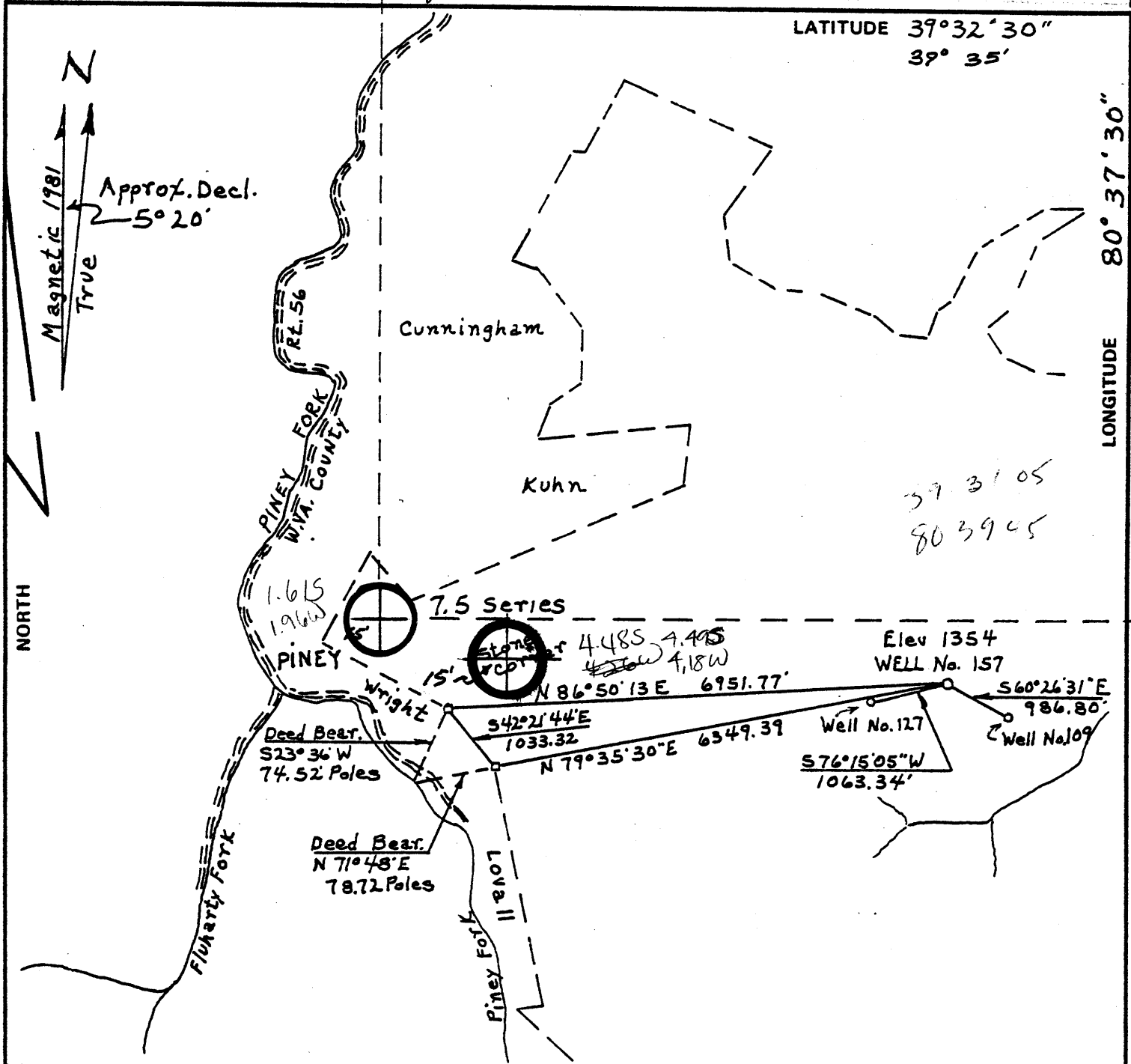


LATITUDE 39°32'30"
39° 35'

LONGITUDE 80° 37' 30"



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1/2500
 PROVEN SOURCE OF ELEVATION BM 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

PLACE SEAL HERE

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



DATE March 4 1981
 OPERATOR'S WELL NO. 157
 API WELL NO. _____
47 - 103 - 1227
 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 1354 WATER SHED BUFFALO RUN
 DISTRICT GRANT COUNTY WETZEL
 QUADRANGLE PINE GROVE Littleton 1 S 3 C
 SURFACE OWNER LEWIS WETZEL HUNTING GROUND ACREAGE 5228.50
 OIL & GAS ROYALTY OWNER MILLS WETZEL LAND 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 3270
 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

FORM IV-35
(Obverse)

Operator's Well No. J. MILLS, JR. #157

[08-78]

WELL OPERATOR'S REPORT
OF

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

RECEIVED
OIL AND GAS DIVISION
DEPARTMENT OF MINES
SEP 30 1981

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil XX / Liquid Injection ___ / Waste Disposal ___ /
(If Oil and Gas Division) Production ___ / Underground storage ___ / Deep ___ / Shallow ___

LOCATION: Elevation: 1354 Watershed: Buffalo Run

District: Grant County: Wetzel Quadrangle: Pine Grove 7.5'

WELL OPERATOR QUAKER STATE OIL REFG. CORP. DESIGNATED AGENT Carl J. Carlson
Address P.O. Box 1327 Address P.O. Box 1327
Parkersburg, WV 26102-1327 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, 19 81

OIL & GAS INSPECTOR FOR THIS WORK:
Name Phillip L. Tracy
Address Rt. #3
Alma, WV 26320

(IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED _____, 19 _____)

GEOLOGICAL TARGET FORMATION: Gordon Depth 3143 - 3200 feet

Depth of completed well, 3270 feet Rotary XX / Cable Tools ___

Water strata depth: Fresh, na feet; salt, 1565 feet.

Coal seam depths: none Is coal being mined in the area? no

Work was commenced July 19, 19 81 and completed July 24 19 81

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		20	XX		392	392	125 sx	
Coal									Sizes
Intermediate									
Production	4 1/2	J-55	9.5	XX		3241	3241	490 sx	Depth set
Tubing									
Liners									Perforations:
									Top Bottom

OPEN FLOW DATA

10 BOPD + 15 MCF

Producing formation Gordon Pay zone depth 3143 - 3200 feet

Gas: Initial open flow, show Mcf/d Oil: Initial open flow, show Bbl/d
Final open flow, 15 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

OCT 22 1981

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

Perforated from 3145 to 3193 GL with 30 shots.
 Frac'd with 780 bbl. water and 28,000# 20/40 sand. Breakdown at 2900 psi.
 Treated at 2650 psi and 33 BPM. I.S.I. 2000 psi.

4

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	155	
Sandstone			155	181	
Shale & Siltstone			181	901	
Sandstone			901	958	
Shale			958	1055	
Sandstone			1055	1073	
Shale			1073	1130	
Sandstone & Siltstone			1130	1565	
Sandstone			1565	1621	
Shale			1621	1643	
Sandstone			1643	1704	
Shale			1743	1833	
Sandstone			1833	1907	
Shale			1907	1933	
Sandstone			1933	2008	
Shale			2008	2053	
Sandstone			2053	2108	
Shale			2108	2235	
Sandstone			2235	2250	
Shale			2250	2276	
Little Lime			2276	2289	
Pencil Cave			2289	2305	
Big Lime			2305	2365	
Big Injun			2365	2569	
Shale			2569	3136	
Gordon Stray			3136	3140	
Shale			3140	3143	
Gordon			3143	3200	
Shale			3200	3270 D.T.D.	

(Attach separate sheets to complete as necessary)

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

OPE: 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."

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's
Well No. JOHN MILLS, JR. #157
API Well No. 47 - 103 - 1227
State County Permit

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

LOCATION: Elevation: 1354 Watershed: Buffalo Run
District: Grant County: Wetzel Quadrangle: Pine Grove 7.5'

WELL OPERATOR QUAKER STATE OIL REFG. CORP. DESIGNATED AGENT Carl J. Carlson
Address P.O. Box 1327 Address P.O. Box 1327
Parkersburg, WV 26101 Parkersburg, WV 26101

OIL & GAS ROYALTY OWNER Mills Wetzel Lands, Inc. COAL OPERATOR None
Address 115 So. LaSalle Street Address
Chicago, Illinois 60603

SURFACE OWNER Lewis Wetzel Hunting Ground COAL OWNER(S) WITH DECLARATION ON RECORD: Mills Wetzel Lands, Inc.
Address Dept. of Natural Resources Address 115 So. LaSalle Street
Charleston, WV 25305 Chicago, Illinois 60603
Acreage 5228.5 Name

FIELD SALE (IF MADE) TO:
Name None
Address

OIL & GAS INSPECTOR TO BE NOTIFIED
Name Phillip L. Tracy 758-4573
Address Rt. #3
Alma, WV 26320

RECEIVED
MAR 18 1981

OIL & GAS DIVISION
DEPT. OF MINES

RECEIVED
MAR 24 1981

OIL & GAS DIVISION
DEPT. OF MINES

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed XX / lease / other contract / dated Nov. 30, 1948, to the undersigned well operator from Mills Wetzel Lands, Inc.

[If said deed, lease, or other contract has been recorded:]
Recorded on Sept. 22, 1980, in the office of the Clerk of the County Commission of Wetzel County, West Virginia, in Deed Book 60A at page 381. A permit is requested as follows:

PROPOSED WORK: Drill XX / 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.

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 PHYSICAL LOGS DIRECTLY TO:

VIRGINIA OIL AND GAS CONSERVATION COMMISSION
WASHINGTON STREET EAST
LESTON, WV 25311

PHONE: (304) 346-3092

BLANKET BOND

QUAKER STATE OIL REFINING CORPORATION

Well Operator
Carl J. Carlson

By Carl J. Carlson
Its Asst. Dist. Production Manager

PROPOSED WORK ORDER

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

DRILLING CONTRACTOR (IF KNOWN) Clint Hurt & Associates
Address P.O. Box 388
Elkview, WV 25071

GEOLOGICAL TARGET FORMATION, Gordon

Estimated depth of completed well, 3270 feet Rotary XX/ Cable tools /

Approximate water strata depths: Fresh, 150 feet; salt, 1770 feet.

Approximate coal seam depths: no mineable coals coal being mined in the area? Yes / No XX /

CASING AND TUBING PROGRAM

Table with columns: CASING OR TUBING TYPE, SPECIFICATIONS (Size, Grade, Weight, New, Used), FOOTAGE INTERVALS (For drilling, Left in well), CEMENT FILL-UP OR SACKS (Cubic feet), PACKERS (Kinds, Sizes, Depths set, 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 § 22-4-12a, 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 THIS PERMIT MUST BE POSTED AT THE WELL SITE 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.

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 11-30-81

Signature of Deputy Director - Oil & Gas Division

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:

W A I V E R

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