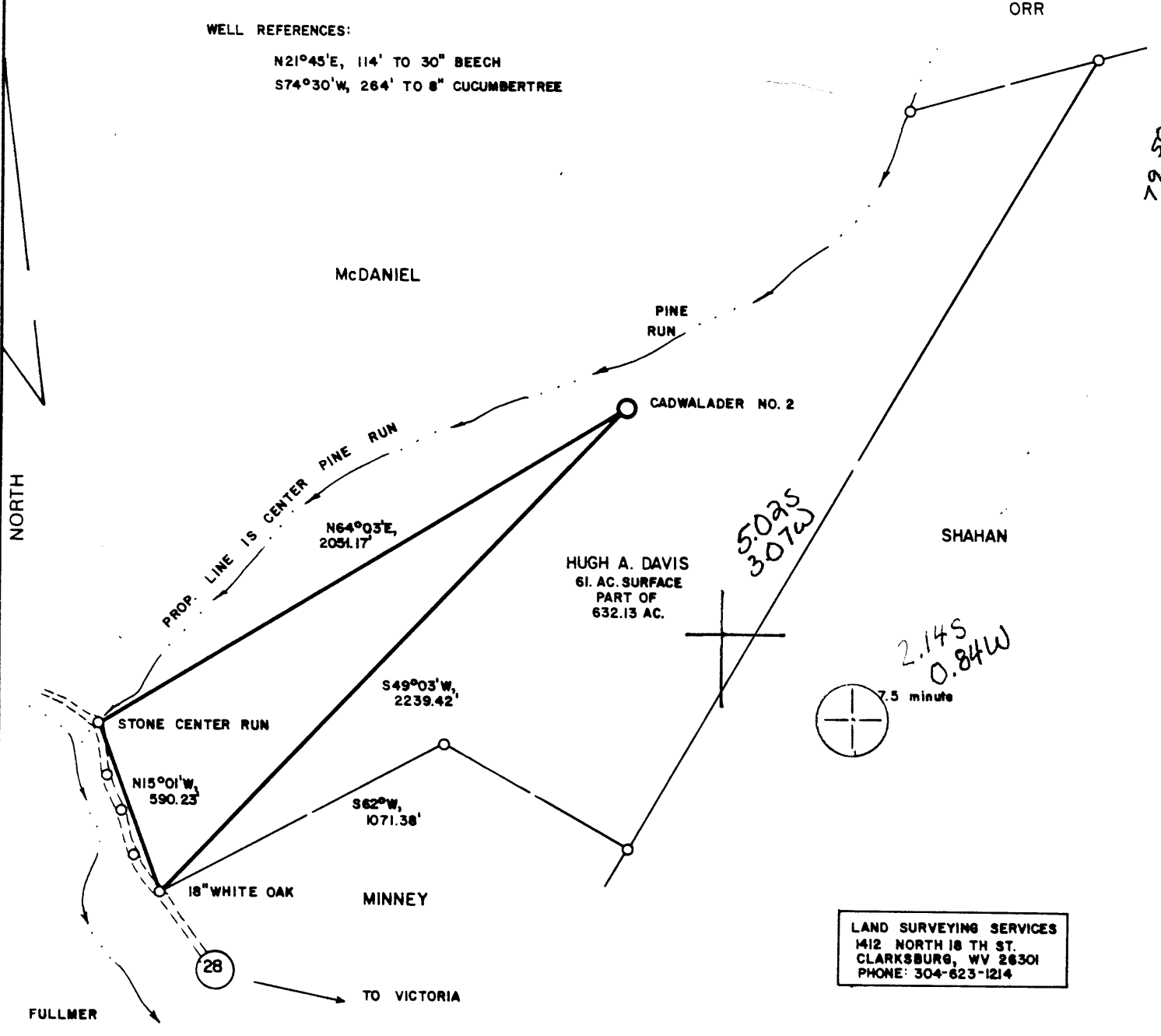


WELL REFERENCES:  
 N21°45'E, 114' TO 30" BEECH  
 S74°30'W, 264' TO 8" CUCUMBERTREE

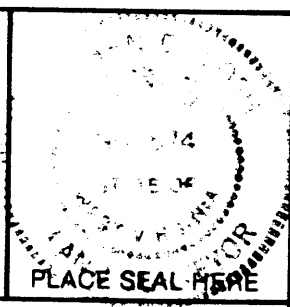


LAND SURVEYING SERVICES  
 1412 NORTH 18 TH ST.  
 CLARKSBURG, WV 26301  
 PHONE: 304-623-1214

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION ROAD INTERSECTION  
 3075' SW OF LOC. ELEV 1306'

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) Stephen D. Losh  
 R.P.E. \_\_\_\_\_ L.L.S. NO. 674  
 STEPHEN D. LOSH



STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION



DATE NOVEMBER 16, 19 84  
 OPERATOR'S WELL NO. CADWALADER NO. 2  
 API WELL NO. 47-077-0242  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
 LOCATION: ELEVATION 1517' WATER SHED PINE RUN OF LAUREL RUN  
 DISTRICT LYON 3 COUNTY PRESTON  
 QUADRANGLE GLADESVILLE 7.5 min. 368 Thorton 15' NC2  
 SURFACE OWNER HUGH A. DAVIS ACREAGE 61  
 OIL & GAS ROYALTY OWNER HEIRS OF LOUISE CADWALADER LEASE ACREAGE 632.13  
 LEASE NO. WV-0488  
 PROPOSED WORK: DRILL X 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 HAVERTY ESTIMATED DEPTH 5990'  
 WELL OPERATOR SWIFT ENERGY COMPANY DESIGNATED AGENT TIM BENNETT  
 ADDRESS P. O. BOX 2201 ADDRESS P. O. BOX 2201  
 855 CLARKSBURG, WV 26301 6-6 Fetterman (373) CLARKSBURG, WV 26301

JAN 14 1985

FORM IV-6 (8-78)  
 H.T. HALL

COUNTY NAME  
 PERMIT

# RECEIVED

MAR 1 - 1985

OIL & GAS DIVISION  
DEPT. OF MINES



Date 02-19-85  
Operator's  
Well No. Cadwalader No. 2  
Farm \_\_\_\_\_  
API No. 47 - 077 - 0242

IV-35  
(Rev 8-81)

State of West Virginia  
Department of Mines  
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 \_\_\_ /)

LOCATION: Elevation: 1517' Watershed Pine Run of Laurel Run  
District: Lyon County Preston Quadrangle Gladesville 7.5

COMPANY Swift Energy Company  
ADDRESS 652 E. North Belt, #200, Houston, TX  
DESIGNATED AGENT Tim Bennett 77060  
ADDRESS P.O. Box 2201, Clarksburg, WV 26301  
SURFACE OWNER Hugh A. Davis  
ADDRESS Rt. 8, Box 358, Fairmont, WV 26554  
MINERAL RIGHTS OWNER Louise Cadwalader Heirs  
c/o Freda Cadwalader  
ADDRESS 820 South Inez St., Hemet, CA 92343  
OIL AND GAS INSPECTOR FOR THIS WORK \_\_\_\_\_  
Don Ellis ADDRESS 2604 Crabapple Ln.  
Fairmont, WV 26554  
PERMIT ISSUED 11-30-85  
DRILLING COMMENCED 12-11-84  
DRILLING COMPLETED 12-16-84  
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 Cord.			
13-10"			
9 5/8			
8 5/8		623'	180 sks.
7			
5 1/2			
4 1/2		2873'	400 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Haverty Depth 5990 feet  
Depth of completed well 5999 feet Rotary X / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh \_\_\_\_\_ feet; Salt \_\_\_\_\_ feet  
Coal seam depths: 197'-203'; 264'-270'; 453'-457' Is coal being mined in the area? No

OPEN FLOW DATA  
Producing formation \*Speechley Pay zone depth 2691 feet  
Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow (2477) Mcf/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 4 hours  
Static rock pressure 650 psig (surface measurement) after 12 hours shut in  
(If applicable due to multiple completion--)  
Second producing formation 4th Sand & 4th Sand Pay zone depth 1922 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

\*Gas comingled

MAR 11 1985 (Continue on reverse side)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.  
12-20-84

Speechley: 2684'-2698' SCF N<sub>2</sub>, 10,000# 80-100 SD; 32,500# 20-40 SD;  
500 GA, 423 BGW.

L. 4th Sand: 1963'-1975' SCF N<sub>2</sub>, 60,000# 20-40 SD; 500 GA, 486 BGW.

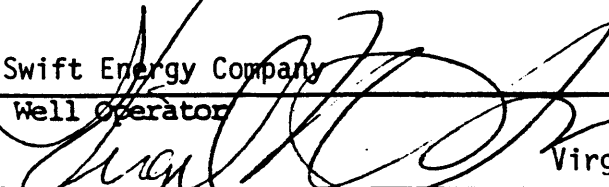
4th Sand: 1869'-1890' SCF N<sub>2</sub>, 80,000# 20-40 SD, 500 GA, 485 BGW.

PBTD: 3,000'

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sand & Shale			40	197	Gas check @ 1104' - no show
Coal			197	203	
Sand & Shale			203	264	" @ 1607' - "
Coal			264	270	" @ 2018' -Strong odor, no reading
Sand & Shale			270	453	" @ 3014' -odor, no readin
Coal			453	457	" @ 4011' - " "
Sand & Shale			457	536	" @ 4668' - " "
Red Rock & Shale			536	565	" @ 5999' - 2/10-2" water (T.D.)
Sand			565	567	
Red Rock			567	578	" @collars up- odor, no reading
Sand & Shale			578	612	
Red Rock & Shale			612	642	
Sand & Shale			642	781	
Shale & Red Rock			781	819	
Little Lime			819	832	
Shale & Red Rock			832	857	
Stray Lime			857	865	
Shale			865	875	
Big Lime			875	973	
Sand & Shale			973	1919	
Shale & Red Rock			1919	2020	
Sand & Shale			2020	5999	
				T.D.	
				Brallies	
				@ TD	

(Attach separate sheets as necessary)

Swift Energy Company  
Well Operator  
By:  Virgil N. Swift  
Date: 02-19-85

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."

**RECEIVED**

NOV 10 1984



1) Date: November 16, 1984  
 2) Operator's Well No. Cadwalader #2  
 3) API Well No. 47 - 077 - 0242  
 State \_\_\_\_\_ County \_\_\_\_\_ Permit \_\_\_\_\_

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES, OIL AND GAS DIVISION  
 OIL & GAS DIVISION  
 DEPT. OF MINES  
**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: 1517' Watershed: Pine Run of Laurel Run  
 District: Lyon County: Preston Quadrangle: Gladesville 7.5 mi
- 6) WELL OPERATOR Swift Energy Company 7) DESIGNATED AGENT Tim Bennett  
 Address P.O. Box 2201 Address P.O. Box 2201  
Clarksburg, WV 26301 Clarksburg, WV 26301
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:  
 Name Don Ellis Name Unknown  
 Address 2604 Crab Apple Lane Address \_\_\_\_\_  
Fairmont, WV 26554
- 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, Haverty
- 12) Estimated depth of completed well, 5990 feet
- 13) Approximate trata depths: Fresh, 30-500 feet; salt, 850 feet.
- 14) Approximate coal seam depths: 50, 170, 300, 385 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		
Conductor	1 13/4	H-40	42#	X		30			Kinds
Fresh water									
Coal									Sizes
Intermediate	8 5/8	ERW	20#	X		600	600	To Surface	by Rule 15.05
Production	4 1/2	ERW	10 1/2	X		5075		As Required	by Rule 15.01
Tubing									
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY  
**DRILLING PERMIT**

Permit number 47-077-0242 Date November 30, 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 November 30, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>152</u>	Agent: <u>MU</u>	Plat: <u>TS</u>	Casing: <u>TS</u>	Fee: <u>1193</u>
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*Margaret J. Hesse*  
 Administrator, Office 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