

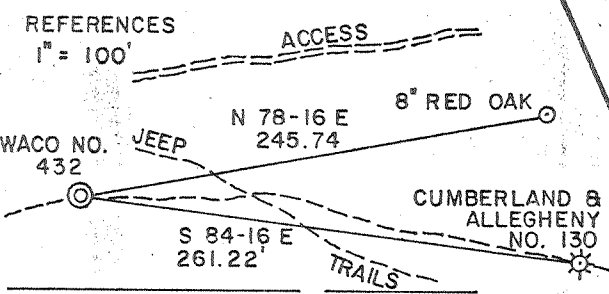
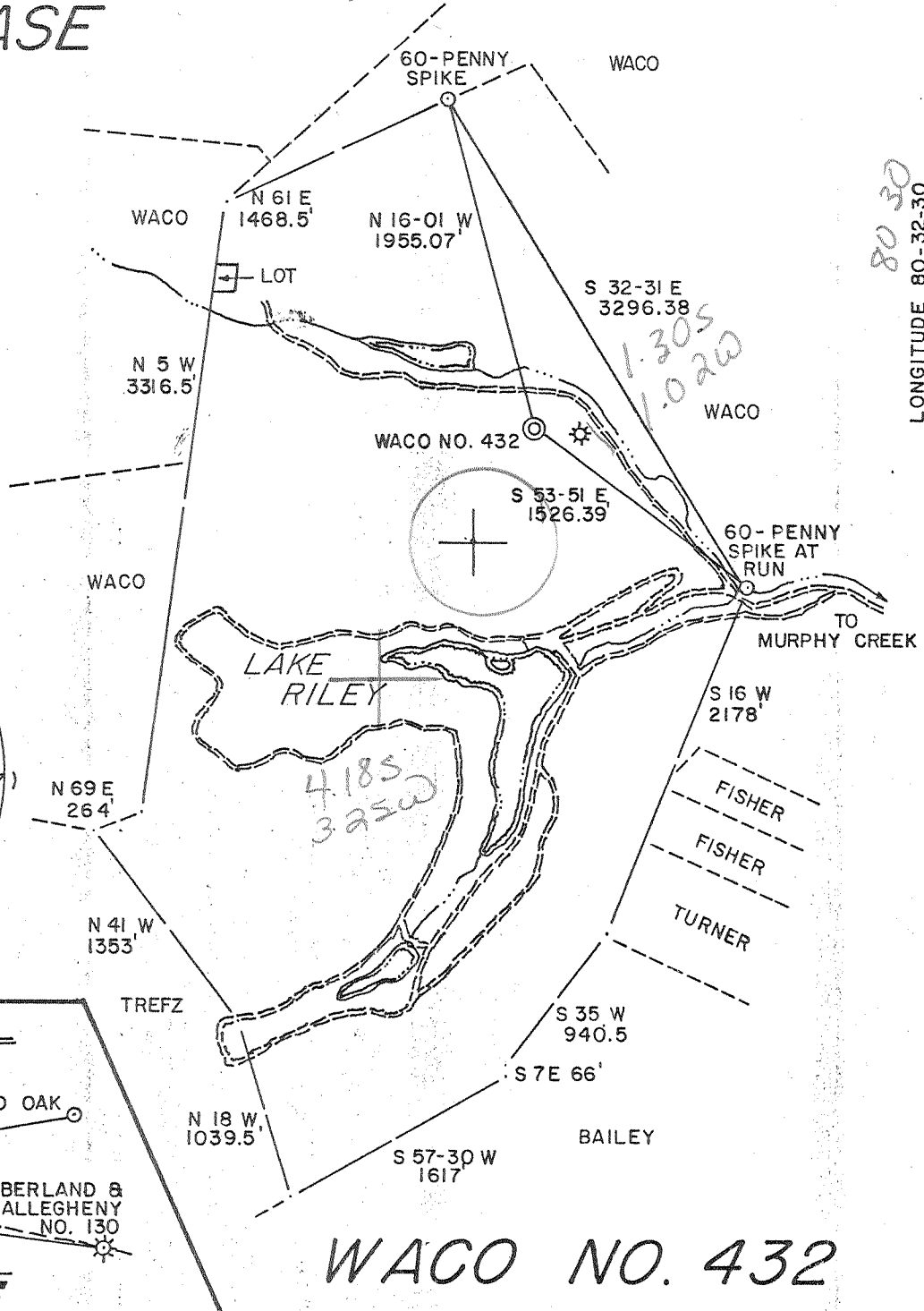
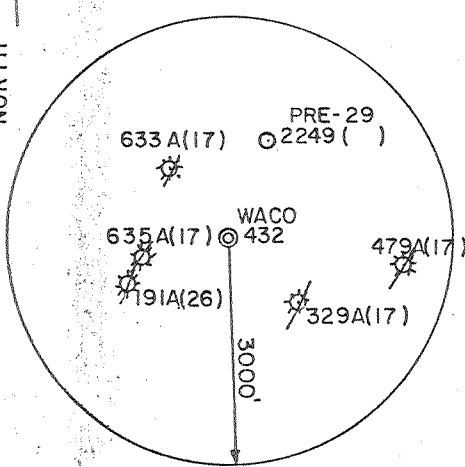
PAR LEASE

*P/O 375
ACRES ±*

*WELL
NO. 1*

NORTH

80 30
LONGITUDE 80-32-30
6810



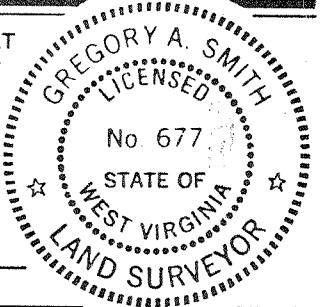
SLS SMITH LAND SURVEYING

WACO NO. 432

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 DATE MARCH 17TH, 1986
 OPERATORS WELL NO. PAR NO. 1
 API WELL NO. WACO NO. 432
47 - 041 - 3703
 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. 677 *Gregory A. Smith*



MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 18-70
 PROVEN SOURCE OF ELEVATION TOP OF KNOB 1428' SCALE 1"=1000'



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 X SHALLOW ___

LOCATION: ELEVATION 1225' WATERSHED JACKS HOLLOW OF MURPHY CREEK *Vadis*
 DISTRICT COURT HOUSE COUNTY LEWIS QUADRANGLE CAMDEN 7.5' *276*
 SURFACE OWNER WACO OIL & GAS CO. INC. ACREAGE 342.25 *123*
 OIL & GAS ROYALTY OWNER WACO OIL & GAS CO. INC. et. al. LEASE ACREAGE 375 *569*

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 ORISKANY
 ESTIMATED DEPTH 7450'

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

COUNTY NAME 041
 PERMIT 3703

WR-35

Free
Filling
7.31.86



State of West Virginia

DEPARTMENT OF ENERGY
Oil and Gas Division

Date June 17, 1986
Operator's
Well No. Waco #432
Farm Par #1
API No. 47 - 041 - 3703

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: 1225' Watershed Jacks Hollow
District: Court House County Lewis Quadrangle Camden 7.5'

COMPANY WACO OIL AND GAS CO., INC.
ADDRESS PO Box 397, Glenville, WV 26351
DESIGNATED AGENT Stephen E. Holloway
ADDRESS PO Box 397, Glenville, WV 26351
SURFACE OWNER Waco Oil & Gas Co., Inc.
ADDRESS PO Box 397, Glenville, WV 26351
MINERAL RIGHTS OWNER Waco Oil & Gas Co., Inc.
ADDRESS PO Box 397, Glenville, WV 26351
OIL AND GAS INSPECTOR FOR THIS WORK Stephen Casey ADDRESS Jane Lew, WV
PERMIT ISSUED May 6, 1986
DRILLING COMMENCED May 18, 1986
DRILLING COMPLETED May 27, 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 Cond.			
13-10"			
9 5/8			
8 5/8	1007	1007	Surf.
7			
5 1/2			
4 1/2		6325	860 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Oriskany Depth 7450 feet
Depth of completed well 7677 feet Rotary X / Cable Tools
Water strata depth: Fresh 184 feet; Salt ___ feet
Coal seam depths: 721-726' Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Sycamore Grit, Benson, Riley Pay zone depth see treatment feet
Gas: Initial open flow ___ Mcf/d Oil: Initial open flow ___ Bbl/d
Final open flow 1710 Mcf/d Final open flow show Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 1260 psig (surface measurement) after 48 hours shut in
(If applicable due to multiple completion--)
Second producing formation Balltown, Speechly, Bayard 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

DEC 15 1986

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

- 1st Stage: Sycamore Grit (6240-6206) 500 gal 15% Hcl, 40 ton CO₂, 656 MCF N₂
 2nd Stage: Benson (4916-4841) 600 gal 15% Hcl, 25 MCF N₂, 50000# 20/40, 562 bbl h₂o
 3rs Stage: Riley (4743-3885) 600 gal 15% Hcl, 40 ton CO₂, 637 MCF N₂
 4th Stage: Balltown, Speechly (3734-3122) 1000 gal 15% Hcl, 60 ton CO₂, 666 MCF N₂
 5th Stage: Bayard (2820-2805) 800 gal 15% Hcl, 20 ton CO₂, 530 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
Shale			0	25	
Shale & Redrock			25	95	
Sand, Shale & Redrock			95	721	Fresh Water @ 184'
Coal			721	726	Coal @ 721'-726'
Sand, Shale & Redrock			726	840	
Sand & Shale			840	1685	
Redrock			1685	1765	
Sand & Shale			1765	1827	
Little Lime			1827	1840	
Shale			1840	1858	
Big Lime			1858	2028	
Big Injun			2028	2043	
Shale			2043	2350	
Gantz			2350	2356	
Sand & Shale			2356	2480	
Gordon			2480	2567	
Shale			2567	2720	
Fifth Sand			2720	2733	
Shale			2733	2797	
Bayard			2797	2822	
Shale			2822	3101	
Speechly Section			3101	3300	
Balltown Section			3300	3736	
Riley Section			3736	4764	
Shale			4764	4840	
Benson			4840	4918	
Shale			4918	4100	
(Attach separate sheets as necessary)					
Alexander		5100	5176		
Shale		5176	6184		
Spencer Grit		6184	6250		
Shale		6250	7027		
Tully Lime		7027	7063		
Shale		7063	7165		
Marcellus		7165	7221		
Onondaga Lime		7221	7255		
Huntersville					
Chert		7255	7479		
Oriskany		7479	7559		

WACO OIL AND GAS CO., INC.
Well Operator

By: Daniel R. Chapman, Geologist

Date: June 17, 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: April 25, 1986

2) Operator's Waco #432 - Par No. 1
Well No.

3) API Well No. 47 - 041 - 3703
State County Permit

RECEIVED
MAY = 6 1986

STATE OF WEST VIRGINIA

DEPARTMENT OF ENERGY, OIL AND GAS DIVISION

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil / Gas /
B (If "Gas", Production / Underground storage / Deep / Shallow)
- 5) LOCATION: Elevation: 1225' / Watershed: Jacks Hollow
District: Court House / County: Lewis / Quadrangle: Camden 7.5'
- 6) WELL OPERATOR WACO OIL & GAS CO. CODE: 51800 / 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
Name Stephen Casey / Name I.L. MORRIS WELL SERVICE, INC.
Address Rt. 2, Box 232-D / Address PO Box 397
Jane Lew, WV 26378 / Glenville, WV 26351
- 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate /
Plug off old formation / Perforate new formation /
Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Oriskany 425
12) Estimated depth of completed well, 7450 feet
13) Approximate trata depths: Fresh ~~200'~~ None feet; salt, None feet.
14) Approximate coal seam depths: 291-293 Is coal being mined in the area? Yes / No

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		
Conductor									Kinds
Fresh water									
Coal									Sizes
Intermediate	8 5/8	ERW	20#	X		880	880	252 sks	CTS Per Rule 15.05
Production	4 1/2	J-55	10.5#	X			7450	525 sks	Depths set
Tubing								OR AS REQUIRED BY RULE	
Lin...								15.01	Perforations:
									Top Bottom

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-041-3703

May 6 1986
Date

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 6, 1988 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Plat: <input checked="" type="checkbox"/>	Casing: <input checked="" type="checkbox"/>	Fee: 1601	WPCP: <input checked="" type="checkbox"/>	S&E: <input checked="" type="checkbox"/>	Other: <input type="checkbox"/>
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John H. Johnston by Margaret J. Hasse
Director, Division of Oil and Gas

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

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

File