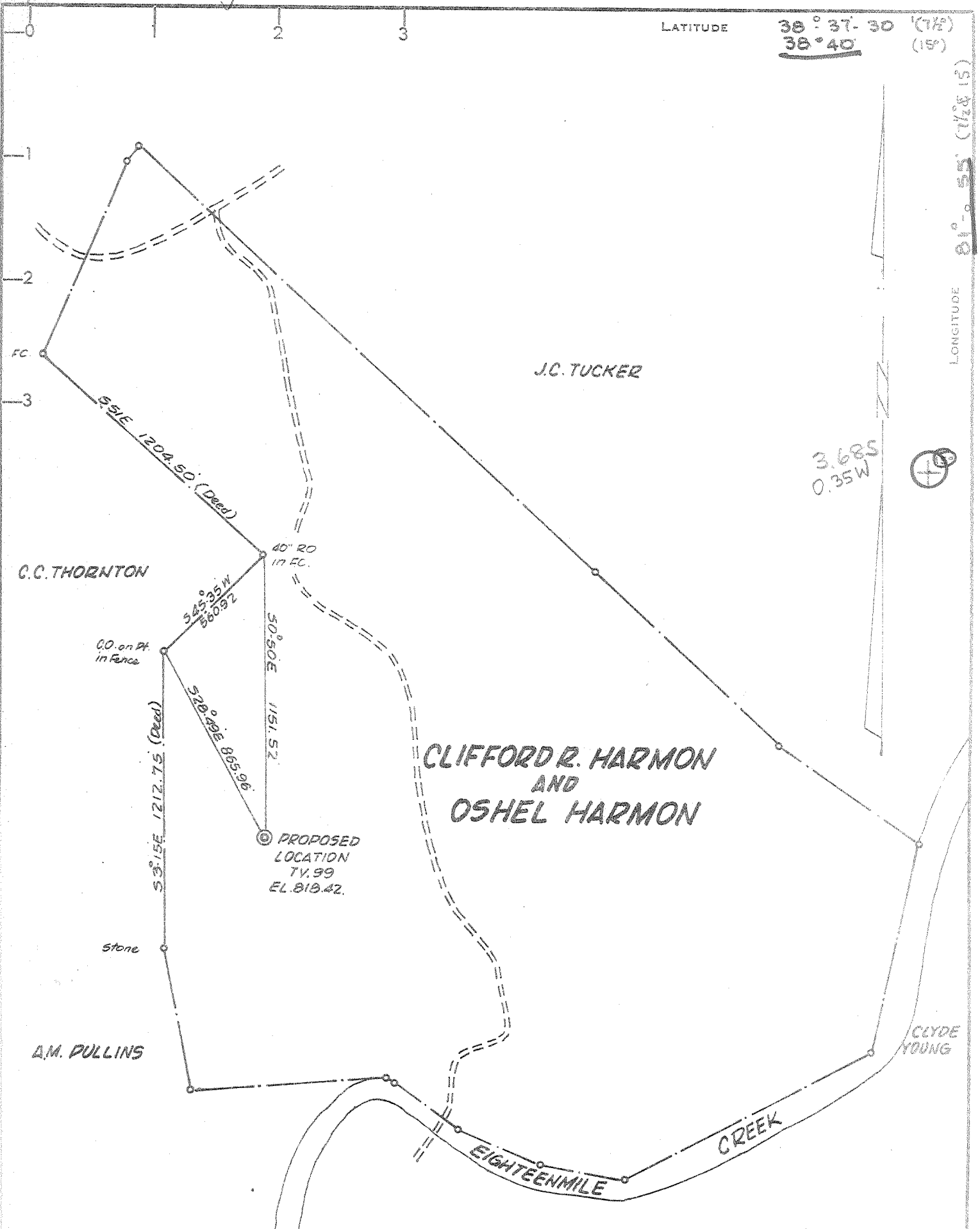


2/2-179E



LATITUDE 38° 37' 30" (17 1/2)
38° 40" (15)

LONGITUDE 81° 55' (17 1/2 & 15)

J.C. TUCKER

C.C. THORNTON

CLIFFORD R. HARMON
AND
OSHEL HARMON

A.M. PULLINS

CLYDE YOUNG

PROPOSED
LOCATION
TV. 99
EL. 818.42.

3.685
0.35W



CERTIFICATE

"I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia."

Minimum degree of accuracy is one part in 200

Signed *Frank J. Barber* U.S. #289

- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

COMPANY TEAVER OIL & GAS Co. Inc.
 ADDRESS 1901 KANAWHA VALLEY BLDG. CHARLESTON, W.V.A.
 FARM CLIFFORD HARMON & OSHEL HARMON
 MAP _____ ACRES 153.06 LEASE NO. _____
 WELL (FARM) NO. 1 SERIAL NO. TV. 99
 ELEVATION (SPIRIT LEVEL) 818.42
 QUADRANGLE WINFIELD 7 1/2 & 15 WC
 COUNTY POTNAM DISTRICT BUFFALO
 POINT OF PROVEN ELEVATION PT. IN Rd INTERSECTION EL. 813
 FILE NO. _____ DRAWING NO. _____
 DATE AUG. 9, 1978 SCALE 1"=500 FT.

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON
 WELL LOCATION MAP
PUT-915
 FILE NO. _____
 SEP 11 1978
 + DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC
 MAPS. SCALE 1 TO 62,500. LATITUDE AND LONGITUDE LINES
 BEING REPRESENTED BY BORDER LINES AS SHOWN. 24,000
 - DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING. **47-079**

DEEP WELL 6-6 Midway-Extra (278)

RECEIVED
JUL 10 1985



IV-35
(Rev 8-81)

OIL & GAS DIVISION
DEPT. OF MINES
State of West Virginia
Department of Mines
Oil and Gas Division

Date 7/1/85
Operator's
Well No. TV- 99
Farm Clifford Harmon
API No. 47 - 079 - 915

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 XX / Underground Storage / Deep XX / Shallow /)

LOCATION: Elevation: 818.42 Watershed Eighteen Mile Creek
District: Buffalo County Putnam Quadrangle Winfield

COMPANY Teavee Oil & Gas, Inc.
ADDRESS 1901 Kanawha Valley Bldg.
Charleston, WV
DESIGNATED AGENT D. K. Bowers
ADDRESS Same as above
SURFACE OWNER Clifford Harmon
ADDRESS Buffalo, WV
MINERAL RIGHTS OWNER same as above
ADDRESS
OIL AND GAS INSPECTOR FOR THIS WORK
C. Hively ADDRESS Elkview, WV
PERMIT ISSUED 08/10/78
DRILLING COMMENCED 08/15/78
DRILLING COMPLETED 08/23/78
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 3/4	238	238	90
9 5/8			
8 5/8			
7	2178	2178	150
5 1/2			
4 1/2			
3 1/2	4574	4574	205
2			50/90 POZMIX
Liners used			

GEOLOGICAL TARGET FORMATION Oriskany Depth 4660 feet
Depth of completed well 4574 feet Rotary XX / Cable Tools
Water strata depth: Fresh 120 feet; Salt 1055 feet
Coal seam depths: N/A Is coal being mined in the area? NO

OPEN FLOW DATA

Producing formation Brown Shale Pay zone depth 3900 feet
Gas: Initial open flow SHOW 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 72 hours
Static rock pressure 480 psig (surface measurement) after 48 hours shut in
(If applicable due to multiple completion--)
Second producing formation Marcellus Shale Pay zone depth 4387 feet
Gas: Initial open flow see above 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

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

Perforated Intervals: 4448-4492, 4402, 4432, 4368-4374, 3990-4042, 3912-3918
 18 shots
 FOAM FRAC
 Treated with 1,000 gallons 15% HCl, 15,000 lbs. 80/100 sand,
 30,000 lbs. 20/40 sand, 530 mscf N₂ 228 cum. bbls. H₂O

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Surface			0.0	20	
Sand			20	55	
Red rock & Shale			55	100	
Sand			100	125	Fresh water @120
Red rock & Shale			125	375	
Shale			375	500	
Red rock & Shale			500	695	
Slate			695	830	
Slate & Shells			830	940	
Sand			940	1039	
Slate & Shells			1039	1150	
Sand			1150	1305	
Salt Sand			1305	1490	
Lime Shells			1490	1512	
Big Lime			1512	1770	
Shale			1770	1878	
Injun Sand			1878	1950	
Shale			1950	2315	
Coffee Shale			2315	2331	
Berea			2331	2362	
Shale			2362	3650	
*BROWN SHALE			3650	4038	GAS
White Slate			4038	4393	
*MARCELLUS SHALE			4393	4555	GAS
*CORNIFEROUS LIME			4555	4650	
*ORISKANY			4650	4661	
Lime				4676	TD

Bad Cases

2531? ←

*E-log: FR- 828
 L. Huron: 3646-4046
 Jura: 4046-4172
 Arkola: 4172-4368
 Rinescrest: 4368-4509
 Sanyou: 4509-4548
 Marcellus: 4548-4555
 Onondaga: 4555*

*INDICATES ELECTRIC LOG TOPS

TEAVERE OIL & GAS, INC.

Well Operator

By: *D. R. Bowen*

GEOLOGIST

Date:

7/1/85

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

OIL AND GAS WELL PERMIT APPLICATION

RECEIVED
AUG 11 1978
OIL & GAS DIVISION
DEPT. OF MINES

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

DATE August 8, 1978

Surface Owner Clifford & Oshel Harmon Company Teavoe Oil & Gas, Inc.
 Address Buffalo, W. Va. Address 19th fl. Kan. Valley Bldg., Chas.

Mineral Owner Same Farm Harmon Acres 146
 Address Same Location (waters) Eighteen Mile

Coal Owner Same Well No. TV #99 Elevation 818.42
 Address Same District Buffalo County Putnam

Coal Operator None Quadrangle Winfield
 Address None

THIS PERMIT MUST BE POSTED AT THE WELL SITE

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 12-11-78.

INSPECTOR Martin Nichols
 TO BE NOTIFIED
 ADDRESS Clendenin, W.Va.
 PHONE 548-6993

Robert W. ...
Deputy Director - Oil & Gas Division

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated Feb. 4 & May 23 1972 by Oshel & Clifford Harmon made to Teavoe Oil & Gas, Inc. and recorded on the 30th day of May 1972, in Putnam County, Book 56 Page 424 & 495.

NEW WELL DRILL DEEPER REDRILL FRACTURE OR STIMULATE
OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. *

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:

Very truly yours, *Robert W. ...*
(Sign Name) Teavoe Oil & Gas, Inc.
Well Operator

Address of Well Operator

19th Fl., Kanawha Valley Bldg.
Street
Charleston,
City or Town
West Virginia
State

W. VA. OIL & GAS CONSERVATION COMMISSION
1613 WASHINGTON STREET, EAST
CHARLESTON, WEST VIRGINIA 25311

*SECTION 3 If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

BLANKET BOND

PUT-915

PERMIT NUMBER

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

Signed by _____

47-079

Survey

THIS IS AN ESTIMATE ONLY
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:
 NAME F.W.A. Drilling Co., Inc. NAME V. C. Smith
 ADDRESS P.O. Box 448, Elkview, W. Va. ADDRESS 1901 Kan. Valley Hdg. Chas. WV
 TELEPHONE 965-3379 TELEPHONE 342-2125
 ESTIMATED DEPTH OF COMPLETED WELL: _____ ROTARY CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Oriskany
 TYPE OF WELL: OIL _____ GAS COMB. _____ STORAGE _____ DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10 <u>103/4</u>	<u>200</u>	<u>200</u>	<u>To surface</u>
9 - 5/8			
8 - 5/8			
7	<u>2300</u>	<u>2300</u>	<u>Anchor packer</u>
5 1/2			
4 1/2			
3	<u>4675</u>	<u>4675</u>	Perf. Top <u>1000 feet</u>
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 40 FEET _____ SALT WATER _____ FEET _____
 APPROXIMATE COAL DEPTHS None known _____
 IS COAL BEING MINED IN THE AREA? No BY WHOM? _____

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.
 OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.
 Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for _____ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.
 We the _____ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

For Coal Company

Official Title