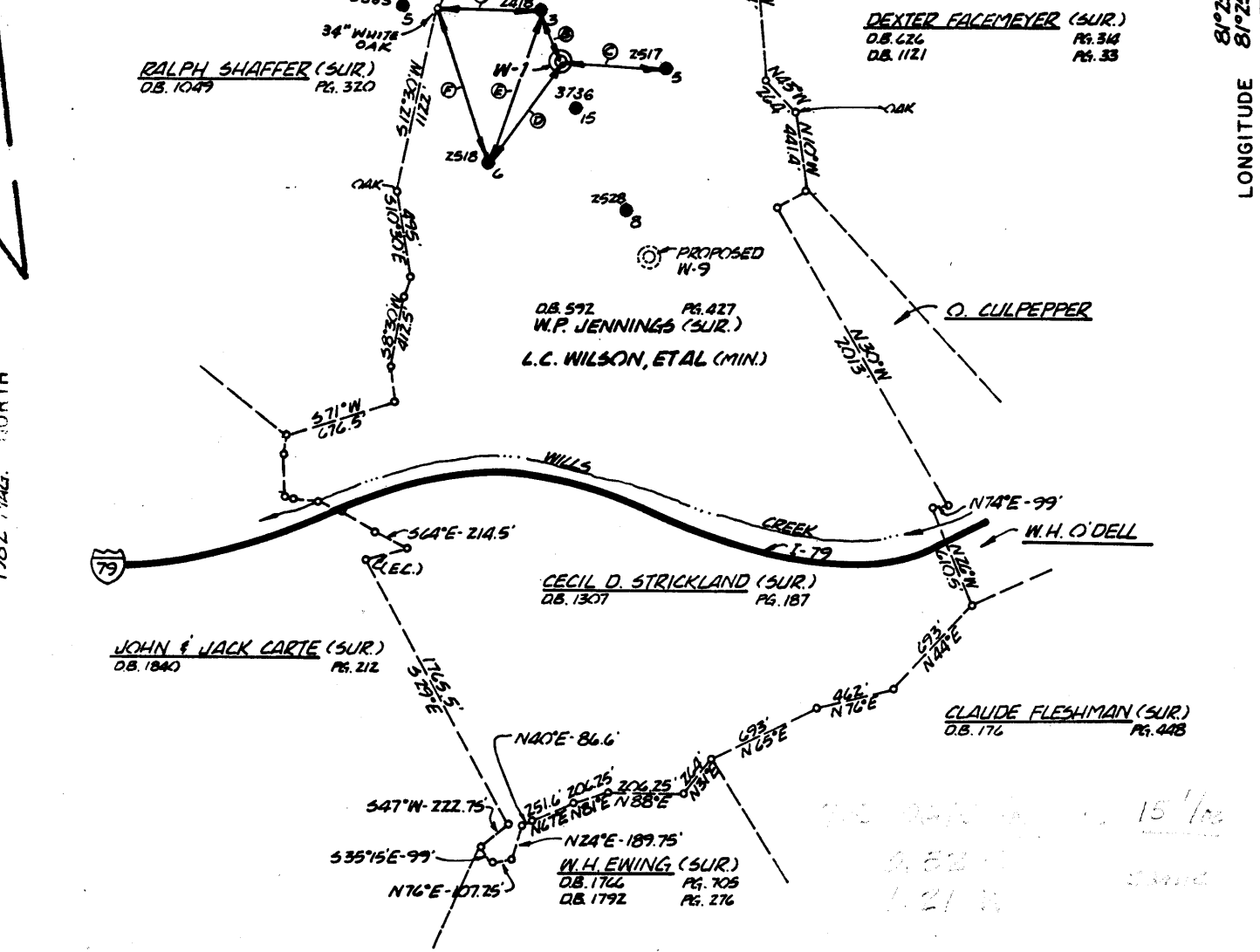


M.F. 9/13/82 Plot Card

- Ⓐ - 584°44'E - 589'
- Ⓑ - 517°10'E - 333'
- Ⓒ - N83°19'W - 620'
- Ⓓ - 539°11'W - 731'
- Ⓔ - 522°20'W - 957'
- Ⓕ - N13°23'W - 965'

W-1 TO W-3 - S 20°-03' E 1275.1

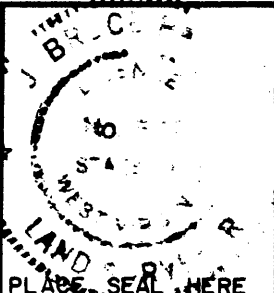


1982 MAG. NORTH

LONGITUDE 81°25'00" (15) 81°25'00" (15)

FILE NO. 8293-1
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1" IN 2400'
 PROVEN SOURCE OF ELEVATION EXIST. L.C. WILSON WELL #15 ELEV. 997'

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) Bruce Nager
 R. P. E. _____ L. L. S. 577



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



DATE AUGUST 5, 1982
 OPERATOR'S WELL NO. W-1
 API WELL NO. 47-039-3911-41
 STATE COUNTY PERMIT

Department of Mines
 Oil & Gas Division

WELL TYPE: OIL ___ GAS ___ LIQUID INJECTION X WASTE DISPOSAL ___
 (IF "GAS", PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___)
 LOCATION: ELEVATION 1000' WATER SHED WILLS CREEK OF LITTLE SANDY
 DISTRICT ELK COUNTY KANAWHA
 QUADRANGLE BLUE CREEK 7.5' / CLENDENIN 15' (N.W.)
 SURFACE OWNER W.P. JENNINGS ACREAGE 139.91
 OIL & GAS ROYALTY OWNER L.C. WILSON, ET AL LEASE ACREAGE 279
 LEASE NO. W-1099
 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 BIG INJUN ESTIMATED DEPTH 2110'
 WELL OPERATOR QUAKER STATE OIL REF CORP DESIGNATED AGENT CARL J. CARLSON
 ADDRESS P.O. BOX 1327 PARKERSBURG, W.V. 26101 ADDRESS P.O. BOX 1327 PARKERSBURG, W.V. 26101

OCT 18 1982

8-0 Blue Creek (alt)

QUAKER STATE OIL REFINING CORPORATION

PARKERSBURG PRODUCTION DEPARTMENT
1226 PUTNAM HOWE DRIVE
BELPRE, OHIO 45714

PHONE: (614) 423-9543

Mail Address:
Post Office Box 1327
Parkersburg, West Virginia 26101

September 29, 1982

Mr. Theodore M. Streit, Administrator
Office of Oil and Gas
Department of Mines
1615 Washington Street, East
Charleston, WV 25311

Dear Ted:

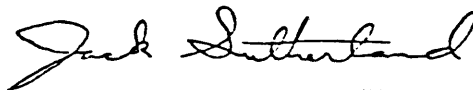
This is a written request for variance from Regulation 9.01, as discussed in our phone conversation of September 20th. The two subject wells are the L.C. Wilson #W-1 and #W-9, Elk District of Kanawha County.

The planned procedure for completion of these wells is as follows. The surface casing will be run to approximately 350 feet (through the freshwater zone) and cemented back to surface. The long string casing will be ran to the top of the Big Injun formation, set on a formation packer shoe, and cemented up through the Salt Sand. Annular pressure between these two strings will be monitored regularly to indicate the injection string integrity during operation.

The well permit applications were both filed the week of September 6, 1982 and form IV-37 will be completed following the casing integrity test. If you have any problems with these plans, please contact me.

Sincerely,

QUAKER STATE OIL REFINING CORPORATION

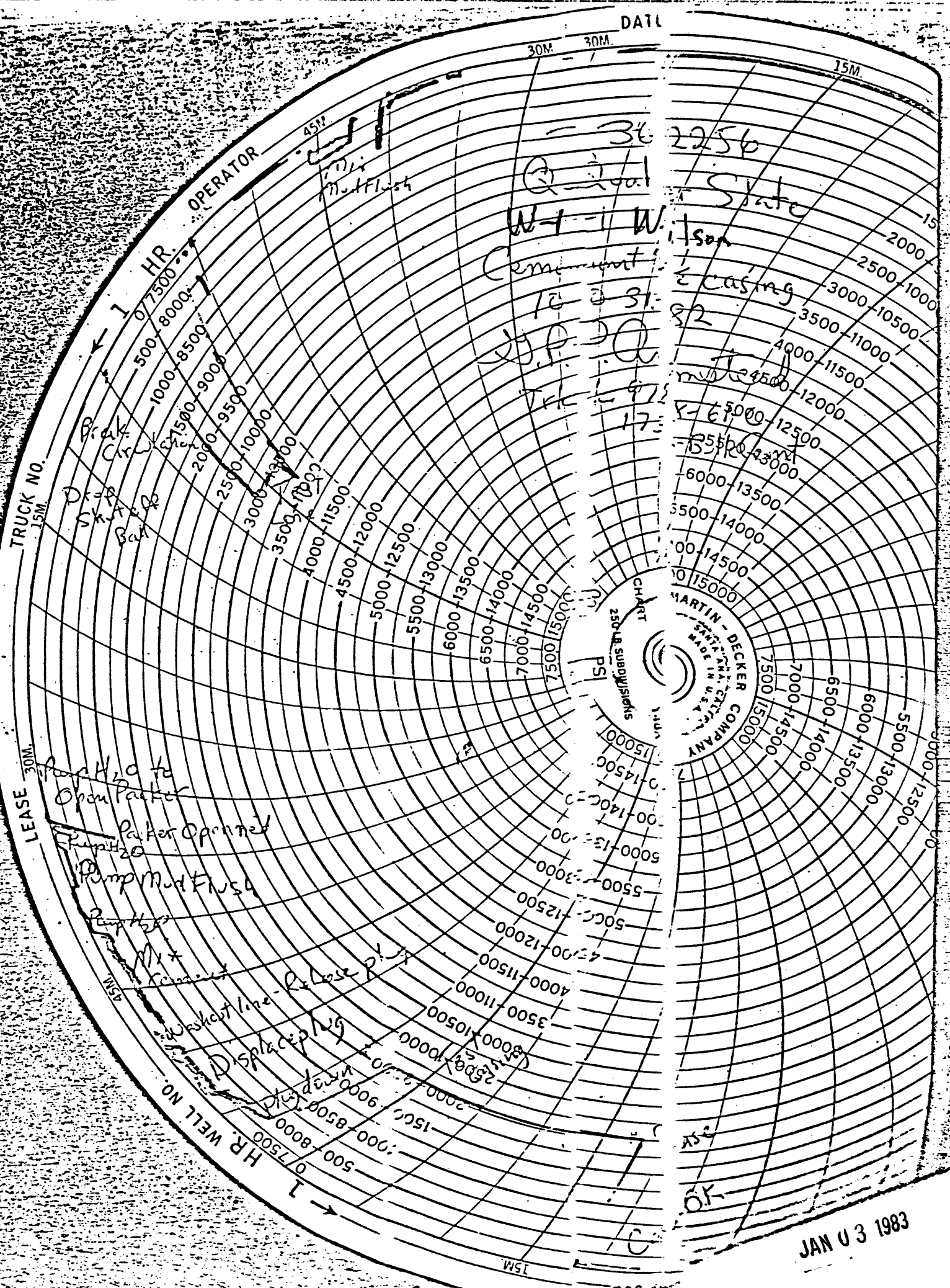


Jack Sutherland
Engineer

JES:crb

xc: Carl Carlson
Wayne McMillan ✓

JAN 1 1983



DATE

36 2256
 @ 2nd
 W-1 W
 Cement
 10 31
 J.P. O
 17

State
 Wilson
 casing
 82
 5000-12500
 5500-13000
 6000-13500
 6500-14000
 7000-14500
 7500-15000

HR. OPERATOR
 45M
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 07500
 500
 8000
 1500
 8500
 2000
 9000
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JAN 03 1983

JOB



State of West Virginia
Department of Mines
Oil and Gas Division
Charleston 25305

BEFORE THE OFFICE OF OIL AND GAS, DEPARTMENT OF MINES
OF THE STATE OF WEST VIRGINIA

IN THE MATTER OF A REQUEST FOR A)
VARIANCE OF REGULATION 9.01 OF THE)
OPERATIONAL REGULATIONS ON LIQUID)
INJECTION AND WASTE DISPOSAL WELLS.)

CAUSE NO. 23

ORDER NO. 1

ORDER

By letter dated September 29, 1982, Quaker State Oil Refining Corporation requested a variance from Regulation 9.01.

The two (2) subject wells are: L. C. Wilson No. W-1, Permit 47-039-3911-LI, and L. C. Wilson No. W-9, Permit 47-039-3912-LI.

The wells will be completed as follows: The surface casing will be run to approximately 350 feet (through the fresh water zones), and cemented back to surface. The long string casing will be run to the top of the Big Injun formation, set on a formation packer and cemented up through the Salt sand.

Annular pressure between these two strings will be monitored regularly to indicate the integrity of the injection string during operation.

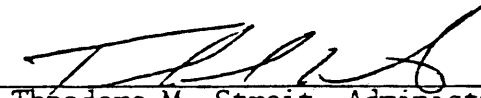
Dated this 13th day of October, 1982.
Charleston, West Virginia

IN THE NAME OF THE STATE OF WEST VIRGINIA:

OFFICE OF OIL AND GAS OF
THE DEPARTMENT OF MINES OF
THE STATE OF WEST VIRGINIA

JAN 03 1983

By:


Theodore M. Streit, Administrator

IV-35
(Rev 8-81)

RECEIVED
DEC 27 1982



OIL & GAS DIVISION
DEPT. OF MINES

JAN 03 1983

State of West Virginia

Department of Mines

Oil and Gas Division

Date December 20, 1982

Operator's

Well No. W-1

Farm L.C. WILSON

API No. 47 - 039 - 3911 L.I.

WELL OPERATOR'S REPORT

OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1008 Watershed Wills Creek of Little Sandy
District: Elk County Kanawha Quadrangle Blue Creek 7.5'

COMPANY QUAKER STATE OIL REFG. CORP.

ADDRESS P.O.Box 1327, Parkersburg, WV 26102-1327

DESIGNATED AGENT Carl J. Carlson

ADDRESS Same as above

SURFACE OWNER W.P. Jennings, etal

ADDRESS Box 142, Sissonville, WV 25185

MINERAL RIGHTS OWNER L.C. Wilson, etal

ADDRESS 1618 Kanawha Blvd., E., Charleston, WV

OIL AND GAS INSPECTOR FOR THIS WORK Martin

Nichols ADDRESS Clendenin, WV 25045

PERMIT ISSUED 10/10/82

DRILLING COMMENCED 10/26/82

DRILLING COMPLETED 10/30/82

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 Cord.			
13-10"			
9 5/8			
8 5/8	356	356	150 sx
7			
5 1/2			
4 1/2	2014	2014	150 sx
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Big Injun Depth 2018 - 2065 feet

Depth of completed well 2127 feet Rotary xx / Cable Tools _____

Water strata depth: Fresh na feet; Salt 1362 feet

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

OPEN FLOW DATA

Producing formation Big Injun Pay zone depth 2018 - 2065 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 530 psig (surface measurement) after est. 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

(Continue on reverse side)

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

Frac'd open hole with 154 bbl. gelled water and 1600# of 20/40 sand.
Breakdown at 1200 psi, treated at 810 psi and 7.3 BPM, I.S.I. 700 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
Sandstone			0	127	
Shale			127	290	
Sandstone			290	340	
Shale			340	542	
Sandstone & Shale			542	802	
Shale & Sandstone			802	1121	
Sandstone			1121	1220	
Shale & Siltstone			1220	1362	
Salt Sands			1362	1702	
Shale			1702	1746	
Little Lime			1839	1876	
Pencil Cave			1876	1882	
Big Lime			1882	2018	
Big Injun			2018	2065	
Siltstone & Shale			2065	2127 LTD	

(Attach separate sheets as necessary)

QUAKER STATE OIL REFINING CORPORATION

Well Operator

By: Michael C. Brannock

Date: Michael C. Brannock - 12/20/82

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."

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OIL AND GAS DIVISION

PRE-OPERATION CERTIFICATE
FOR LIQUID INJECTION OR WASTE DISPOSAL WELL

WELL OPERATOR Quaker State Oil Refining Corporation
Address P.O. Box 1327 Parkersburg, WV 26101
DESIGNATED AGENT Carl J. Carlson
Address P.O. Box 1327 Parkersburg, WV 26101

GEOLOGICAL TARGET FORMATION Big Injun Depth 2018' feet(top) to 2065' feet(bottom) K.B.
Virgin reservoir pressure in target formation 530 psig
Source of information on virgin reservoir pressure
Perforation intervals _____ Open-hole intervals 2018'-2127' K.B.

MAXIMUM PROPOSED INJECTION OPERATIONS
Volume per hour: 20 BBL/Hour Bottom hole pressure: 2000 psig

DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED
Liquids to be injected for oil recovery under Code § 22-4-10a: Produced brine from the Big Injun formation.
Wastes to be disposed of: See above.

Additives (slurry mediums, inhibitors, solvents, oxidizers, deoxidizers, etc.): Bacteriacide, Corrosion Inhibitor, and Scale Inhibitor continuously treated with Visco 3905. Also, weekly batch treatment with Visco 3951, Bacteriacide, and Corrosion Inhibitor (Nalco Chemical Company).

SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL None

FILTERS (IF ANY) Two stage filter system: first stage involving a 75 micron cartridge vessel on main line and second stage involving a 5 micron cartridge vessel at the injection well.

ADDITIONAL DRILLING AS PART OF THE CONVERSION

(Complete and submit Form IV-35, "Well Operator's Report of Drilling, Fracturing and/or Stimulating or Physical Change".)

DETAILS ON NEW CASING AND TUBING PROGRAM AS PART OF THE CONVERSION:

(To be completed below unless the new casing and tubing program is described on a Form IV-35, "Well Operator's Report of Drilling, Fracturing and/or Stimulating or Physical Change", submitted in connection with the permit to which this Form IV-37 pre-operation certificate relates.)

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 Formation Packer Shoe Sizes <u>5 1/2" X 6 3/4"</u>
Fresh water	<u>8 5/8</u>	<u>F-25</u>	<u>24#</u>	<u>X</u>		<u>356'</u>	<u>356'</u>	<u>150 sacks</u>	
Coal									Depths set <u>2018'</u> K.B.
Intermediate									
Production	<u>5 1/2</u>	<u>J-55</u>	<u>14#</u>	<u>X</u>		<u>2014'</u>	<u>2014'</u>	<u>150 sacks</u>	Perforations: Top Bottom
Tubing									
Liners									

(Continue on reverse side)

MECHANICAL INTEGRITY TEST

Test method: Casing was pressured up to 2050 psig and monitored for 20 minutes.
Minimal leak-off observed (approximately 2% in 20 minutes).

The undersigned certifies that the test described above was made on
October 31, 19 82, and demonstrated the mechanical integrity
of the well.

FACILITIES OR SYSTEMS TO PROTECT THE INTEGRITY OF THE GEOLOGICAL
TARGET FORMATION OR TO PREVENT FRACTURING THE CONFINING STRATA A two stage safety system has
been installed to avoid over-pressuring the formation and the injection
facilities.

APPLICATION FOR VARIANCE (IF ANY) FROM REGULATION 9.01(a)
[Specify purpose, necessity, and justification]

See Attachment: Case No. 23
Order No. 1

QUAKER STATE OIL REFINING CORPORATION
Well Operator

By [Signature]
Its Agent

Operator's Well No. L.C. WILSON #W-1

API Well No. 47 - 039 - 3911-LI

RECEIVED

SEP 1 1982

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OIL AND GAS DIVISION

LIQUID INJECTION OR WASTE DISPOSAL WELL PERMIT APPLICATION

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

WELL TYPE: Liquid Injection XX / Waste Disposal /
LOCATION: Elevation: 1008 Watershed: Wills Creek of Little Sandy
District: Elk County: Kanawha Quadrangle: Blue Creek 7.5'
GEOLOGICAL TARGET FORMATION: Big Injun Approximate depth 2022 - 2080 feet
Virgin reservoir pressure in target formation 530 psig (surface measurement)
Source of information on virgin reservoir pressure Wellhead shut in measurement
(24hr.) plus fluid head correction

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

ROYALTY OWNER L.C. WILSON ETAL
Address 1618 Kanawha Blvd. East
Charleston, WV 26301

COAL OPERATOR none
Address

Acreage 279
SURFACE OWNER W.P. Jennings, etal
Address Box 142
Sissonville, WV 25185
Acreage 139.91

COAL OWNER(S) WITH DECLARATION ON RECORD:
Name none
Address
Name
Address

OIL & GAS INSPECTOR TO BE NOTIFIED
Name Martin Nichols
Address P.O.Box 554
Clendenin, WV 25045

COAL LESSEE WITH DECLARATION ON RECORD:
Name none
Address

The undersigned well operator is entitled to operate for liquid injection or waste disposal purposes at the above location under a deed / lease / other contract XX / dated Nov. 30, 19 73, to the undersigned well operator from Mareve Oil Corp., etal

[If said deed, lease, or other contract has been recorded:]

Recorded on Dec. 8, 19 73, in the office of the Clerk of the County Commission of Kanawha County, West Virginia, in Assign. Book 82 at page 66. A permit is requested as follows:

PROPOSED WORK: Convert / 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.

Date of first liquid injection or waste disposal: Nov. 1, 19 82

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 thirty (30) 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
GEOPHYSICAL LOGS DIRECTLY TO:
WEST VIRGINIA OIL AND GAS
CONSERVATION COMMISSION
1615 WASHINGTON STREET EAST
CHARLESTON, WV 25311
TELEPHONE: (304) 348-3092

QUAKER STATE OIL REFINING CORPORATION
Well Operator

By Carl J. Carlson
Carl J. Carlson - Dist. Manager

BLANKET BOND

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY: ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 AND/OR FORM IV-37 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) Unknown

Address

GEOLOGICAL TARGET FORMATION, Big Injun

Estimated depth of completed well, 2110 feet RotaryXXX / Cable tools /

Approximate water strata depths: Fresh, 317 feet; salt, 1364 feet.

Approximate coal seam depths: none Is 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 1: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-3 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 § 22-4-2a, (iii) unless previously paid on the same well, the fee required by Code § 22-4-12a, (iv) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, 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-3 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-5 filed in connection therewith.

NOTE 2: In addition to the permit required from the Department of Mines, the operator of a disposal well must obtain a separate permit from the Department of Natural Resources under the provisions of Code § 20-5A-5(b)(7).

THIS PERMIT MUST BE POSTED AT THE WELL SITE ALL PROVISIONS BEING IN ACCORDANCE WITH CHAPTER 22, ARTICLE 4 OF THE W. VA. CODE, THE LOCATION IS HEREBY

APPROVED FOR THIS PERMIT SHALL EXPIRE

IF OPERATIONS HAVE NOT COMMENCED BY BY Fred B. [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 thirty (30) 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