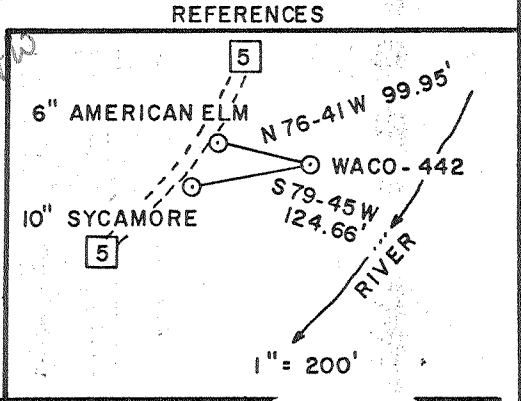
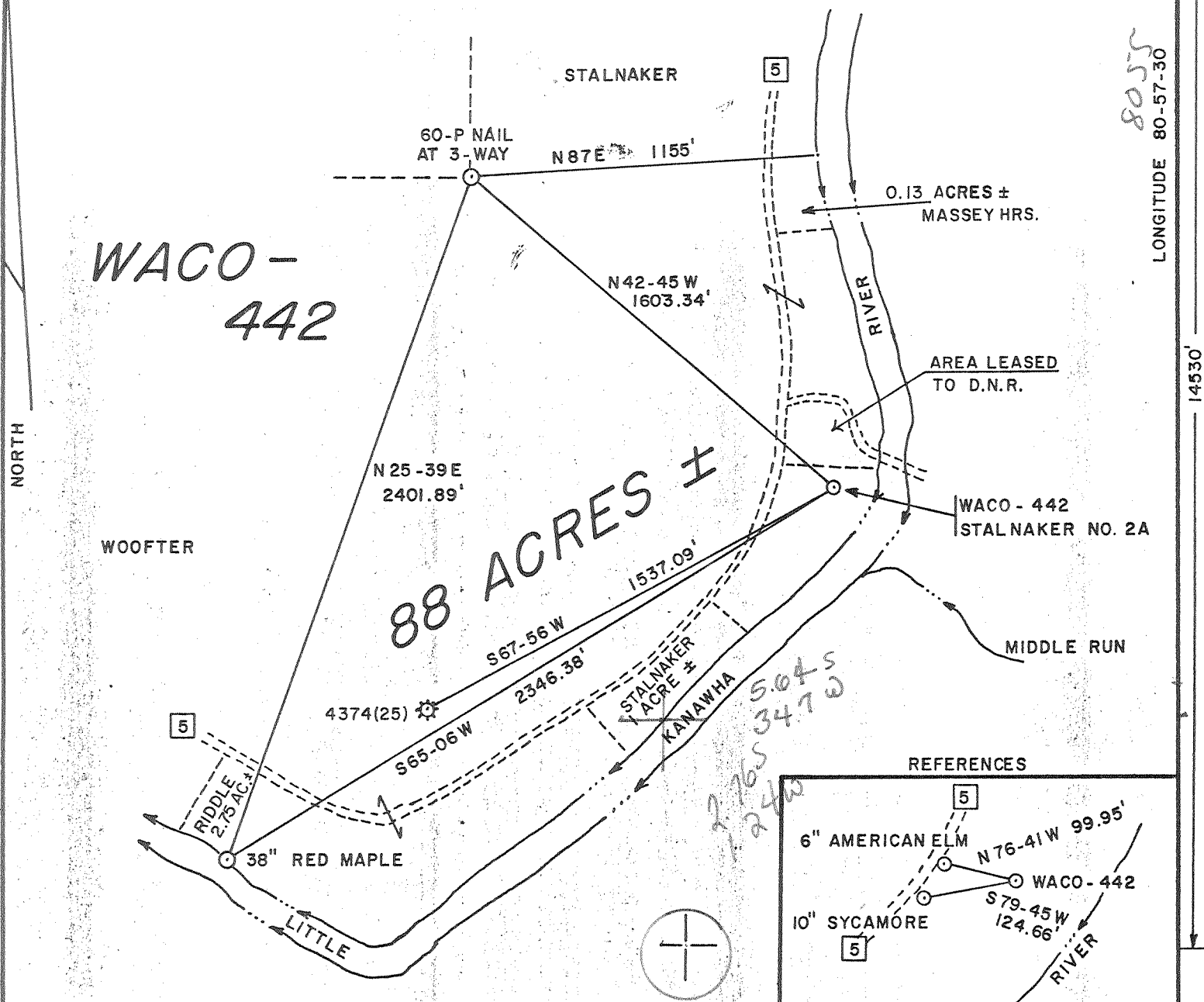


STALNAKER LEASE WELL NO. 2A



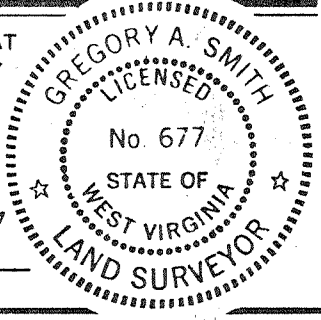
SLS SMITH LAND SURVEYING

NO WELLS WITHIN 1200'

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 DATE MARCH 14, 1986
 OPERATORS WELL NO. WACO-442
 API WELL NO. STALNAKER NO. 2A
47-021-4465
 STATE COUNTY PERMIT

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 ENERGY.

L.L.S. Gregory A. Smith
 677



MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 18-26
 PROVEN SOURCE OF ELEVATION JUNCT. OF RDS. ELEV. = 735' SCALE 1" = 500'



STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

LOCATION: ELEVATION 690' WATERSHED LITTLE KANAWHA RIVER
 DISTRICT DEKALB COUNTY GILMER QUADRANGLE TANNER 7.5 634
 SURFACE OWNER C. F. STALNAKER, JR. ACREAGE 86.87
 OIL & GAS ROYALTY OWNER C. F. STALNAKER, JR., ET. AL. LEASE ACREAGE 88

PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF ___
 OLD FORMATION ___ PERFORATE NEW FORMATION ___ PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 OTHER PHYSICAL CHANGE IN WELL (SPECIFY) ___ TARGET FORMATION ELK
 ESTIMATED DEPTH 5500'

WELL OPERATOR WACO OIL & GAS CO., INC. DESIGNATED AGENT STEPHEN HOLLOWAY
 ADDRESS P.O. BOX 397, GLENVILLE, WV. 26351 ADDRESS P.O. BOX 397, GLENVILLE, WV. 26351

8055
 LONGITUDE 80-57-30

14530

COUNTY NAME

PERMIT

021

4465

575



Date December 29, 1986

Operator's Well No. Waco #442

Farm Stalnaker #2A

API No. 47 - 021 - 4465

State of West Virginia
DEPARTMENT OF ENERGY
Oil and Gas Division

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 ___ / Shallow X /)

LOCATION: Elevation: 690 Watershed Little Kanawha River
District: Deklab County Gilmer Quadrangle Tanner 7.5'

COMPANY Waco Oil & Gas Co., Inc.
ADDRESS P.O. Box 397, Glenville, WV 26351
DESIGNATED AGENT Stephen E. Holloway
ADDRESS P.O. Box 397, Glenville, WV 26351
SURFACE OWNER C. F. Stalnaker
ADDRESS Glenville, WV
MINERAL RIGHTS OWNER C.F. Stalnaker et.al.
ADDRESS Glenville, WV
OIL AND GAS INSPECTOR FOR THIS WORK Craig Duckworth
ADDRESS Gassaway, WV
PERMIT ISSUED May 7, 1986
DRILLING COMMENCED December 4, 1986
DRILLING COMPLETED December 9, 1986
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 Codd.	28	0	-
13-10"	204	204	110 sks
9 5/8			
8 5/8	1543	440	40 sks
7			
5 1/2			
4 1/2		5844	630 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Elk Depth 5500 feet
Depth of completed well 5902 feet Rotary X / Cable Tools _____
Water strata depth: Fresh _____ feet; Salt 1172 feet
Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Shale, Elk, Alexander Pay zone depth See Treatment feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 1205 Mcf/d Final open flow show Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 1545 psig (surface measurement) after 48 hours shut in
(If applicable due to multiple completion--)
Second producing formation Riley Balltown Speechly 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

(Continue on reverse side)

APR 20 1987

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

- 1st Stage: Shale (5801-5605) 500 gal 15% HCL, 25 ton CO₂, 398 mcf N₂
- 2nd Stage: Elk, Alexander (4764-4545) 500 gal 15% HCL, 35 ton CO₂, 565 mcf N₂
- 3rd Stage: Riley (4240-3980) 500 Gal 15% HCL, 40 ton CO₂, 528 mcf N₂
- 4th Stage: Balltown (3654-3304) 100 Gal 15% HCL, 80 ton CO₂, 770 mcf N₂
- 5th Stage: Speechly, (2930-2888) 500 Gal 15% HCL, 20 ton CO₂, 520 mcf N₂

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Dirt			0	25	
Sand & Shale			25	148	
Redrock, sand & shale			148	237	
Sand & Shale			237	1492	
Little Lime			1492	1516	
Blue Monday			1534	1651	
Big Injun			1651	1677	
Sand & Shale			1677	2897	
Speechly Section			2897	3205	
Shale			3205	3290	
Balltown Section			3290	3846	
Riley Section			3846	4241	
Shale			4241	4302	
Benson			4302	4309	
Shale			4309	4528	
Alexander			4528	4589	
Shale			4589	4715	
Elk Section			4715	4979	
Shale			4979	5838	
Marcellus			5838	5982	
Onondaga			5882	5902	

404 1927
 813 3002
 822 4327
 825 4577
 830 4877

5882
 670
 5192

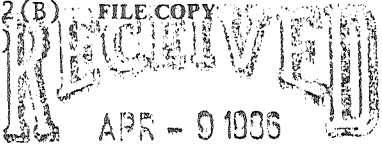
(Attach separate sheets as necessary)

Waco Oil & Gas Co., Inc.
 Well Operator

By: David R. Chapman, Geologist

Date: December 29, 1986

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."



1) Date: March 27, 1986
 2) Operator's Well No. Waco #442 - Stalnaker 2A
 3) API Well No. 47 - 021 - 4465
 State _____ County _____ Permit _____

DIVISION OF OIL & GAS STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY, 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 _____ / Shallow X /)
- 5) LOCATION: Elevation: 690' Watershed: Little Kanawha River
 District: DeKalb 933 County: Gilmer Quadrangle: Tanner 7.5'
- 6) WELL OPERATOR WACO OIL & GAS COCODE: 57800 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 Craig Duckworth Name I.L. Morris Well Service, Inc.
 Address Box 107, Davisson Rt. Address PO Box 397
Gassaway, WV 26624 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, Elk 436
- 12) Estimated depth of completed well, 5500 feet
 13) Approximate trata depths: Fresh, 40 to 24 feet; salt, 752 feet.
 14) Approximate coal seam depths: None Is coal being mined in the area? Yes _____ / No X /

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.	New	Used	For drilling	Left in well		Kinds	Sizes
Conductor										
Fresh water	<u>11 3/4</u>					<u>155</u>	<u>155</u>	<u>TO SURFACE</u>	<u>Per Rule 15.05</u>	
Coal										
Intermediate	<u>8 5/8</u>	<u>ERW</u>	<u>20#</u>	<u>X</u>		<u>900</u>	<u>900</u>	<u>258 sks</u>		
Production	<u>4 1/2</u>	<u>J-55</u>	<u>10.5#</u>	<u>X</u>			<u>5500</u>	<u>625 sks</u>	<u>Depths set</u>	
Tubing										
Lin...									<u>Perforations:</u>	
									<u>Top</u>	<u>Bottom</u>

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-021-4465 Date May 7 19 86

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 7, 1988 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>✓</u>	Agent: <u>KB</u>	Plat: <u>AS</u>	Casing: <u>AS</u>	Fee: <u>1593</u>	WPCP: <u>AS</u>	S&E: <u>AS</u>	Other: _____
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John H. Johnston by Margaret J. Hass
 Director, Division of Oil and Gas File _____

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