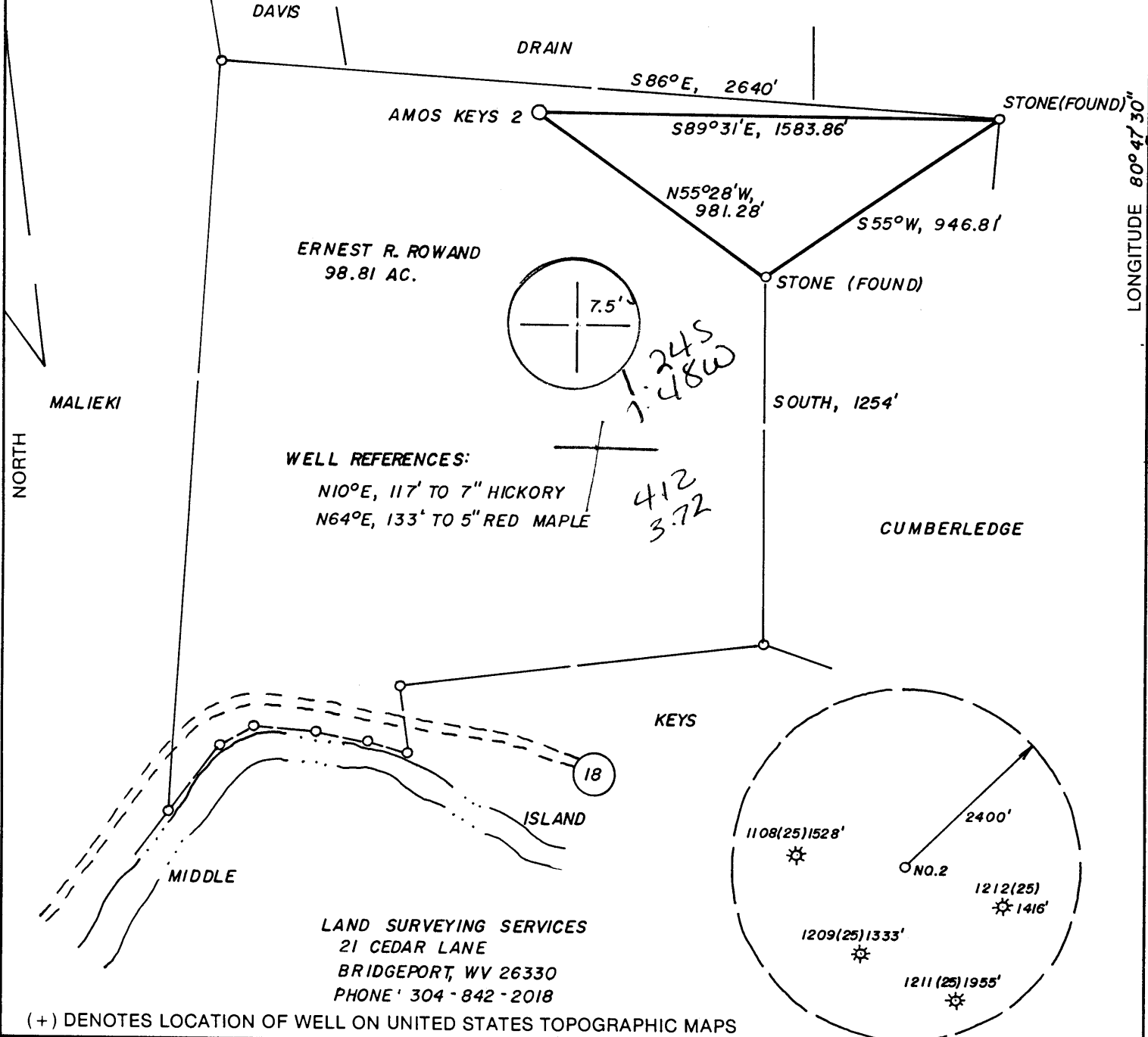


Janice 10/21/88

7885' LATITUDE 39° 22' 30"



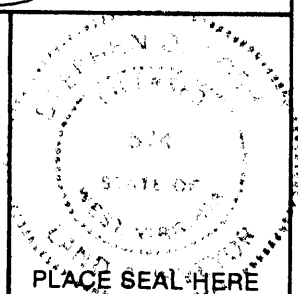
WELL REFERENCES:
 N10°E, 117' TO 7" HICKORY
 N64°E, 133' TO 5" RED MAPLE

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. 3380' 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) *[Signature]*
 R.P.E. _____ L.L.S. NO. 674
 STEPHEN D. LOSH



STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION



DATE APRIL 27, 19 88
 OPERATOR'S WELL NO. AMOS KEYS 2
 API WELL NO.

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 926' WATER SHED CAMP MISTAKE RUN
 DISTRICT CENTERVILLE 1 COUNTY TYLER
 QUADRANGLE WEST UNION 7.5' 671 1336 +15' EC
 SURFACE OWNER ERNEST R. ROWAND ACREAGE 98.81
 OIL & GAS ROYALTY OWNER AMOS KEYS, HRS LEASE ACREAGE 121.
 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) _____
 OCT 24 1988

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION BENSON ESTIMATED DEPTH 5200'
 WELL OPERATOR STONEWALL 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



NOV 28 1988

WR-35

DIVISION OF OIL & GAS
 DEPARTMENT OF ENERGY
 Date NOVEMBER 11, 1988
 Operator's
 Well No. AMOS KEYS #2
 Farm 371-S
 API No. 47 - 095 - 1264

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 ___ / Underground Storage ___ / Deep ___ / Shallow X /)
 LOCATION: Elevation: 926 Watershed CAMP MISTAKE RUN
 District: CENTERVILLE County TYLER Quadrangle WEST UNION 7.5

COMPANY STONEWALL GAS COMPANY
 ADDRESS PO DRAWER R, JANE LEW, WV 26378
 DESIGNATED AGENT CHARLES W. CANFIELD
 ADDRESS PO DRAWER R, JANE LEW, WV 26378
 SURFACE OWNER ERNEST R. ROWAND
 ADDRESS BOX 493, NEWELL, WV 26050
 MINERAL RIGHTS OWNER PAUL HYLBERT
 ADDRESS 11 MIDDLE MARSH RETREAT, SAVANNAH, GA 31411
 OIL AND GAS INSPECTOR FOR THIS WORK GLEN ROBINSON ADDRESS RT 1, MINERAL WELLS, WV 26150
 PERMIT ISSUED 10-21-88
 DRILLING COMMENCED 11-01-88
 DRILLING COMPLETED 11-06-88
 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"	88.8	88.8	65 SKS
9 5/8			
8 5/8	1226	1226	300 SKS
7			
5 1/2			
4 1/2	4988	4988	675 SKS
3			
2 3/8		4794	
Liners used			

GEOLOGICAL TARGET FORMATION BENSON Depth 5200 feet
 Depth of completed well 5922 feet Rotary X / Cable Tools ___
 Water strata depth: Fresh 90 feet; Salt ___ feet
 Coal seam depths: 33-60 Is coal being mined in the area? X

OPEN FLOW DATA
 Producing formation BENSON Pay zone depth 4802 feet
 Gas: Initial open flow 105 Mcf/d Oil: Initial open flow N/A Bbl/d
 Final open flow 1501 Mcf/d Final open flow N/A Bbl/d
 Time of open flow between initial and final tests 240 hours
 Static rock pressure 1450 psig (surface measurement) after 120 hours shut in
 (If applicable due to multiple completion--)
 Second producing formation RILEY Pay zone depth 4380 feet
 Gas: Initial open flow 31 Mcf/d Oil: Initial open flow N/A Bbl/d
 Final open flow 1501 Mcf/d Oil: Final open flow N/A Bbl/d
 Time of open flow between initial and final tests 240 hours
 Static rock pressure 1450 psig (surface measurement) after 120 hours shut in

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 (Continues on reverse side)

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

<u>BENSON</u>	<u>4804-4811</u>	3 HOLES/FT	20,000 # (80-100) SAND	800 BBLs,
			60,000 # (20-40) SAND	30# GEL, H ₂ O
<u>RILEY</u>	<u>4384-4390</u>	3 HOLES/FT	20,000 # (80-100) SAND	700 BBLs,
			60,000 # (20-40) SAND	30# GEL, H ₂ O

BIG INJUN 1900-1921 2 HOLES/FT RAN TUBING PACKER AT 2021 FT. TO ISOLATE BIG INJUN, AT EQUITRAN'S REQUEST, FOR STORAGE FIELD OBSERVATION. BIG INJUN WILL NOT BE PRODUCED.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
FK-CL	CLEAR		0	8	
DIRT	BROWN	SOFT	8	13	
SAND & SHALE	GRAY	MED	13	33	
COAL	BLACK	SOFT	33	36	
SAND & SHALE	GRAY	MED	36	100	
SAND	WHITE	HARD	100	152	HOLE DAMP @ 430
RED ROCK	RED	SOFT	152	164	
SAND & SHALE	GRAY	MED	164	227	GAS CK @ 1814 NO SHOW
RED ROCK	RED	SOFT	227	240	
SAND & SHALE	GRAY	MED	240	290	GAS SHOW @ 1887
RED ROCK	RED	SOFT	290	306	
SAND & SHALE	GRAY	MED	306	325	GAS CK @ 1941 102/10 1" H ₂ O
RED ROCK	RED	SOFT	325	335	
SAND & SHALE	GRAY	MED	335	421	GAS CK @ 2626 140/10 1" H ₂ O
SAND	WHITE	HARD	421	452	
SHALE	GRAY	SOFT	452	526	GAS CK 4430 9/10 1" H ₂ O
SAND	LT GRAY	HARD	526	540	
SHALE	GRAY	SOFT	540	1350	GAS CK @ 4896 100/10 1 1/2" H ₂ O
COAL	BLACK	SOFT	1350	1355	
SAND	GRAY	HARD	1355	1400	LOG TOPS
SAND & SHALE	GRAY	MED	1400	1760	
BIG LIME	LT GRAY	HARD	1760	1822	
INJUN	LT GRAY	HARD	1822	1941	BIG LIME 1749
AND & SHALE	GRAY	MED	1941	2500	
GORDON	GRAY	MED HARD	2500	2535	
SAND & SHALE	GRAY	SOFT-MED	2535	3208	BIG INJUN 1834
SAND	GRAY	MED	3208	3277	
SAND & SHALE	GRAY	SOFT	3277	4358	WEIR 2100
RILEY	GRAY	MED	4358	4414	
SAND & SHALE	GRAY	MED	4414	4802	BEREA 2302
BENSON	BROWN	MED	4802	4817	
SAND & SHALE	GRAY	SOFT	4817	5022	GORDON 2500
TD			5022		RILEY 4337
					BENSON 4796

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

STONEWALL GAS COMPANY

Well Operator

By: Benjamin A. Hardesty
Date: BENJAMIN A. HARDESTY, VICE PRESIDENT

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 ... of a well."

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

- 1) Well Operator: STONEWALL GAS COMPANY *47950, 1, 670*
- 2) Operator's Well Number: AMOS KEYS #2 (371-S) 3) Elevation: 926'
- 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: 5000 feet
- 7) Approximate fresh water strata depths: 54' 549' 689' 275'
- 8) Approximate salt water depths: OK 1190'
- 9) Approximate coal seam depths: OK N/A
- 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.)
<i>OK RAL</i> Conductor	11 3/4	ERW	42#	100'	100'	38CSR18-11.3
Fresh Water						
Coal						
Intermediate	8 5/8	ERW	23#	1250'	1250'	38CSR18-11.3
Production	4 1/2	ERW	10.5#	4950'	4950'	38CSR18-11.1
Tubing						
Liners						

Consistent to schedule

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

For Division of Oil and Gas Use Only

Fee(s) paid: *AS* Well Work Permit *AS* Reclamation Fund *AS* WPCP
Plat *AS* WW-9 *AS* WW-2B *AS* Bond 500 Blanket *AS* Agent
(Type)

H673
AS
AS

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

1) Date: OCTOBER 10, 1988
2) Operator's well number
AMOS KEYS #2 (371-S)
3) API Well No: 47 - 095 - 1264
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 ERNEST R. ROWAND
 - Address BOX 493
NEWELL, WV 26050
 - (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 GLEN P. ROBINSON
- Address RT 1, #6 MT. PLEASANT EST.
MINERAL WELLS, WV 26150
 - Telephone (304)-489-9162
- (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
 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)
- 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: Bevin A. Trusty
Its: PRESIDENT
Address PO DRAWER R
JANE LEW, WV 26378-0080
Telephone 304-884-7881

Subscribed and sworn before me this 11th day of October, 1988

Richard K. Clivick
My commission expires OCTOBER 14, 1993 ~~Notary Public~~
COMMISSIONER