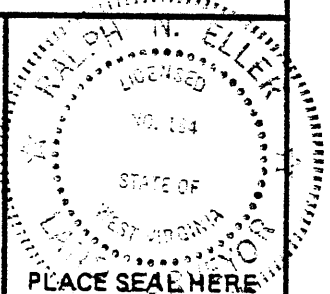


FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1/2500
 PROVEN SOURCE OF ELEVATION B.M. R-138
823'

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) Ralph N. Eller
 R.P.E. _____ L.L.S. No. 184



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

WELL TYPE: OIL GAS _____ LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION _____ STORAGE _____ DEEP _____ SHALLOW _____
 LOCATION: ELEVATION 1430' WATER SHED BUFFALO RUN
 DISTRICT GRANT COUNTY WETZEL
 QUADRANGLE PINE GROVE Littleton SC 15
 SURFACE OWNER LEWIS WETZEL HUNTING GROUND ACREAGE 5228.50
 OIL & GAS ROYALTY OWNER MILLS WETZEL LANDS INC. LEASE ACREAGE 5228.50
 LEASE NO. W-195

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 GORDON ESTIMATED DEPTH 3400
 WELL OPERATOR QUAKER STATE OIL REF. CORP. DESIGNATED AGENT CARL J. CARLSON
 ADDRESS P.O. Box # 1327 ADDRESS P.O. Box # 1327
PARKERSBURG, W.VA. 26101 PARKERSBURG, W.VA. 26101

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

DATE FEB. 28, 1981
 OPERATOR'S WELL NO. 156
 API WELL NO. 47 - 103 - 1226
 STATE COUNTY PERMIT

[08-79,

WELL OPERATOR'S REPORT

Operator's
Well No. J. MILLS, JR. #156

OF
DRILLING, FRACTURING AND/OR STIMULATION, OR PHYSICAL CHANGE

API Well No. 47 - 103 - 122
State County Perm

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

LOCATION: Elevation: 1430 Watershed: Buffalo Run
District: Grant County: Wetzel Quadrangle: Pine Grove 7.5'

WELL OPERATOR QUAKER STATE OIL REFG. CORP.
Address P.O. Box 1327
Parkersburg, WV 26102-1327

DESIGNATED AGENT Carl J. Carlson
Address P.O. Box 1327
Parkersburg, WV 26102-1327

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

PERMIT ISSUED ON March 30, 1981

OIL & GAS INSPECTOR FOR THIS WORK:

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

Name Phillip L. Tracy

Address Rt. #3

Alma, WV 26320

GEOLOGICAL TARGET FORMATION: Gordon Depth 3254 - 3304 feet

Depth of completed well, 3385 feet Rotary XX / Cable Tools

Water strata depth: Fresh, na feet; salt, 1816 feet.

Coal seam depths: na Is coal being mined in the area? no

Work was commenced 7/13/81, 19 , and completed 7/18/81, 19

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		
Conductor								Kinds
Fresh water	8 5/8	J-55	20	xx		393'	393	125 cu. ft.
Coal								Sizes
Intermediate								
Production	4 1/2	K-55	9.5	xx		3362	3362	500 sx
Tubing								Deaths set
Liners								Perforations:
								Top Bottom

OPEN FLOW DATA

Producing formation Gordon Pay zone depth 3254 - 3304 feet

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

Final open flow, 6 Mcf/d Final open flow, 10 Bbl/d

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

Static rock pressure, 250 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 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

SEP 28 1981

08-78]

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.
Perforated from 3260 to 3290 with 31 shots.

Frac'd with 780 bbl. water and 28,000# of 20/40 sand.

Breakdown at 2000 psi, treated at 2325 psi and 34.8 BPM. I.S.I. 1900 psi.

WELL LOG

FORMATION	Color	Hard or Soft	Feet		Remarks Including indication of all fresh and salt water, coal, oil and gas
			Top	Bottom	
Shale			0	1005	
Sandstone			1005	1064	
Shale			1064	1163	
Sandstone			1163	1184	
Shale			1184	1273	
Sandstone			1273	1305	
Shale & Siltstone			1305	1686	
Sandstone			1686	1711	
Shale			1711	1766	
Sandstone & Shale			1766	1816	
Salt Sands			1816	2216	
Shale			2216	2386	
Little Lime			2386	2398	
Pencil Cave			2398	2415	
Big Lime			2415	2483	
Big Injun			2483	2684	
Shale			2684	3241	
Gordon Stray			3241	3243	
Shale			3243	3254	
Gordon			3254	3304	
Shale			3304	4485 D.T.D.	

(Attach separate sheets to complete as necessary)

QUAKER STATE OIL REFINING CORPORATION
Well Operator
By Michael C. Brannock
Trs Michael C. Brannock - Sr. Geologist

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."