

DJB 7/15/87

LATITUDE 39°22'30"

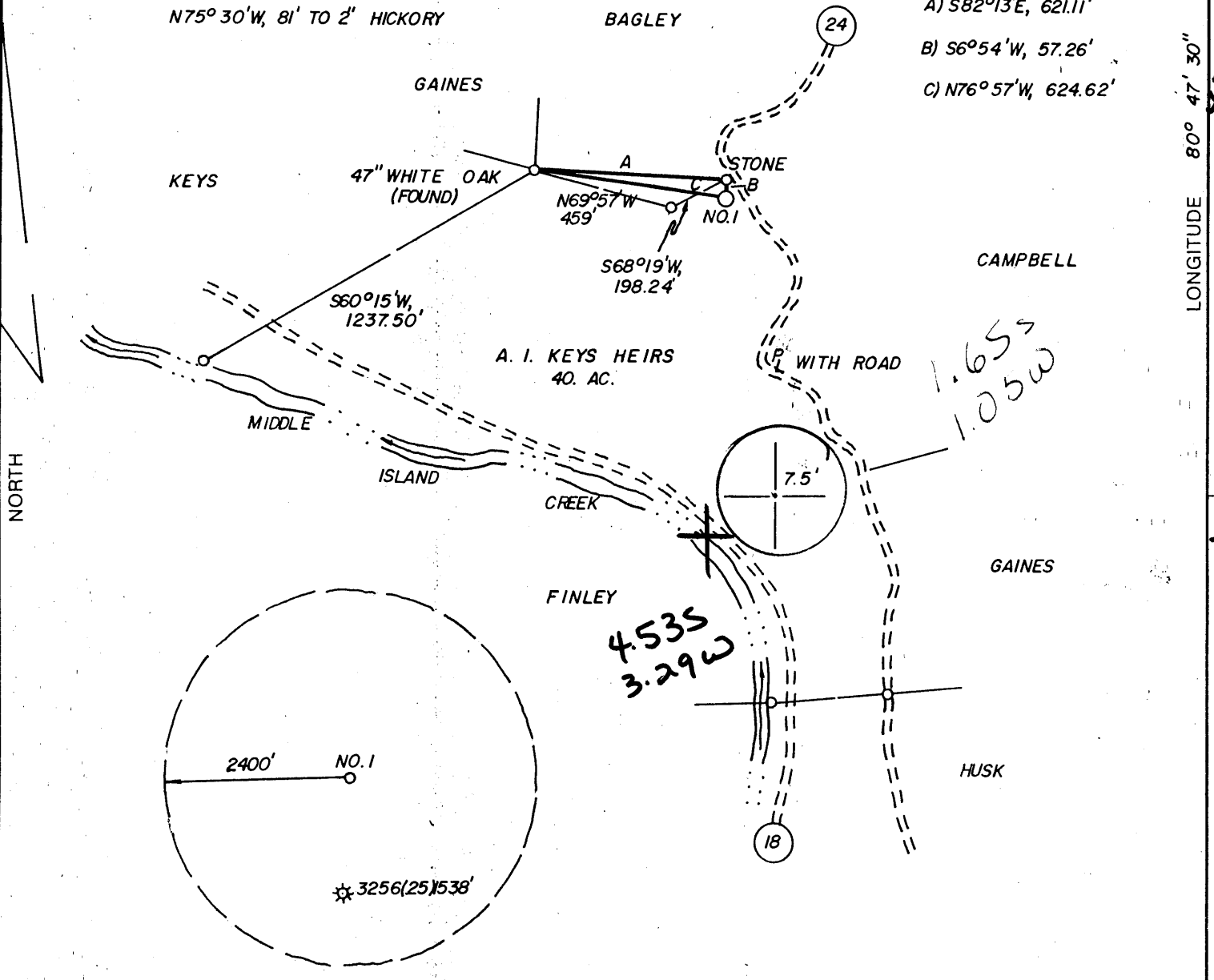
35

WELL REFERENCES:

N12°30'W, 54' TO 2" REDBUD  
N75°30'W, 81' TO 2" HICKORY

TIE LINES

A) S82°13'E, 621.11'  
B) S6°54'W, 57.26'  
C) N76°57'W, 624.62'



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 B. M. 815' SW. OF LOC. AT ELEV. 749'

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

PLACE SEAL HERE

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY  
OIL AND GAS DIVISION



DATE JUNE 23, 19 87  
OPERATOR'S WELL NO. A. I. KEYS I  
API WELL NO.

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
LOCATION: ELEVATION 990' WATERSHED MIDDLE ISLAND CREEK  
DISTRICT WEST UNION 4 COUNTY DODDRIDGE  
QUADRANGLE WEST UNION 7.5' 671 133 206  
SURFACE OWNER DWIGHT R. KEYS, ET AL. ACREAGE 67  
OIL & GAS ROYALTY OWNER AUSTIN I. KEYS HEIRS LEASE ACREAGE 40.

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 STONEWALL GAS COMPANY DESIGNATED AGENT CHARLES CANFIELD  
ADDRESS P. O. DRAWER R ADDRESS P. O. DRAWER R  
JANE LEW, WV 26378-0080 JANE LEW, WV 26378-0080

AUG 03 1987

6-6-11111111 (92)

FORM WW-6  
H.T. HALL 48673

COUNTY NAME  
PERMIT



WR-35

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SEP 08 1987

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

State of West Virginia

DEPARTMENT OF ENERGY

Oil and Gas Division

Date AUGUST 25, 87

Operator's

Well No. 209-S

Farm KEYS #1

API No. 47 - 017 - 3575

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: 990 Watershed MIDDLE ISLAND CREEK

District: WEST UNION County DODDRIDGE Quadrangle WEST UNION

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 A.I. KEYS JR.

ADDRESS STARR RT, BOX 42, WEST UNION, WV 26456

MINERAL RIGHTS OWNER SAME AS SURFACE

ADDRESS

OIL AND GAS INSPECTOR FOR THIS WORK MIKE

UNDERWOOD ADDRESS RT 2, BOX 135, SALEM, WV

PERMIT ISSUED JULY 29, 89

DRILLING COMMENCED 08-12-87

DRILLING COMPLETED 08-17-87

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"			
11 3/4 9 5/8	190	190	100 SKS
8 5/8	1396	1396	300 SKS
7			
5 1/2			
4 1/2	5009	5009	205 SKS
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION BENSON Depth 5250 feet

Depth of completed well 5009 feet Rotary X / Cable Tools

Water strata depth: Fresh 87 feet; Salt 1100 feet

Coal seam depths: N/A Is coal being mined in the area? NO

OPEN FLOW DATA

Producing formation BENSON Pay zone depth 4905 feet

Gas: Initial open flow 189 Mcf/d Oil: Initial open flow N/A Bbl/d

Final open flow 1.639 M Mcf/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests 72 hours

Static rock pressure 1500 psig (surface measurement) after 24 hours shut in (If applicable due to multiple completion--)

Second producing formation Pay zone depth 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

SEP 14 1987 (Continue on reverse side)

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

FRAC ONE STAGE 8/25/87

BENSON PERFS HOLES BBL SAND B.D. I.S.I.P.  
 4900-4906 18 850 75,000lbs 1900# 1700#

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 SEP 08 1987

DIVISION OF OIL & GAS  
 DEPARTMENT OF ENERGY

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
CLAY	GREY	SOFT	0	5	
SHALE	RED & GREY	SOFT	5	150	
SAND & SHALE	BRN	SOFT	150	1830	
LIME	BRN	HARD	1830	1930	
BIG INJUN	BRN	HARD	1930	2030	
SAND & SHALE	BRN	SOFT	2030	2390	
BEREA	BRN	SOFT	2390	2400	
GORDON	GREY	SOFT	2590	2640	GAS @ 2670 2/10 1" H <sup>2</sup> O
WARREN	BRN	SOFT	3300	3340	GAS @ 3357 10/10 1" H <sup>2</sup> O
RILEY	BRN	HARD	4450	4570	GAS @ 4581 9/10 1" H <sup>2</sup> O
BENSON	BRN	HARD	4890	4930	GAS @ 4959 10/10 2" H <sup>2</sup> O
T.D.			<u>5085</u>		GAS @ T.D. 5085 10/10 2" H <sup>2</sup> O

(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

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1) Date: July 1, 1987
2) Operator's Well No. Keys #1 209-S
3) API Well No. 47 017 3575
State County Permit

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

APPLICATION FOR A WELL WORK PERMIT

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

- 4) WELL TYPE: A Oil / Gas X
5) LOCATION: Elevation: 990', Watershed: Middle Island Creek, District: West Union, County: Doddridge, Quadrangle: West Union 670
6) WELL OPERATOR: Stonewall Gas, CODE: 47850, Address: P.O. Drawer R, Jane Lew, WV 26378
7) DESIGNATED AGENT: Charles W. Canfield, Address: P.O. Drawer R, Jane Lew, WV 26378
8) OIL & GAS INSPECTOR TO BE NOTIFIED: Name: Mike Underwood 782-1043, Address: Rt 2, Box 135, Salem, WV 26426
9) DRILLING CONTRACTOR: Name: S.W. Jack, Address: Buckhannon, WV 26201
10) PROPOSED WELL WORK: Drill X / Drill deeper / Redrill / Stimulate / Plug off old formation / Perforate new formation / Other physical change in well (specify)
11) GEOLOGICAL TARGET FORMATION, Benson
12) Estimated depth of completed well, 5250' feet
13) Approximate trata depths: Fresh, salt, feet.
14) Approximate coal seam depths: Is coal being mined in the area? Yes / No

15) CASING AND TUBING PROGRAM

Table with columns: CASING OR TUBING TYPE, SPECIFICATIONS (Size, Grade, Weight per ft., New, Used), FOOTAGE INTERVALS (For drilling, Left in well), CEMENT FILL-UP OR SACKS (Cubic feet), PACKERS. Includes rows for Conductor, Fresh water, Coal, Intermediate, Production, Tubing, and Liners.

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-017-3575 Date July 29 19 87

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 July 29, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

Table with columns: Bond, Agent, Fee, WPCP, SSE, Other. Includes handwritten signatures and amounts like 210 and 3894.

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

Director, Division of Oil and Gas

File

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