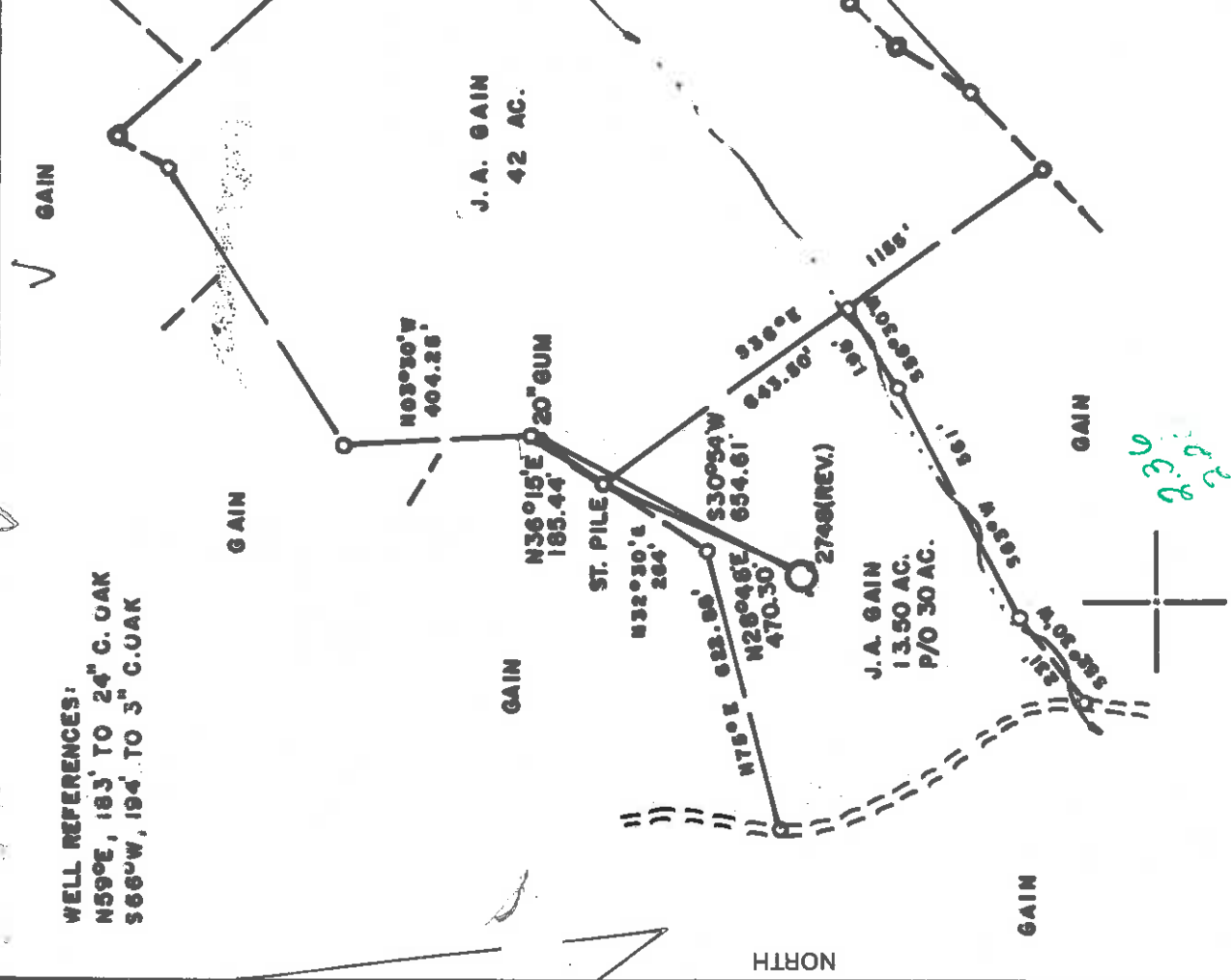


45-5-18-10

LATITUDE 39°17'30"
LONGITUDE 80°45'00"

WELL REFERENCES:
N59°E, 183' TO 24" C. OAK
S66°W, 194' TO 3" C. OAK



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

5.24
2.20

PJH 3-18-87

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

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 400'
MINIMUM DEGREE OF ACCURACY 1 in 200
PROVEN SOURCE OF ELEVATION RD. INTER. 325' S.W.
OF LOCATION ELEV. - 860'

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. 674
STEPHEN O. LOBH

PLACE SEAL HERE

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
OIL AND GAS DIVISION



DATE MARCH 09 19 87
OPERATOR'S WELL NO. 2748 (REV.)
API WELL NO. 47-017-3538-W

WELL TYPE: OIL _____ GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
(IF "GAS,") PRODUCTION STORAGE _____ DEEP _____ SHALLOW
LOCATION: ELEVATION 1006' WATER SHED LEFT FORK OF ARNOLDS CREEK
DISTRICT WEST UNION COUNTY DODDRIDGE
QUADRANGLE WEST UNION 7.5 min. SE
SURFACE OWNER JAMES A. GAIN
OIL & GAS ROYALTY OWNER JAMES A. GAIN LEASE NO. DV 14646
LEASE ACREAGE 30

PROPOSED WORK: DRILL 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 DEVONIAN SHALE ESTIMATED DEPTH 5300'
WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. MCHOLAS
ADDRESS ONE PARK RIDGE CENTER 142 ADDRESS RT. 2, BOX 696
PITTSBURGH, PA 15244 BRIDGEPORT, WV 26330

000
COUNTY NAME

3538-W
PERMIT

OWWD G-6 Straight Fork-Bluestone Creek (133)

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: GAIN, JAMES A. Operator Well No.: CNGP 2748

LOCATION: Elevation: 1,006.00 Quadrangle: WEST UNION

District: WEST UNION County: DODDRIDGE
Latitude: 12515 Feet South of 39 Deg. 17Min. 30 Sec.
Longitude 11640 Feet West of 80 Deg. 45 Min. Sec.

Company: CNG PRODUCING COMPANY
ROUTE 2, BOX 698
BRIDGEPORT, WV 26330-0698

Agent: RODNEY J. BIGGS

Inspector: MIKE UNDERWOOD
Permit Issued: 10/04/93
Well work Commenced: 11/02/93
Well work Completed: 12/06/93

Verbal Plugging
Permission granted on: _____ Rig
Rotary Cable _____
Total Depth (feet) _____
Fresh water depths (ft) _____

Salt water depths (ft) _____

Is coal being mined in area (Y/N)? _____
Coal Depths (ft): _____

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
NO ADDITIONAL CASING RAN IN WELL			

OPEN FLOW DATA

Gordon
Balltown

Producing formation Speechley
Gas: Initial open flow _____ MCF/d Oil: _____ MCF/d Oil: _____
Final open flow * 310 MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ 4 Hours
Static rock Pressure 725 psig (surface pressure) after 62 1/2 Hours

*Commingle with existing production

Second producing formation _____
Gas: Initial open flow _____ MCF/d Oil: _____ MCF/d Oil: _____
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

2483-248
3734-3738

Pay zone depth (ft) 3173-3260
Initial open flow _____ Bbl/d
Final open flow _____ Bbl/d

Pay zone depth (ft) _____
Initial open flow _____ Bbl/d
Final open flow _____ Bbl/d

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.

For: Rodney J. Biggs, Manager
CNG PRODUCING COMPANY

By: *Rod Biggs*
Date: December 7, 1993

17 1993

Young Wireline Perf.
 1. Balltown 3734-3738, 16 holes, .39" HSC plug @ 3744'
 2. Speechley 3137-3269, 21 holes, .39" HSC plug @ 3275'

Nowasco 25# Gel

Break	1	2
Ave HHP	2300	2380
Ave Rate	1250	1400
Ave Pres.	23	23
Max Tr Pres.	2200	2500
Total Acid	2300	2850
Total Sand	250 gal. 10%	250 gal. 10%
Max Conc.	31000#	10000#
Total Fl.	3#/gal	2#/gal(screen out)
SL Fluid	467	268
ISIP	353	168
5 min	1600	1300
	1250	1050

Perforated Gordon 2483-2489, 20 holes, .39" HSC plug @ 2499

Nowasco 25# Gel (refrac Speechley) Balled out perfs. on Speechley

Breakdown	2	3
Ave HHP	2500	2430
Ave Rate	1500	1200
Ave Pres.	26	30
Max Tr. Pres.	2300	2400
Total Sand	2700	2450
Max. Conc.	30,000#	30,000#
Total Acid	3#/g	3#/g
Total Fluid	500 gal	500 gal
SL Fluid	536	466
ISIP	378	312
5-min	1400	1800
	1050	1400

TD 5323
 DF 424
 DFT 439

87521

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DEC 21 1987

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGYDate December 11, 1987
Operator's
Well No. 2748
Farm Gains
State of West Virginia
Department of Mines
Oil and Gas Division
API No. 47 - 017 - 3538WELL OPERATOR'S REPORT
OFDRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGEWELL TYPE: Oil / Gas / Liquid Injection / Waste Disposal /
(If "Gas," Production / Underground Storage / Deep / Shallow)LOCATION: Elevation: 1006 Watershed Left Fork of Arnolds Creek
District: West Union County Doddridge Quadrangle West UnionCOMPANY CNG Development Company
ADDRESS P.O. Box 15746
Pittsburgh, PA 15244
DESIGNATED AGENT Gary A. Nicholas
ADDRESS Rt. 2 Box 698
Bridgeport, WV 26330
SURFACE OWNER James A. Gain
ADDRESS Rt. 1, Box 54
West Union, WV 26456
MINERAL RIGHTS OWNER James A. Gain
ADDRESS Rt. 1, Box 54
West Union, WV 26456

OIL AND GAS INSPECTOR FOR THIS WORK

Mike Underwood Rt. 2, Box 114
Salmon, WV 26426PERMIT ISSUED May 21, 1987DRILLING COMMENCED Nov. 4, 1987DRILLING COMPLETED Nov. 9, 1987IF 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.			
13-10"	209	209	To Surf.
9 5/8			
8 5/8	1471	1471	To Surf.
7			
5 1/2			
4 1/2	5231	5231	200 sks
3			
2 1/2	5011	5011	
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 5300 feetDepth of completed well 5323 feet Rotary / Cable Tools _____Water strata depth: Fresh 350 feet; Salt _____ feet

Coal seam depths: _____ Is coal being mined in the area? No _____

OPEN FLOW DATA

Producing formation Alexander Pay zone depth 5032-5079 feet

Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d

Final open flow 1061 Mcf/d Final open flow _____ Bbl/dTime of open flow between initial and final tests 4 hoursStatic rock pressure 850 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

(Continue on reverse side)

DEC 29 1987

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

Perforated Alexander 5032-5079, 29 holes, .39

Dowell Foam Frac - Breakdown 1350, Ave HHP 728, Ave Rate 11.8, Ave Pr 2517,
Max Tr Pr 2750, 700 gal 15% Acid, Total Sand 123,000, Max Conc. 12, Total Fl 631,
Sl Fluid 443, ISIP 1280, 5 min SIP 1120, Total Nit. 636,000 SCF.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all free and salt water, coal, oil and gas
Soil, Sand, Shale & RK			0	1700	Damp @ 350'
L. Lime			1700	1725	
Shale			1725	1735	
Big Lime			1735	1835	
Sand & Shale			1835	<u>5323</u>	
LOG TOPS ✓					
Big Lime			1736	1836	
Big Injun			1836	1890	
Weir			2040	2148	
Berea			2242	2252	
Gordon Gp.			2452	2490	
Warren			3106	3162	
U. Speechley			3180	3270	
Bradford			4306	4342	
Riley			4664	4690	
Benson			4751	4806	
<u>Alexander</u>			4996	5086	

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY
Well Operator
By: [Signature]
Date: December 11, 1987

RECEIVED
DEC 21 1987

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

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
minerals, encountered in the drilling of a well."



1) Date: March 21, 1987
 2) Operator's Well No. CNGD 2748 Rev. 3538
 3) API Well No. 47 017 State County Permit

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

4) WELL TYPE: A Oil Gas B (If "Gas", Production Undergrnd storage Deep Shallow
 Elevation: 1006 Watershed: Left Fork of Arnolds Creek

5) LOCATION: District: West Union 8 County: Doddridge 017 Quadrangle: West Union 670

6) WELL OPERATOR: CNG Development Co. CODE: 10110 7) DESIGNATED AGENT Gary Nicholas
 Address: Cheryl S. Hattle P.O. Box 15746 Address: Crosswind Corporate Park
Pittsburgh, PA 15244 Rt. 2, Box 698, Bridgeport, WV 26330

8) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name: Mike Underwood Name: Sam Jack Drilling Co.
 Address: Route 2, Box 114 Address: P.O. Box 48
Salaw, WV 26426 Ruckhannon, WV 26201

10) PROPOSED WELL WORK: Drill deeper Redrill Stimulate
 Plug off old formation Perforate new formation
 Other physical change in well (specify) _____

11) GEOLOGICAL TARGET FORMATION, Alexander
 12) Estimated depth of completed well, 5300 feet
 13) Approximate trata depths: Fresh, _____ feet; salt, 1300 feet.
 14) Approximate coal seam depths: _____ Is coal being mined in the area? Yes _____ No _____

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS			FOOTAGE INTERVALS	CEMENT FILL-UP OF SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.			
Conductor						
Fresh water	11-3/4	H-40	42	For drilling: 200 Left in well: 200	To surface	By rule 15.05
Coal						
Intermediate	8-5/8	X-42	23	1450	To surface	By rule 15.05
Production	4-1/2	J-55	10.5	5300	200 - 400	Depths set
Tubing	1-1/2	CN-55	2.75			By rule 15.01
Liners						Perforations:
						Top
						Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-017-3538 Date May 21 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. May 21, 1989 unless well work is commenced prior to that date and prosecuted with due diligence. Permit expires

27001

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Plat: <u>RS</u>	Fee: <u>18132</u>	Casing: <u>RS</u>	Other: <u>SEE</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

