

LATITUDE 39-57-30

39° 00'

N 19-45 W
475.29'

CODE

CARD

S 79 E

3,170.32

WE-SE et. al.

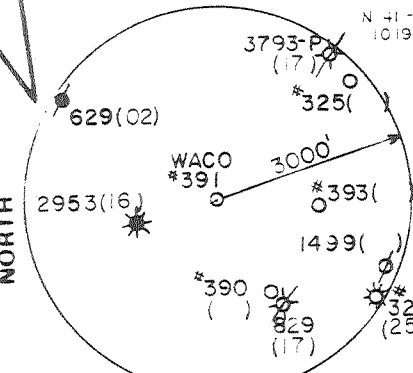
N 45-48 W
445.42'

N 13-25 W
343.69'

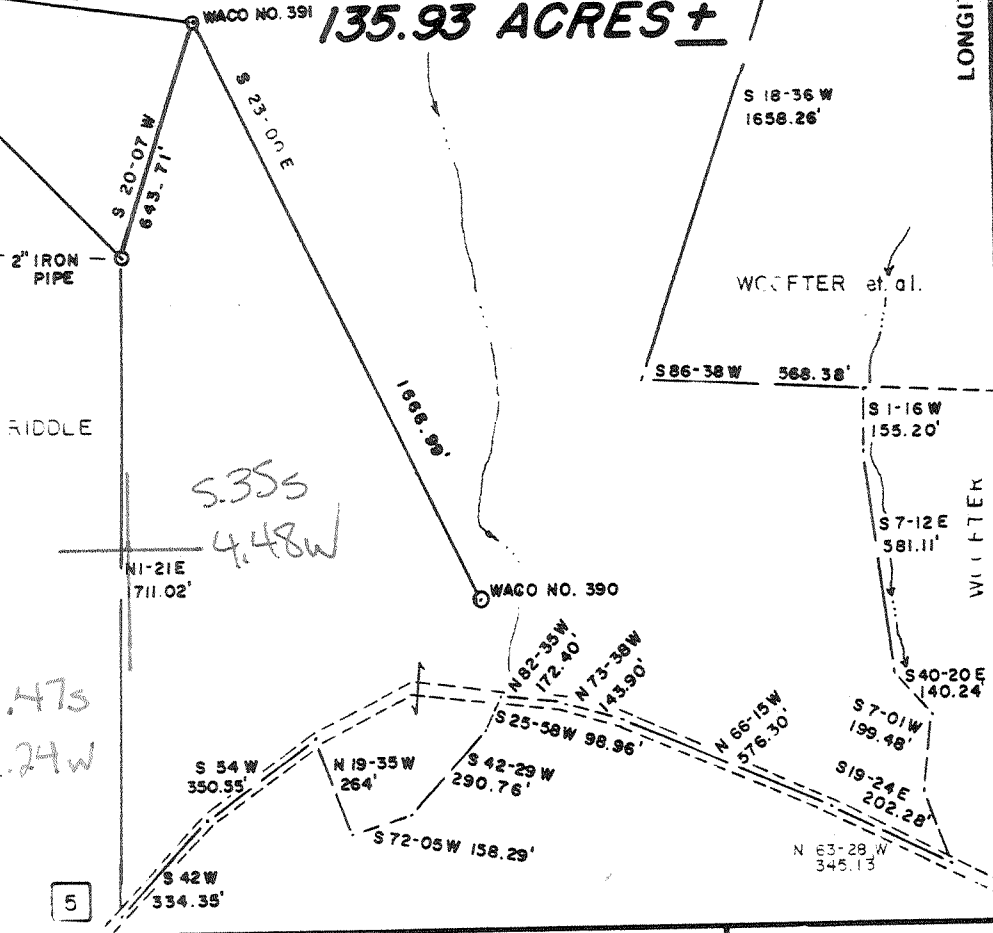
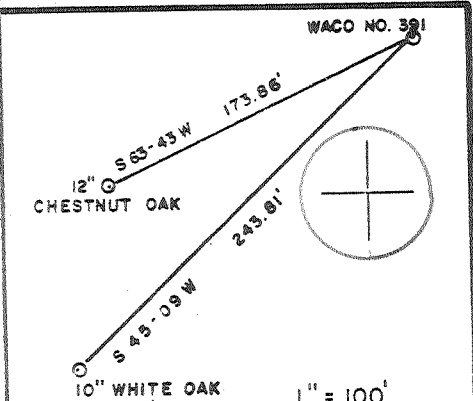
8" CHESTNUT OAK

WOOFTER "C" LEASE WACO WELL NO. 391 WOOFTER 2A

135.93 ACRES ±



REFERENCES



FILE NO. 17-12
DRAWING NO. R.M.
SCALE 1"=500'
MINIMUM DEGREE OF ACCURACY 1/200
PROVEN SOURCE OF ELEVATION BM 706'

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) Gregory A. Smith
R.P.E. _____ L.L.S. 677

PLACE SEAL HERE

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



DATE MARCH 2, 19 85
OPERATOR'S WELL NO. WACO NO. 391
API WELL NO. WCCFTER "C" WELL NO. 2A
47 - 021 - 4332
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA DEPARTMENT OF MINES OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP X SHALLOW ___
LOCATION ELEVATION 1002' WATER SHED LITTLE KANAWHA RIVER
DISTRICT DEKALB 2 COUNTY GILMER
QUADRANGLE TANNER 7.5' 634 Glenville 050 NW1
SURFACE OWNER ALBERT J. WOOFTER ACREAGE 135.93
OIL & GAS ROYALTY OWNER ALBERT J. WOOFTER LEASE ACREAGE 135.93

PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
TARGET FORMATION ORISKANY 933 ESTIMATED DEPTH 6800'
WELL OPERATOR WACO OIL & GAS CO. INC. DESIGNATED AGENT STEPHEN E. HOLLOWAY
ADDRESS P.O. BOX 397 ADDRESS P.O. BOX 397
GLENVILLE, WV 26351 GLENVILLE, WV 26351

APR 29 1985

DEEP WELL 3-6 DeKalb

(179) OPT-oriskany

FERC



State of West Virginia
Department of Mines
Oil and Gas Division

Date October 1, 1985
Operator's
Well No. Waco #391
Farm Woofter #2A
API No. 47 - 021 - 4332

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1002 Watershed Little Kanawha River
District: DeKalb County Gilmer Quadrangle Tanner 7.5'

COMPANY WACO OIL & GAS CO., INC.
ADDRESS PO Box 397, Glenville, WV 26351
DESIGNATED AGENT Stephen E. Holloway
ADDRESS PO Box 397, Glenville, WV 26351
SURFACE OWNER Albert J. Woofter
ADDRESS Parkersburg, WV 26101
MINERAL RIGHTS OWNER Albert J. Woofter
ADDRESS Parkersburg, WV 26101
OIL AND GAS INSPECTOR FOR THIS WORK
Deo Mace ADDRESS Sandridge, WV
PERMIT ISSUED April 18, 1985
DRILLING COMMENCED April 25, 1985
DRILLING COMPLETED May 1, 1985
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	1442	1442	Surf.
7			
5 1/2			
4 1/2		6490	650 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Oriskany Depth 6800 feet
Depth of completed well 6746 feet Rotary X / Cable Tools
Water strata depth: Fresh 35' 170' feet; Salt _____ feet
Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Shale, Alexander, Elk Pay zone depth see treatment feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 1150 Mcf/d Final open flow show Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 1475 psig (surface measurement) after 48 hours shut in
(If applicable due to multiple completion--)
Second producing formation Riley, Balltown, Speed Pay zone depth see treatment 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

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

Shale - 5930 to 6170 - 500 Gal 15% Hcl, 60 Ton CO₂

Upper Elk, Lower Elk, Alexander - 500 Gal 15% Hcl, 60 Ton CO₂

2nd Riley, 3rd Riley - 500 Gal 15% Hcl, 60 Ton CO₂

Balltown, Speechly - 1000 Gal 15% Hcl, 60 Ton CO₂

4806 - 5348
? - 4691
3222 - 4106

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Redrock, Sand & Shale			0	20	
Sand & Shale			20	162	Hole damp @ 35'
Sand, Shale, Redrock			162	170	Fresh Water @ 170'
Sand & Shale			170	309	
Redrock, Sand & Shale			309	540	
Sand & Shale			540	1869	
Little Lime			1869	1875	
Sand & Shale			1879	1920	
Big Lime			1920	1964	
Big Injun			1964	2064	
Shale			2064	2126	
Weir Sand			2126	2200	
Sand & Shale			2200	2640	
Gordon			2640	2648	
Sand & Shale			2648	3222	
Speechly Section			3222	3358	
Balltown Section			3358	4106	
Riley Section			4106	4691	
Benson			4691	4700	
Shale			4700	4806	830 5200
Alexander			4806	4976	835 6100
Elk Section			4976	5348	
Shale			5348	6224	
Onondaga LS			6224	6266	
Huntersville Chert			6266	6432	
Oriskany			6432	6498	
Helderburg Section			6498	6746	TD

expl frg. → $\begin{matrix} 6746 \\ 5348 \\ \hline 1398 \end{matrix}$

(Attach separate sheets as necessary)

WACO OIL & GAS CO., INC.
Well Operator

By: Daniel R. Chapman, Geologist

Date: October 1, 1985

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."

FILE COPY

Geol. Survey



1) Date: April 15, 19 85
 2) Operator's Well No. Waco #391 - Woofter C-2A
 3) API Well No. 47 - 021 - 4332
 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 X /
 B (If "Gas", Production X / Underground storage _____ / Deep X / Shallow _____)
- 5) LOCATION: Elevation: 1002' Watershed: Little Kanawha River
 District: DeKalb County: Gilmer Quadrangle: Tanner 7.5'
- 6) WELL OPERATOR WACO OIL & GAS CO., INC. 7) DESIGNATED AGENT Stephen E. Holloway
 Address PO Box 397 Address PO Box 397
Glenville, Wv 26351 Glenville, WV 26351
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Deo Mace Name I.L. MORRIS WELL SERVICE, INC.
 Address Rt. 1, Box 5 Address PO Box 397
Sandridge, WV 25274 Glenville, WV 26351
- 10) PROPOSED WELL WORK: Drill X / Drill deeper _____ / Redrill _____ / Stimulate X /
 Plug off old formation _____ / Perforate new formation _____
 Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Oriskany
 12) Estimated depth of completed well, 6800 feet
 13) Approximate trata depths: Fresh, 200 feet; salt, None feet.
 14) Approximate coal seam depths: None Is coal being mined in the area? Yes _____

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	Kinds
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor									
Fresh water →						<u>250'</u>	<u>250'</u>	<u>CTS by rule 15.05</u>	
Coal									Sizes
Intermediate	<u>8 5/8</u>	<u>ERW</u>	<u>20#</u>	<u>X</u>		<u>1400</u>	<u>1400</u>	<u>300 sks to surf.</u>	
Production	<u>4 1/2</u>	<u>J-55</u>	<u>10.5#</u>	<u>X</u>			<u>6800</u>	<u>700 sks.</u>	Depths set
Tubing									
Liners									Perforations:
									Top Bottom

DEPT. OF MINES
 OIL & GAS DIVISION
 APR 17 1985
 RECEIVED

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-021-4332 Date April 18, 19 85

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 April 18, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
<u>168</u>	<u>LW</u>	<u>MH MH</u>		<u>1325</u>

Margaret J. Hesse
 Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.

File

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