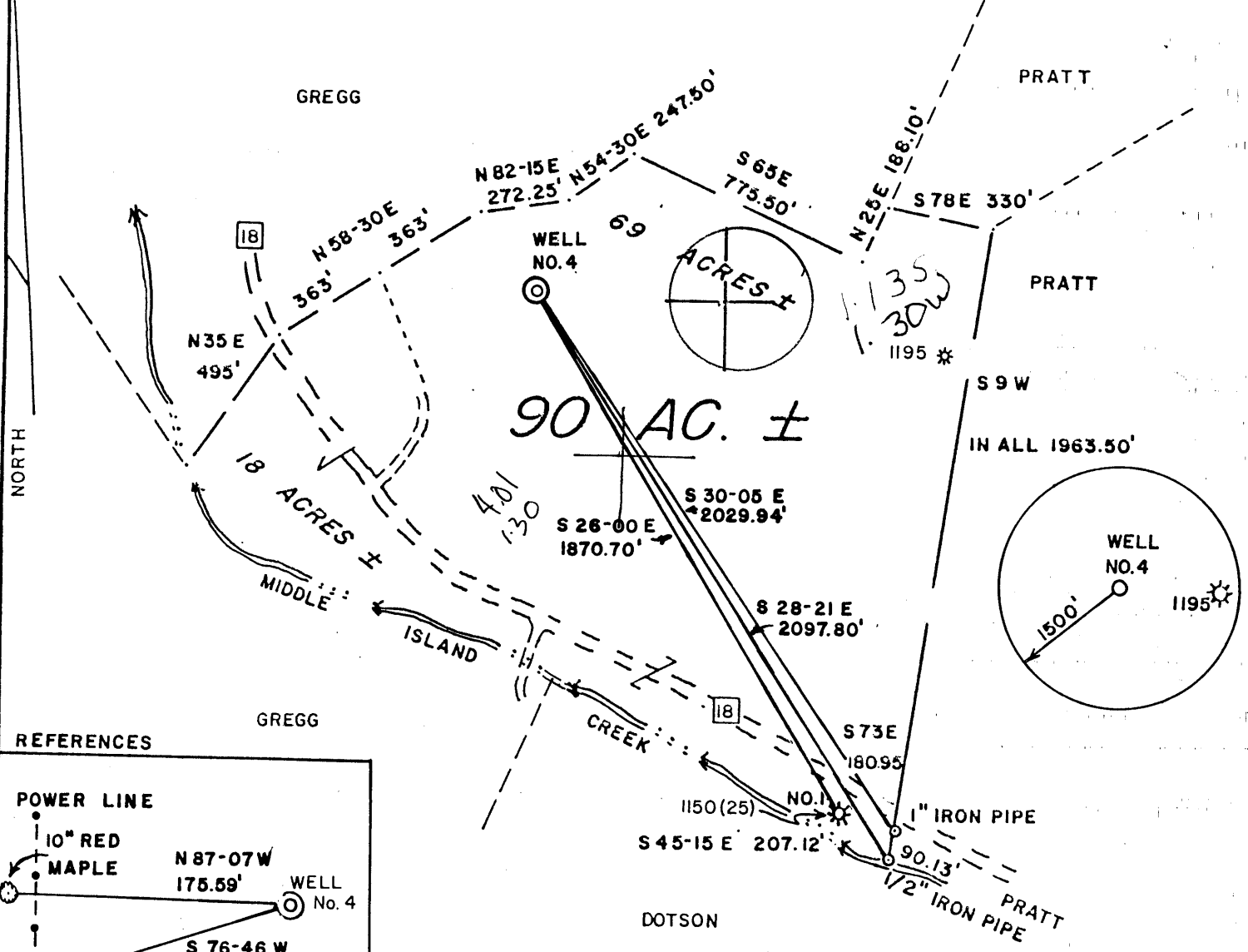


IRELAND LEASE

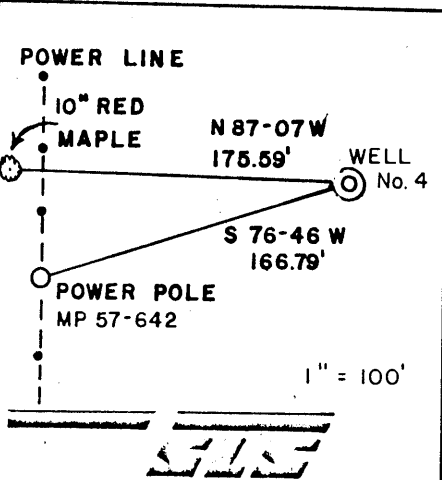
LATITUDE 39-22-30

6940' 25

LONGITUDE 80-50-00



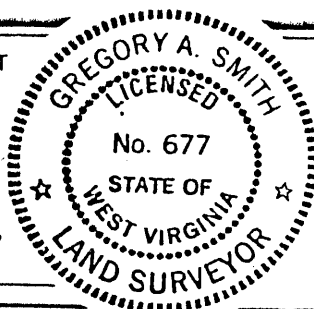
REFERENCES



GREGG WELL NO. 4

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.

L.L.S. 677 Gregory A. Smith



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

DATE JUNE 24, 19 87
 OPERATORS WELL NO. GREGG NO. 4
 API WELL NO. 47 - 095 - 1199
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 22-19 1469
 PROVEN SOURCE OF ELEVATION BM. ELEV. = 737' SCALE 1" = 500'

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
OIL AND GAS DIVISION



WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 826' WATERSHED MIDDLE ISLAND CREEK
 DISTRICT CENTERVILLE 1 COUNTY TYLER QUADRANGLE WEST UNION 7.5' 67

SURFACE OWNER MILDRED GREGG, ET. AL. ACREAGE 90
 ROYALTY OWNER MILDRED GREGG ET. AL. LEASE ACREAGE 90

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER
 PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION BENSON
 ESTIMATED DEPTH 5100' IIII G 1987

WELL OPERATOR ANVIL OIL CO., INC. DESIGNATED AGENT JUSTIN HENDERSON
 ADDRESS P.O. BOX 2566, CLARKSBURG, WV. 26301 ADDRESS P.O. BOX 2566, CLARKSBURG, WV. 26301

6-6 Stanley (92)

COUNTY NAME PERMIT

575



WR-35

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DEC 08 1987

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

State of West Virginia
DEPARTMENT OF ENERGY
Oil and Gas Division

Date 7-13-87
Operator's
Well No. #4
Farm Gregg #4
API No. 47 - 095 - 1199

WELL OPERATOR'S REPORT
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil / Gas XX / Liquid Injection / Waste Disposal /
(If "Gas," Production / Underground Storage / Deep / Shallow XXX /)

LOCATION: Elevation: 826 Watershed Middle Island Creek
District: Centerville County Tyler Quadrangle West Union

COMPANY Anvil Oil Co. Inc.

ADDRESS P.O. Box 2566 Clarksburg WV

DESIGNATED AGENT Justin Henderson

ADDRESS P.O. Box 2566 Clarksburg WV

SURFACE OWNER Mildred Gregg

ADDRESS General Delivery Alma WV

MINERAL RIGHTS OWNER as above

ADDRESS as above

OIL AND GAS INSPECTOR FOR THIS WORK

Lowther ADDRESS Middlebourne

PERMIT ISSUED 6-29-87

DRILLING COMMENCED 7-1-87

DRILLING COMPLETED 7-5-87

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 Cond.			
13-10"			
9 5/8			
8 5/8	969	969	cts
7			
5 1/2			
4 1/2	4826	4826	175 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Benson Depth 4726 feet

Depth of completed well 4893 feet Rotary XXXXX / Cable Tools

Water strata depth: Fresh 290 feet; Salt feet

Coal seam depths: 40-42 Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Benson Pay zone depth 4726-36 feet

Gas: Initial open flow 277 Mcf/d Oil: Initial open flow 0 Bbl/d

Final open flow 2350 Mcf/d Final open flow 0 Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure 1675 psig (surface measurement) after 32 hours shut in

(If applicable due to multiple completion--)

Second producing formation Riley Pay zone depth 4327-4355 feet

Gas: Initial open flow commingled Mcf/d Oil: Initial open flow 0 Bbl/d

Final open flow commingled Mcf/d Oil: Final open flow 0 Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure as above psig (surface measurement) after 32 hours shut in

(Continue on reverse side)

DEC 14 1987

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

Perforate Benson 4727-4734 (14 holes) Frac with 400 sks sand, 300 gal HCL
400 bbls treated fluid, 105,000 scf N2 Avg rate = 17 Avg psi = 1950

Perforate Riley 4327-4355 (14 holes) Frac with 400 sks sand, 500 gal HCL,
400 bbls treated fluid, 100, 000 scf N2, Avg rate = 20, avg psi = 2000#

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
top soil			0	40	
coal			40	42	
RR/rock			42	1075	damp 290'
sd/sh			1075	1270	
sd			1270	1390	
sh/sd			1390	1640	E-Log Tops
lime			1640	1705	
sd/sh			1705	1740	Big Lime 1683
sd			1740	1880	Green Briar Injun 1732
sh			1880	2050	Berea 2232
sd			2050	2160	Riley 322 4322
sh/sd			2160	2660	Benson 4726
sd			2660	2770	
sh			2770	4893	

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DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

Well Operator

By: _____

Date: _____

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
unencountered in the drilling of a well."

1135

RECEIVED
JUN 29 1987



1) Date: June 22, 1987
2) Operator's Well No. Gregg #4
3) API Well No. 47 095 1199
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 XX /
B (If "Gas", Production XX / Underground storage / Deep / Shallow XX /)
- 5) LOCATION: Elevation: 826 Watershed: Middle Island Creek
District: Centerville / County: Tyler 095 Quadrangle: West Union 670
- 6) WELL OPERATOR Anvil Oil Co Inc CODE: 2275 7) DESIGNATED AGENT Justin Henderson
Address P.O. Box 2566 Address P.O. Box 2566
Clarksburg WV 26301 Clarksburg WV 26301
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
Name Bob Lowther Name Coastal Corporation
Address General Delivery Address
Middlebourne WV
- 10) PROPOSED WELL WORK: Drill XX / Drill deeper / Redrill / Stimulate XX /
Plug off old formation / Perforate new formation
Other physical change in well (specify)
- 11) GEOLOGICAL TARGET FORMATION, Benson
12) Estimated depth of completed well, 4900 feet
13) Approximate trata depths: Fresh, 65 feet; salt, feet.
14) Approximate coal seam depths: 0 Is coal being mined in the area? Yes / No XXX /

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	For drilling	Left in well		Kinds	
Conductor	11 3/4			X						
Fresh water						<u>200ft</u>	<u>200ft</u>	<u>Cemented to</u>	<u>Surface</u>	<u>1505</u>
Coal										
Intermediate	8 5/8		20	X		950	950	<u>cts</u>	<u>as per rule</u>	<u>1505</u>
Production	4 1/2		10.5	X			4800	<u>230 sks</u>	Depths set	
Tubing										
Liners									Perforations:	
									Top	Bottom

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-095-1199 Date June 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 June 29, 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"/>	Plat: <input checked="" type="checkbox"/>	Casing: <input checked="" type="checkbox"/>	Fee: <u>214</u>	WPCP: <input checked="" type="checkbox"/>	S&E: <input checked="" type="checkbox"/>	Other: <input type="checkbox"/>
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NOTE: Keep one copy of this permit posted at the drilling location.

John H. Johnston
Director, Division of Oil and Gas
By Margaret J. Kasse File

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