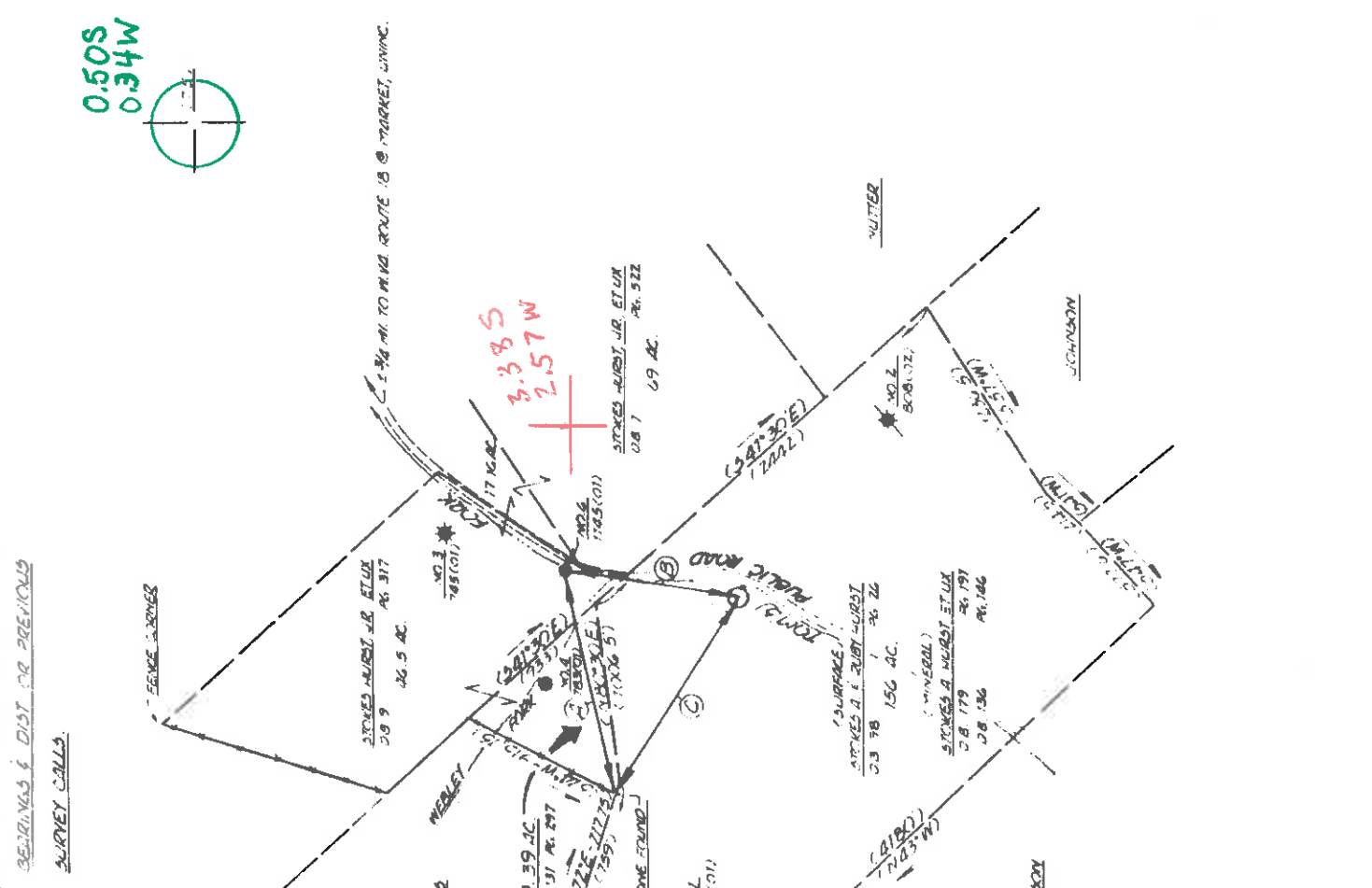


WELL TIES:
 ① N81°37'E - 1150.1'
 ② S07°33'W - 952.7'
 ③ N52°31'W - 1276.1'

DATE BEARINGS & DIST. IN C. ARE USED
 BEARINGS & DIST. OR PREVIOUS SURVEY CALLS

39°15' LATITUDE 39° 12' 30" LONGITUDE 80° 42' 30"



LOCATES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. 8400-20
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1' IN 2000'
 PROVEN SOURCE OF ELEVATION U.S.G.S. SPOT ELEV. & ROAD INTERSECTION @ MOUTH OF WEBLEY FORD, EL. 853'

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) Shirley Egan
 R.P.E. L.L.S. 577

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE FEB 24 19 84
 OPERATOR'S WELL NO. 2-A HURST, SR. 000A
 API WELL NO. _____

WELL TYPE: OIL GAS _____ LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS") PRODUCTION _____ STORAGE _____ DEEP _____ SHALLOW _____
 LOCATION ELEVATION 855.6' WATERSHED LITTLE TOM'S FORK OF TOM'S FORK OF MEATHOUSE FORK
 DISTRICT NEW MILTON 6 COUNTY BOONVILLE
 QUADRANGLE NEW MILTON 7 S. 511 VADIS 123 NW 1 ACREAGE 156
 SURFACE OWNER S. A. & RUBY HURST LEASE ACREAGE 156
 OIL & GAS ROYALTY OWNER S. A. HURST, ET ALX

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 BIG INJUN ESTIMATED DEPTH 2108'
 WELL OPERATOR QUAKER STATE OIL REF. CORP. T2L DESIGNATED AGENT CARL J. CARLSON
 ADDRESS P.O. BOX 1327 PARKERSBURG, W.V. 26101 ADDRESS P.O. BOX 1327 PARKERSBURG, W.V. 26101

PERMIT 47-017-3336
 COUNTY NAME _____
 DATE JUN 4 1984
6-6 Porto Rico (Stout) (134)

RECEIVED

NOV 2 - 1984

IV-35 OIL & GAS DIVISION
(Rev 8-81) DEPT. OF MINES



State of West Virginia

Department of Mines

Oil and Gas Division

Date October 29, 1984
Operator's Well No. #4
Farm S.A. HURST, SR.
API No. 47 - 017 - 3336

WELL OPERATING REPORT
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 855.6 Watershed Little Tom's Fork of Tom's Fork of Meathouse
District: New Milton County: Madridge Quadrangle New Milton 7.5' Fork

COMPANY QUAKER STATE OIL REFINING CORPORATION

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

DESIGNATED AGENT Carl I. Carlson

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

SURFACE OWNER S.A. & Ruby Hurst, Sr.

ADDRESS Rural Delivery, New Milton, WV 26411

MINERAL RIGHTS OWNER S.A. Hurst, et ux

ADDRESS Rural Delivery, New Milton, WV 26411

OIL AND GAS INSPECTOR FOR THIS WORK

Mike Underwood ADDRESS Rt. 2, Box 114; Salem, WV
PERMIT ISSUED May 25, 1984 26426

DRILLING COMMENCED July 18, 1984

DRILLING COMPLETED July 25, 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"			
9 5/8			
8 5/8	327'	327'	145 sk
7			
5 1/2			
4 1/2	2072'	2072'	200 sk
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Big Injun Depth 1915 - 1930 feet

Depth of completed well 2120' feet Rotary XX / Cable Tools

Water strata depth: Fresh N/A feet; Salt 1312 feet

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

OPEN FLOW DATA

Producing formation Big Injun & Blue Monday Pay zone depth 1829 - 1849 1915 - 1930 feet

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

Final open flow 50 Mcf/d Final open flow 12 Bbl/d

Time of open flow between initial and final tests 12 hours

Static rock pressure -- psig (surface measurement) after -- 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 26 1984

(Continue on reverse side)

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

2-Stage Perforation:

1st Stage - Perforated from ^{Big Injun} 1916-1930'; 1906-1902' with 38 shots.
 Frac'd with 500 gal. 15% HCl; 16,000# 10/20 sand, 360 Bbl water.
 Breakdown @ 3000 PSI. Treating pressure @ 3000 PSI. Avg. rate @ 35.5 BPM. ISIP @ 2100#.

2nd Stage - Perforated from ^{Blue Ann.} 1820-1846' with 53 shots.

Frac'd with 500 gal 15% HCl; 190 Bbl 10% HCl. Breakdown @ 3000 PSI.
 Avg. treating pressure @ 3200 PSI. Avg. rate 11.1 BPM. ISIP @ 2200 PSI.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS	
Shale and silt			0	540	Including indication of all fresh and salt water, coal, oil and gas	
Lime			540	582		
Shale and silt			582	1032		
Sand			1032	1042		
Shale and sand			1042	1312		
Salt sand			1312	1384		Salt water
Shale and silt			1384	1522		
Sand			1522	1615		
Shale and sand			1615	1808		
Little Lime			1808	1829		
Blue Monday			1829	1849		
Pencil Cave			1849	1851		
Big Lime			1851	1897		
Keener			1897	1915		
<u>Big Injun</u>			1915	1930		
Lime			1930	1993		
Shale and silt			1993	<u>2120</u>	T.D.	

(Attach separate sheets as necessary)

QUAKER STATE OIL REFINING CORPORATION
Well Operator

By: Jeffrey W. Hill Jeffrey W. Hill,
 Date: October 29, 1984 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 strata, encountered in the drilling of a well."



1) Date: April 11, 19 84
 2) Operator's Well No. S.A. HURST, SR. #4
 3) API Well No. 47 - 017 - 3336 State County Permit

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

4) WELL TYPE: A Oil Gas Underground storage Deep Shallow
 B (If "Gas", Production Watershed: Little Tom's Fork
 Elevation: 855.6
 District: New Milton County: Doddridge Quadrangle: New Milton 7.5'
 6) WELL OPERATOR QUAKER STATE OIL REF. COMPANY **RECEIVED**
 Address P.O. Box 1327 **RECEIVED** Carl J. Carlson
Parkersburg, WV 26101 P.O. Box 1327
 8) OIL & GAS INSPECTOR TO BE NOTIFIED **RECEIVED**
 Name Mike Underwood **RECEIVED** Parkersburg, WV 26101
 Address Route 2, Box 114 **RECEIVED** Parkersburg, WV 26101
Salem, WV 26426 **RECEIVED** Parkersburg, WV 26101

10) PROPOSED WELL WORK: Drill deeper Redrill Stimulate **RECEIVED**
 Plug off old formation Perforate new formation
 Other physical change in well (specify) None **RECEIVED**
 Name Mike Underwood **RECEIVED** UNKNOWN
 Address Route 2, Box 114 **RECEIVED** OIL & GAS DIVISION
Salem, WV 26426 **RECEIVED** (304) DEPT. OF MINES

11) GEOLOGICAL TARGET FORMATION, Big Injun **RECEIVED**
 12) Estimated depth of completed well, 2108' feet
 13) Approximate true depths: Fresh, 100 feet; salt, 1135' feet.
 14) Approximate coal seam depths: None Is coal being mined in the area? Yes No **RECEIVED**

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.	For drilling	Left in well		
Conductor							
Fresh water	8 5/8	H40	20	X			
Coal	7	H40	17	X	250	C.T.S. NEAT	Kind
Intermediate							Size
Production	4 1/2	J55	9.5	X	2108	1200 OR	
Tubing	2	J	4.5	X	1958		
Liners							

Perforations: Top
Bottom

OFFICE USE ONLY
 DRILLING PERMIT
 Permit number 47-017-3336 Date May 25, 19 84

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 May 25, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Blanket	Agent:	Plat:	Casing	Fee
	<u>LA MW</u>	<u>MW</u>	<u>MW</u>	<u>10785</u>

NOTE: Keep one copy of this permit posted at the drilling location.
 Administrator, Office of Oil and Gas

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

Hitwell Surveys, Inc.

AUG 16 1984

Perforation Depth Control

#3-745
#5-183
#5-185
#6-408

PLANS NO.		COMPANY QUAKER STATE OIL REFINING CORPORATION	
WELL S.A. HURST SR. #4		FIELD NEW MILTON	
COUNTY DODDRIDGE		STATE W VA	
LOCATION: LITTLE TOM'S FORK			
QUAD: NEW MILTON 7.5			
SEC.	TWP.	RGE.	ELEVATIONS:
			K.R. 855.6
PERMANENT DATUM		GROUND LEVEL	ELEV. 855.6
LOG MEASURED FROM		KELLY BUSHING	
BEARING MEASURED FROM		KELLY BUSHING	
DATE	8/9/84	ONE	
RUN NO.		PDC	
TYPE LOG	2120'		
DEPTH - DRILLER	2059'		
DEPTH - LOGGER	2058'		
BOTTOM LOGGED INTERVAL	1700'		
TOP LOGGED INTERVAL	AIR		
TYPE FLUID IN HOLE			
SALINITY PPM CL.			
DENSITY LB./GAL.			
LEVEL			
MAX. REC. TEMP. - DEG. F			
OPR. RTG TIME	3 HOURS		
RECORDED BY	C. SETTLE		
WITNESSED BY	MR. T. KNOBLOCH		

Change to Top

BORE HOLE RECORD		CASING RECORD	
RUN NO.	BIT	FROM	TO
		SIZE	WGT. FROM TO
		4.50'	10.5 SURF TD

THIS HEADING AND LOG CONFORM TO A P.I. STANDARD PRACTICE SP-33 (P)

WUGES Oil & Gas System Listings: 2/25/1991

ID: COUNTY: 017 (DODDRIDGE) PERMIT: 70123 SFX: W (Worked Over)

COMPLETION INFO: ELEVATION: 856 COMP REC FLAG: (from E-LOG) MM/DD/YYYY WELLS: 0
ELEVATION TYPE: G RIG TYPE: (Unknown) CHPL METH: ()
(Ground Lvl) ()

CLASSIFICATION: (unclassified) DATES: / /
INITIAL: (unclassified) SPUD: / /
FINAL: (unclassified) COMP: / /
FIELD: (?Never assigned) BATCH: / /
YEAR RPTD: / /

OPEN GAS-BEFORE TREATMENT: (MCFPD) OIL-BEFORE TREATMENT: (BOPD)
FLOW: GAS-AFTER TREATMENT: (MCFPD) OIL-AFTER TREATMENT: (BOPD)

ROCK NATURAL (PSI): 0 TIME (NATURAL, IN HOURS): 0
PRESSURE: TREATED (PSI): 0 TIME (TREATED, IN HOURS): 0

DEPTHS: TOTAL FTG: 2120 NEW FTG: 0 EXPL FTG: 0

DEEPEST FM: AT TOTAL DEPTH: 999 TESTED: 999
(undetermined unit) (undetermined unit)

MECHANICAL LOG INFO:

LOGS AVAILABLE: * STATUS: * RANGE OF INTERVALS: 1700- 2058 DEEPEST FM LOGGED: 158

COMMENT: on #158 no permit #

MICROFILM ROLL NUMBER(S): 158

LOG TYPES: GR-gamma ray; D-density; T-temperature; I-induction; N-neutron; S-sonic; #Other types not noted

NOTE: All well depths measured in feet from surface datum.

REASSIGNED ID #: ()

* LOCATION TAX DST:

* INFO: 7.5' LATITUDE: DEGREES MINUTES MILES

* LONGITUDE: 00 00.0 0.005

* QUADRANGLE: 00 00.0 0.00W

* 15' LATITUDE: 00 00 0.005

* LONGITUDE: 00 00 0.00W

* QUADRANGLE: 5' SECT:

* UTM: EASTING: NORTHING:

* COORDINATE DIGITIZED (Y/N):

* OWNER STATUS: C (Compl'd) DATE: / /

* INFO: SURFACE OWNER: Hurst Sr, S A 4

* OIL & GAS OWNER:

* COMPANY NUMBER:

* OPERATOR: 0721 (Quaker State)

