

8/16 9/9/87

LATITUDE 39°15' 00"

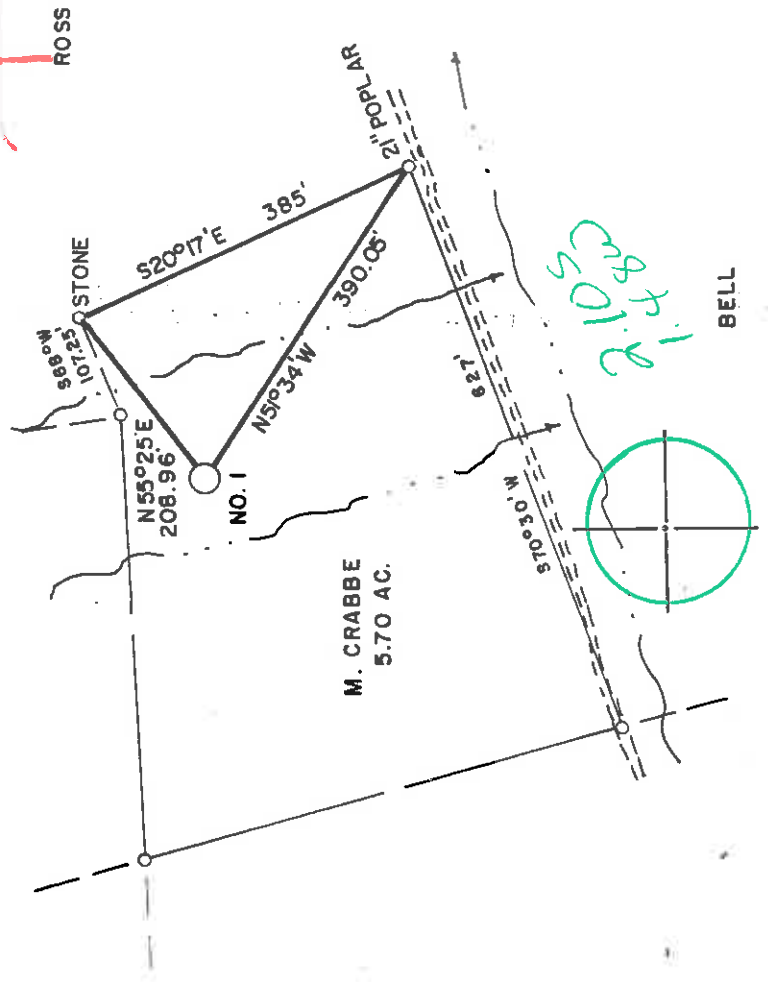
LONGITUDE 80° 35' 00" 11,160

WELL REFERENCES:
N 46° E, 149' TO 4" HICKORY
N 21° 15' W, 110' TO 3" CHERRY

2.10
1.48

NUTTER

BURNSIDE



STONEWALL
BURNSIDE NO. 1
1598'

STONEWALL
ROSS NO. 1
1506'



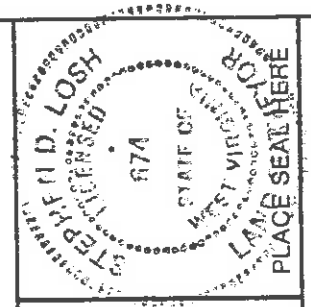
2895 (25)
1557

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" = 200'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION RD. INTER. 2600' ELY.
 OF LOCATION ELEV. - 913'

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.S. STEPHEN D. LOSH 674



STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION

DATE AUGUST 21 19 87
 OPERATOR'S WELL NO. CRABBE NO. 1
 API WELL NO. _____

47 017 3597
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION X STORAGE DEEP SHALLOW X

LOCATION: ELEVATION 1019' WATER SHED INDIAN FORK
 DISTRICT GREENBRIER 4 COUNTY DODDRIDGE

SURFACE OWNER MARJORIE CRABBE LEASE NO. _____
 OIL & GAS ROYALTY OWNER MARJORIE CRABBE LEASE ACREAGE 5.70
 ACREAGE 5.70

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 ALEXANDER ESTIMATED DEPTH 5400'
 WELL OPERATOR STONEWALL GAS COMPANY DESIGNATED AGENT CHARLES CANFIELD
 ADDRESS P.O. DRAWER R 247 ADDRESS P.O. DRAWER R

JANE LEW, WV 26378 JANE LEW, WV 26378

6-6 ZINDIA (145)

SEP 28 1987

WR-35

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY



State of West Virginia

DEPARTMENT OF ENERGY
Oil and Gas Division

WELL OPERATOR'S REPORT

Date OCTOBER 21, 87
Operator's Well No. CRABBE #1 232-S
Farm CRABBE
API No. 47 - 017 - 3597

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil / Gas X / Liquid Injection / Waste Disposal /
(If "Gas," Production X / Undergound Storage / Deep / Shallow X /)

LOCATION: Elevation: 1019 Watershed INDIAN FORK
District: GREENBRIER County DODDRIDGE Quadrangle BIG ISAAC 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 MARGERY CRABBE, ET AL

ADDRESS 10219 CHARLESTON-CHILLECATHIE RD

SOUTH SOLOM, OHIO 43153

MINERAL RIGHTS OWNER SAME AS SURFACE

ADDRESS

OIL AND GAS INSPECTOR FOR THIS WORK MIKE

UNDERWOOD ADDRESS RT 2, BOX 135, SALEM,

PERMIT ISSUED SEPTEMBER 24, 87 WV 26426

DRILLING COMMENCED OCTOBER 7, 87

DRILLING COMPLETED OCTOBER 12, 87

IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
ON

Casing Tubing Size	Used in Drilling	Left in Well	Cement fill up Cu. ft.
20-16			
Cond. 11 3/4"			
13-10"	260	260	100 SKS
9 5/8			
8 5/8	1703	1703	365 SKS
7			
5 1/2			
4 1/2	5436	5436	410 SKS
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION ALEXANDER Depth 5248 feet

Depth of completed well 5436 feet Rotary X / Cable Tools

Water strata depth: Fresh 170 feet; Salt 1650 feet

Coal seam depths: 130-133 425-430 Is coal being mined in the area? NO

OPEN FLOW DATA

Producing formation ALEXANDER Pay zone depth 5248 feet

Gas: Initial open flow 183 Mcf/d Oil: Initial open flow N/A Bbl/d

Final open flow 337 Mcf/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests 72 hours

Static rock pressure 1175 psig (surface measurement) after 72 hours shut in

(If applicable due to multiple completion--)

Second producing formation BENSON Pay zone depth 4955 feet

Gas: Initial open flow 183 Mcf/d Oil: Initial open flow N/A Bbl/d

Final open flow 337 Mcf/d Oil: Final open flow N/A Bbl/d

Time of open flow between initial and final tests 72 hours

Static rock pressure 1175 psig (surface measurement) after 72 hours shut in

(Continue on reverse side)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.
 FRAC TWO STAGES 10/17/87

PERFS	HOLES	BBL	SAND	B.D.	I.S.I.P.
ALEXANDER					
<u>5248 - 5311</u>	16	650	60,000#	2450	1700
BENSON					
<u>4955 - 4959</u>	14	635	60,000#	2200	1850

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fr. and salt water, coal, oil and
CLAY FILL	RED	SOFT	0	15	
SHALE	BLACK	SOFT	15	130	
COAL	BLACK	SOFT	130	133	
SAND & RED ROCK	RED	SOFT	133	425	1" STREAM H ₂ O 170'
COAL	BLACK	SOFT	425	430	
SHALE & SAND	GREY	SOFT	430	1910	1/2" STREAM H ₂ O 1650'
SAND	WHITE	HARD	1910	2010	
BIG LIMESTONE	GREY	HARD	2010	2080	
BIG INJUN	GREY	HARD	2080	2170	
GORDON	GREY	SOFT	2730	2880	GAS CK @ 2902 12/10 2" H ₂ O
SPEECHLEY	GREY	SOFT	3550	3680	
BALLTOWN	GREY	SOFT	3870	3990	
RILEY	GREY	SOFT	4680	4860	GAS CK @ 4871 10/10 2" H ₂ O
BENSON	GREY	HARD	4950	5010	GAS CK @ 5024 10/10 2" H ₂ O
ALEXANDER	GREY	HARD	5200	5330	GAS CK @ 5332 10/10 2" H ₂ O
T.D.				<u>5456</u>	GAS CK @ T.D. 10/10 2" H ₂ O

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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 graphical record of all formations, including
 that of a well."
 404

FORM W-2 (B) FILE COPY
 (Obverse)
 7/8

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1) Date: SEPT 8, 19 87
 2) Operator's Well No. CRABBE #1 232-S
 3) API Well No. 47 017 3597
 State County Permit



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

4) WELL TYPE: A Oil Gas B (If "Gas", Production Underground storage Deep Shallow
 5) LOCATION: Elevation: 1019' Watershed: INDIAN FORK
 District: GREENBRIER A County: DODDRIDGE 017 Quadrangle: BIG ISAAC 7.5'
 6) WELL OPERATOR STONEWALL GAS CODE: 47850 7) DESIGNATED AGENT CHARLES W. CANFIELD
 Address P.O. DRAWER R Address P.O. DRAWER R
JANE LEW, WV 26378 JANE LEW, WV 26378
 8) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name MIKE UNDERWOOD 782-1043 Name S.W. JACK DRILLING CO.
 Address RT 2, BOX 135 Address BUCKHANNON, WV 26201

10) PROPOSED WELL WORK: Drill / deeper / Drill / Redrill / Stimulate
 Plug off old formation / Perforate new formation
 Other physical change in well (specify) ALEXANDER 47850
 11) GEOLOGICAL TARGET FORMATION, ALEXANDER 47850
 12) Estimated depth of completed well, 5,400 feet
 13) Approximate trata depths: Fresh, 30 feet; salt, feet.
 14) Approximate coal seam depths: UNKNOWN Is coal being mined in the area? Yes No

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
Conductor	11 3/4			X		250	CS RULE 38 CSR 18-11.3
Fresh water							
Coal							
Intermediate	8 5/8			X		1319	CS RULE 38 CSR 18-11.22
Production	4 1/2			X		5400	CS RULE 38 CSR 18-11.1
Tubing							
Liners							

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-017-3597 Date September 24 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 September 24, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Casing: <input checked="" type="checkbox"/>	Fee: <u>230</u>	Other: <input checked="" type="checkbox"/>
			<u>4001</u>	

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

Director, Division of Oil and Gas

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

10790

