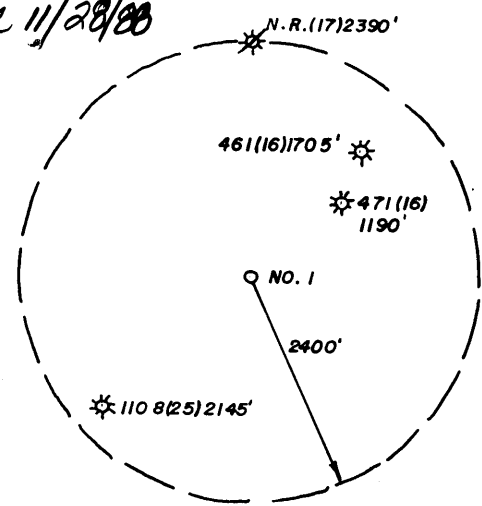


Jamie 11/28/88

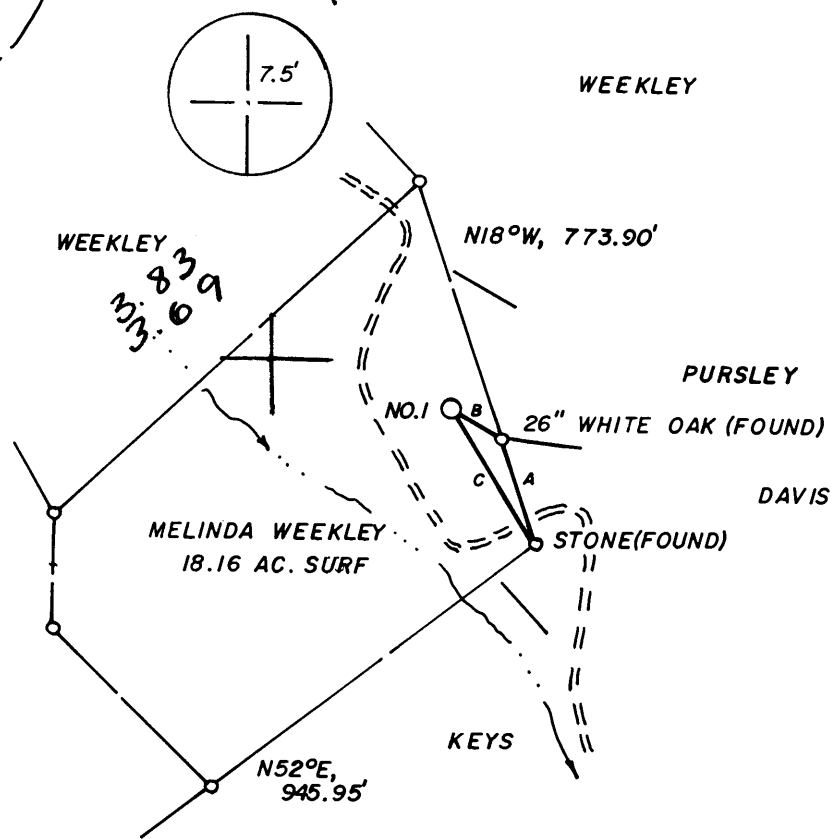
77 80' 25  
LATITUDE 39° 22' 30"



- TIE LINES:
- A) N18°W, 282.49'
  - B) N56°27'W, 149.95'
  - C) S31°07'E, 410.53'

NORTH

LONGITUDE 80° 47' 30"



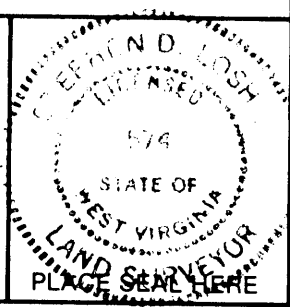
**WELL REFERENCES:**  
 N22°W, 162' TO 15" WHITE OAK  
 N50°E, 106' TO 6" HICKORY

LAND SURVEYING SERVICES  
 21 CEDAR LANE  
 BRIDGEPORT, WV 26330  
 PHONE: 304-842-2018

(+) 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 INT. 3930' SE.  
 OF LOC. AT ELEV. 834'

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



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



DATE MAY 15, 19 88  
 OPERATOR'S WELL NO. COSTILOW 1  
 API WELL NO. \_\_\_\_\_

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
 STATE 47 COUNTY 095 PERMIT 1271

LOCATION: ELEVATION 943 WATER SHED CAMP MISTAKE RUN  
 DISTRICT CENTERVILLE 1 COUNTY TYLER  
 QUADRANGLE WEST UNION 7.5' 671 1336 + 15' EC

SURFACE OWNER LEONA W. LORKOVICH, et al ACREAGE 18.16  
 OIL & GAS ROYALTY OWNER LEONA W. LORKOVICH, et al LEASE ACREAGE 18.

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 5250'  
 WELL OPERATOR STONE WALL GAS CO. DESIGNATED AGENT CHARLES CANFIELD  
 ADDRESS P.O. DRAWER R ADDRESS P.O. DRAWER R  
JANE LEW, WV 26378-0080 847 JANE LEW, WV 26378-0080

6-6 Wilbur (092)

FORM WW-6

COUNTY NAME PERMIT

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

Well Operator's Report of Well Work

Farm name: LORKOVICH, LEONA W. ETAL Operator Well No.: COSTILOW 1-382S

LOCATION: Elevation: 943.00 Quadrangle: WEST UNION

District: CENTERVILLE County: TYLER  
Latitude: 5085 Feet South of 39 Des. 22Min. 30 Sec.  
Longitude 2780 Feet West of 80 Des. 47 Min. 30 Sec.

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

Agent: CHARLES W. CANFIELD

Inspector: GLEN P. ROBINSON  
Permit Issued: 12/01/88  
Well work Commenced: 01-27-89  
Well work Completed: 02-01-89  
Verbal Plugging  
Permission granted on:  
Rotary  Cable \_\_\_\_\_ Ris  
Total Depth (feet) 5102  
Fresh water depths (ft) 90

Salt water depths (ft) 1070  
Is coal being mined in area (Y/N)? N  
Coal Depths (ft): N/A

Size	Used in	Left	Cement
	&		Fill Up
	Tubing	Drillins	in Well
			Cu. Ft.
11 3/4	120	120	75 SKS
8 5/8	1201	1201	310 SKS
4 1/2	5077	5077	660 SKS

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FEB 16 1989

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

OPEN FLOW DATA

Producing formation BENSON Pay zone depth (ft) 4840  
Gas: Initial open flow 267 MCF/d Oil: Initial open flow N/A Bbl/d  
Final open flow 2144 MCF/d Final open flow N/A Bbl/d  
Time of open flow between initial and final tests 1 Hours  
Static rock Pressure 1550 psig (surface pressure) after 48 Hours

Second producing formation RILEY Pay zone depth (ft) 4422  
Gas: Initial open flow 267 MCF/d Oil: Initial open flow N/A Bbl/d  
Final open flow 2144 MCF/d Final open flow N/A Bbl/d  
Time of open flow between initial and final tests 1 Hours  
Static rock Pressure 1550 psig (surface pressure) after 48 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.

FEB 17 1989

For: STONEWALL GAS CO.

By: [Signature] PRESIDENT  
Date: FEBRUARY 14 1989

FRAC DATE 02/09/89 STAGES TWO

PERFS	HOLES	BBL	SAND	BD	ISIP
BENSON 4840-44	16	700	60,000	1900	1560
RILEY 4406-4450	16	700	60,000	2070	1620

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
FILL	RED	SOFT	0	15	3/4" STREAM H <sub>2</sub> O 55
SHALE/RR	RED	SOFT	15	55	
SHALE	GRAY	SOFT	55	420	1/2" STREAM H <sub>2</sub> O 42
SAND/SHALE	GRAY	SOFT	420	1100	
SHALE	GRAY	SOFT	1100	1800	GAS CK 1819 NO SHOW
BIG LIME	WHITE	HARD	1800	1910	
BIG INJUN	WHITE	HARD	1910	2010	GAS CK 2002 140/10 2" H <sub>2</sub> O
SAND/SHALE	GRAY	SOFT	2010	2570	
GORDON	GRAY	SOFT	2570	2620	GAS CK 2618 80/10 2" H <sub>2</sub> O
SAND/SHALE	GRAY	SOFT	2620	4400	
RILEY	BROWN	SOFT	4400	4490	2" H <sub>2</sub> O
SAND/SHALE	GRAY	SOFT	4490	4840	
BENSON	BROWN	HARD	4840	4940	GAS CK 4000 48/10 2" H <sub>2</sub> O
				5102	
					GAS CK 4955 70/10 2" H <sub>2</sub> O
					GAS CK TD 40/10 2" H <sub>2</sub> O

TD  
01 15 49

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FEB 16 1989

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

066L

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

- 1) Well Operator: STONEWALL GAS COMPANY 47850, 1, 670
- 2) Operator's Well Number: COSTILOW #1 382-S 3) Elevation: 943'
- 4) Well type: (a) Oil  / or Gas  /  
(b) If Gas: Production  / Underground Storage  /  
Deep  / Shallow  /
- 5) Proposed Target Formation(s): BENSON
- 6) Proposed Total Depth: 5000' feet
- 7) Approximate fresh water strata depths: OK 68'
- 8) Approximate salt water depths: OK 1175'
- 9) Approximate coal seam depths: NA
- 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	Fill-up (cu. ft.)
<u>OK PAL</u> Conductor	11 3/4	ERW	42#	100'	100' ←	38 CSR 18-11.3
Fresh Water						
Coal						
Intermediate	8 5/8	ERW	23#	1200'	1200' ←	38 CSR 18-11.3
Production	4 1/2	ERW	10.5#	4950'	4950' ←	38 CSR 18-11.1
Tubing						
Liners						

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NOV 15 1988

PACKERS : Kind \_\_\_\_\_  
Sizes \_\_\_\_\_  
Depths set \_\_\_\_\_  
DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

For Division of Oil and Gas Use Only

4705  
38  
1796

Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond 50 Blanket Agent  
(Type)

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NOV 15 1988  
DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

1) Date: November 3, 1988  
2) Operator's well number  
Costilow #1 382-S  
3) API Well No: 47 - 095 - 1271  
State - County - Permit

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 SEE ATTACHED SHEET  
Address \_\_\_\_\_  
  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_

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

6) Inspector Glen P. Robinson  
Address Rt. 1, #6 Mt. Pleasant  
Mineral Wells, Wv 26150  
Telephone (304)-489-9162

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

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: Benjamin A. Hardesty *Ben A. Hardesty*  
Its: President  
Address PO DRAWER R  
JANE LEW, WV 26378-0080  
Telephone 304-884-7881

Subscribed and sworn before me this 4th day of November, 1988

*Benjamin A. Hardesty*  
My commission expires January 16, 1991 Notary Public