producing formation BENSON/RILEY Pay zone depth 4758/4308 feet
Gas: Initial open flow 500 Mcf/d Oil: Initial open flow N/A Bbl/d
Final open flow 100 Mcf/d Final open flow N/A Bbl/d
Time of open flow between initial and final tests 8 hours
Static rock pressure 2100 psig (surface measurement) after 72 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

NOV 19 1984 (Continue on reverse side)

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

PERFORATED BENSON FROM 4758 - 4764' WITH 18 SHOTS. FRACTURED WITH 484 BBLs, 25# GEL + N₂, 400 SX 20/40 SAND. BREAKDOWN @ 2100#. TREATED @ 2500#. AVG. RATE 21 BPM. ISIP 1600#. 5 MIN. 1425#.

PERFORATED RILEY FROM 4308 - 4346' WITH 50 SHOTS. FRACTURED W/ 300 BBLs. 15% HCl & N₂, 100 SX 20/40 SAND. BREAKDOWN @ 2400#. TREATED @ 2600#. AVG. RATE 36 BPM. ISIP 3550#.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
SHALE			0	245	
SAND			245	265	
SHALE AND SILT			265	362	
SAND			362	400	
SHALE AND SILT			400	1007	
SAND			1007	1025	
SILT AND SHALE			1025	1267	
SAND			1267	1370	
SHALE			1370	1433	
SAND			1433	1551	
SILT AND SHALE			1551	1679	
LITTLE LIME			1679	1699	
BIG LIME			1699	1792	
BIG INJUN			1792	1891	
SHALE			1891	2046	
WEIR			2046	2142	
SHALE			2142	2253	
BEREA			2253	2257	
SHALE			2257	2446	
GORDON			2446	2501	BROKEN
SHALE			2501	2669	
5th SAND			2669	2676	
SHALE			2676	3125	
WARREN			3125	3180	
SHALE			3180	3699	
SPEECHLEY			3699	3704	
SHALE			3704	4308	
RILEY			4308	4353	
SHALE			4353	4757	
BENSON			4757	4762	
SHALE			4762	5030	
ALEXANDER			5030	5095	
SHALE			5095	5311	L.T.D.

(Attach separate sheets as necessary)

QUAKER STATE OIL REFINING CORPORATION
 Well Operator
Michael C. Brannock
 By: MICHAEL C. BRANNOCK
 Date: OCTOBER 15, 1984

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

JUL 26 1984



1) Date: July 23, 1984
 2) Operator's Well No. W.F. SMITH #4
 3) API Well No. 47-017-3344
 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
 B (If "Gas", Production Underground storage Deep Shallow)
 5) LOCATION: Elevation: 827.1 Watershed: Gorby Run of Nutter Fork of Middle Island Creek
 District: West Union County: Doddridge Quadrangle: West Union 7.5
 6) WELL OPERATOR QUAKER STATE OIL REF. CORP. 7) DESIGNATED AGENT Carl J. Carlson
 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 Smith Drilling
 Address Route 2, Box 114 Address P.O. Box 150
Salem, WV 26426 Lawrenceville, IL 62439
 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate
 Plug off old formation / Perforate new formation
 Other physical change in well (specify) _____
 11) GEOLOGICAL TARGET FORMATION, Alexander
 12) Estimated depth of completed well, 5200 feet
 13) Approximate trata depths: Fresh, 30 feet; salt, 175 ? feet.
 14) Approximate coal seam depths: 360 Is coal being mined in the area? Yes / No

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	H40	24	X		390	390	c.t.s.	<u>NEAT</u>
Coal									Sizes
Intermediate									
Production	4 1/2	J55	9.5	X		5200	5200	250 sx cmt.	Depths set
Tubing	2	J	4.5	X			5200		<u>or as required by</u>
Liners									<u>Perforate to 15.01</u>
									Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-017-3344 Date August 15, 1984

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 August 15, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>123</u>	Agent: <u>mw</u>	Plat: <u>mp</u>	Casing: <u>mw</u>	Fee: <u>11225</u>
<u>Blanket</u>				

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