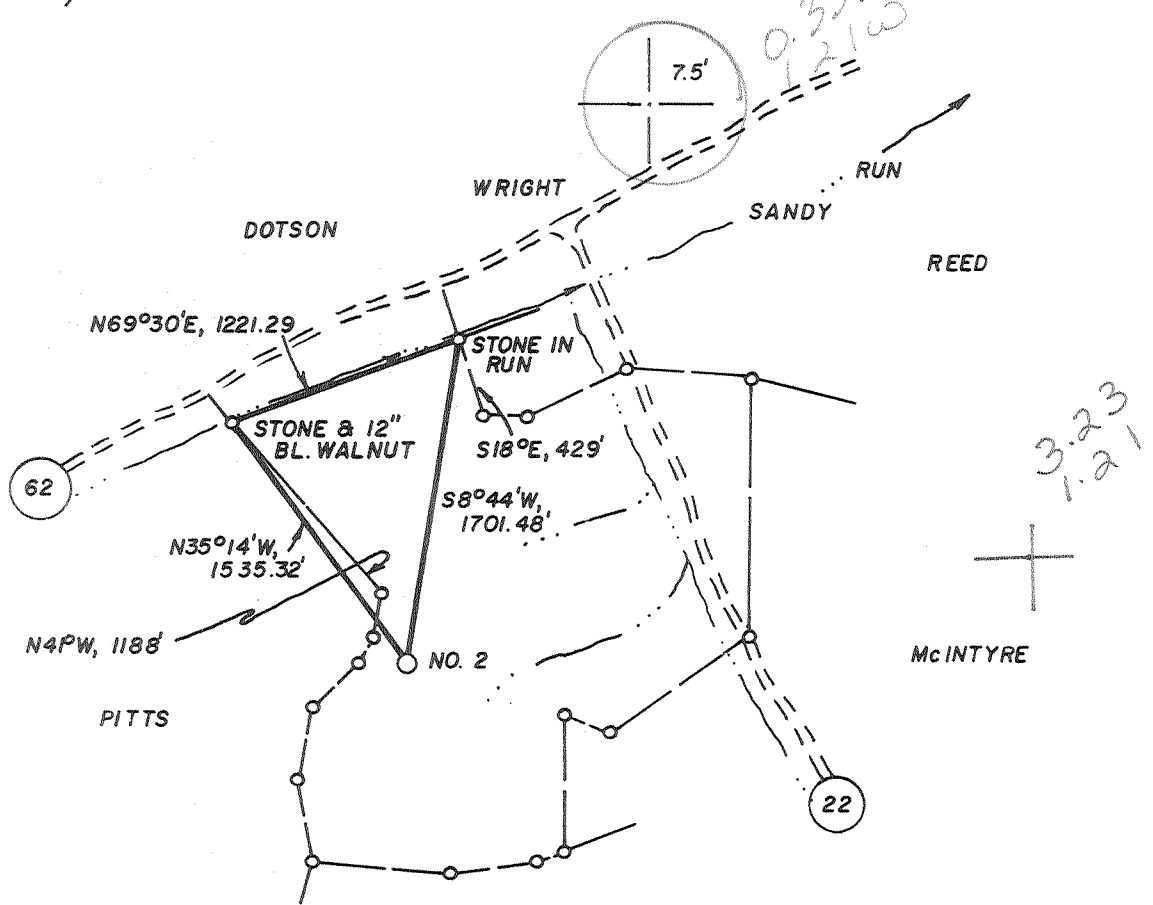


Jamie 8/18/89

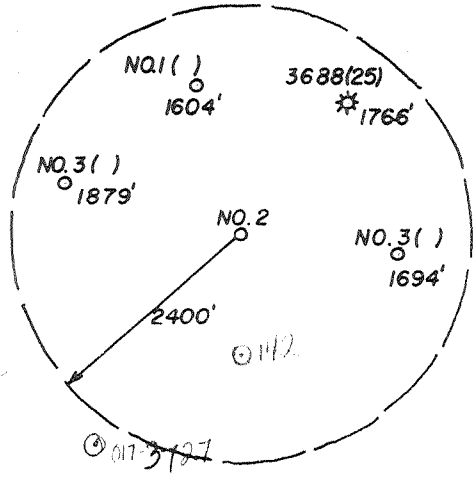
6440'

LATITUDE 39° 22' 30"



**WELL REFERENCES:**

- N15°E, 107' TO 13" BLACK OAK
- N76°W, 94' TO 6" WHITE OAK



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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1,000'  
 MINIMUM DEGREE OF ACCURACY 1 IN 200  
 PROVEN SOURCE OF ELEVATION TOP OF KNOB 1150'  
SW. OF LOC. AT ELEV. 1307'

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.  
 (SIGNED) \_\_\_\_\_  
 R.P.E. \_\_\_\_\_ L.L.S. NO. 674  
**STEPHEN D. LOSH**



**STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION**



DATE JUNE 28, 19 89  
 OPERATOR'S WELL NO. SANDY 2  
 API WELL NO. 47-017-3745

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
 LOCATION: ELEVATION 1170' WATER SHED SANDY RUN  
 DISTRICT GRANT 3 COUNTY DODDRIDGE  
 QUADRANGLE WEST UNION 7.5' 671 1336 +15' EC  
 SURFACE OWNER BRADFORD REED ACREAGE 104  
 OIL & GAS ROYALTY OWNER WILLIAM SANDY LEASE ACREAGE 637  
 LEASE NO. \_\_\_\_\_  
 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 BENSON ESTIMATED DEPTH 5450'  
 WELL OPERATOR STONEWALL GAS CO. DESIGNATED AGENT CHARLES CANFIELD  
 ADDRESS P.O. DRAWER R ADDRESS P.O. DRAWER R  
JANE LEW, WV 26378-0080 JANE LEW, WV 26378-0080

SEP 1 1989

6-6 Wilbur (092)

LONGITUDE 80° 45' 00"

COUNTY NAME

PERMIT

REC'D  
AUG 06 90  
Permitting  
Oil and Gas Section

State of West Virginia  
DEPARTMENT OF ENERGY  
Division of Oil and Gas

Well Operator's Report of Well Work

Farm name: REED, BRADFORD D. Operator Well No.: SANDY #2

LOCATION: Elevation: 1170.00 Quadrangle: WEST UNION

District: GRANT County: DODDRIDGE  
Latitude: 1880 Feet South of 39 Deg. 22Min. 30 Sec.  
Longitude: 6440 Feet West of 80 Deg. 45 Min. 0 Sec.

Company: STONEWALL GAS CO.  
P. O. BOX 1575  
RICHMOND, VA 23213-1575

Agent: JESSE SHELL

Inspector: MIKE UNDERWOOD  
Permit Issued: 08/30/89  
Well work Commenced: 06-07-90  
Well work Completed: 06-15-90  
Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth (feet) 5401  
Fresh water depths (ft) \_\_\_\_\_  
70, 220  
Salt water depths (ft) \_\_\_\_\_  
1930, 1959  
Is coal being mined in area (Y/N)? N  
Coal Depths (ft): NA

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4	176	176	90 SKS
8 5/8	1367	1367	360 SKS
4 1/2	5236	5236	710 SKS

OPEN FLOW DATA

Producing formation BENSON Pay zone depth (ft) 5147  
Gas: Initial open flow \* \_\_\_\_\_ MCF/d Oil: Initial open flow N/A Bbl/d  
Final open flow 1632 MCF/d Final open flow 0 Bbl/d  
Time of open flow between initial and final tests 1 HR Hours  
Static rock Pressure 1625 psig (surface pressure) after 168 Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

\*UNABLE TO DETERMINE DUE TO NATURAL OPEN FLOW FROM INJUN

For: STONEWALL GAS CO.

By: [Signature] PETROLEUM ENGINEER  
Date: AUGUST 3, 1990

AUG 10 1990

0 0 204

STAGES 1 ZONES	FRAC WATER PERFS	DATE	JULY 10, 1990	Holes	BBL	BP	ISIP
BENSON	5147-5154			21	800	1854	1650

FORMATION	COLOR	HARD/SOFT	TOP	BOTTOM	REMARKS
SAND	BROWN	SOFT	0	10	
RED ROCK	RED	HARD	10	18	
SAND	BROWN	HARD	18	40	
RED ROCK & SHALE	GRAY	HARD	40	120	
SAND & SHALE	GRAY	SOFT	120	230	
RED ROCK & SHALE	RED	HARD	230	360	
SAND & SHALE	BROWN	HARD	360	560	
SHALE & RED ROCK	GRAY	HARD	560	580	
SAND	BROWN	SOFT	580	640	
SAND & SHALE	BROWN	HARD	640	795	
COAL	BLACK	SOFT	795	800	
SAND & SHALE	BROWN	SOFT	800	960	
SHALE & RED ROCK	GRAY	SOFT	960	1120	
SAND	BROWN	SOFT	1120	1270	
SAND & SHALE	BROWN	HARD	1270	1475	
RED ROCK & SHALE	GRAY	HARD	1475	1670	
SAND & SHALE	GRAY	SOFT	1670	1928	
SAND	BROWN	SOFT	1928	1995	
RED ROCK	RED	HARD	1995	2032	
L-LIME	BROWN	SOFT	2032	2150	
INJUN	GRAY	SOFT	2150	2285	
SAND & SHALE	GRAY	HARD	2285	2845	
GORDON	GRAY	SOFT	2845	2905	
SAND & SHALE	GRAY	SOFT	2905	4710	
RILEY	BROWN	SOFT	4710	4815	
SAND & SHALE	GRAY	SOFT	4815	5148	
BENSON	GRAY	SOFT	5148	5185	
SAND & SHALE	GRAY	HARD	5185	5401	
TD			5401		

4413

**STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS  
 WELL WORK PERMIT APPLICATION**

- 1) Well Operator: Stonewall Gas Company <sup>247</sup> 47850 (3) 670
- 2) Operator's Well Number: Sandy #2 3) Elevation: 1170
- 4) Well type: (a) Oil  or Gas  /  
 (b) If Gas: Production  / Underground Storage  /  
 Deep  / Shallow
- 5) Proposed Target Formation(s): Benson 435
- 6) Proposed Total Depth: 5350 feet
- 7) Approximate fresh water strata depths: 128' / 190'
- 8) Approximate salt water depths: 1350'
- 9) Approximate coal seam depths: N/A Coal Blossom @ 798
- 10) Does land contain coal seams tributary to active mine? Yes  / No
- 11) Proposed Well Work: Drill & Stimulate New Well
- 12)

**CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor	11 3/4	ERW	42#	135'	135'	38 CSR 18-11.3
Fresh Water					4 1/2'	<i>[Signature]</i>
Coal						38 CSR 18-11.2.2
Intermediate	8 5/8	ERW	23#	1400'	1400'	38 CSR 18-11.3
Production	4 1/2	ERW	10.5#	5350'	5350'	38 CSR 18-11.1
Tubing						
Liners						

**RECEIVED**  
 AUG 14 1989

PACKERS : Kind \_\_\_\_\_  
 Sizes \_\_\_\_\_  
 Depths set \_\_\_\_\_

DIVISION OF OIL & GAS  
 DEPARTMENT OF ENERGY

For Division of Oil and Gas Use Only

Fee(s) paid: *[Signature]* Well Work Permit *[Signature]* Reclamation Fund *[Signature]* WPCP  
*[Signature]* plat *[Signature]* WW-9 *[Signature]* WW-28 *[Signature]* Bond *[Signature]* Blanket *[Signature]* Agent

**RECEIVED**  
AUG 14 1989

Date: AUGUST 10, 1989  
Operator's well number  
SANDY #2 (419-S)  
API Well No: 47 - 017 - 3745  
State - County - Permit

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:  
(a) Name BRADFORD D. REED  
Address PO BOX 134  
SHIRLEY, WV 26434  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_

5) (a) Coal Operator:  
Name N/A  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name SAME AS SURFACE  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_

6) Inspector MIKE UNDERWOOD  
Address RT 2, BOX 135  
SALEM, WV 26426  
Telephone (304)- 782-1043

(c) Coal Lessee with Declaration  
Name N/A  
Address \_\_\_\_\_

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

\_\_\_\_\_ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR  
X Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_\_\_ on the above named parties, by:

- \_\_\_\_\_ Personal Service (Affidavit attached)
- X Certified Mail (Postmarked postal receipt attached)
- \_\_\_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator STONEWALL GAS COMPANY  
By: [Signature]  
Its: PRESIDENT  
Address PO DRAWER R  
JANE LEW, WV 26378-0080  
Telephone (304) 884-7881

Subscribed and sworn before me this 10TH day of AUGUST, 1989

[Signature]  
My commission expires OCTOBER 14, 1993

XXXXXXXXXXXXXXXXXX