

Jamie 8/21/89

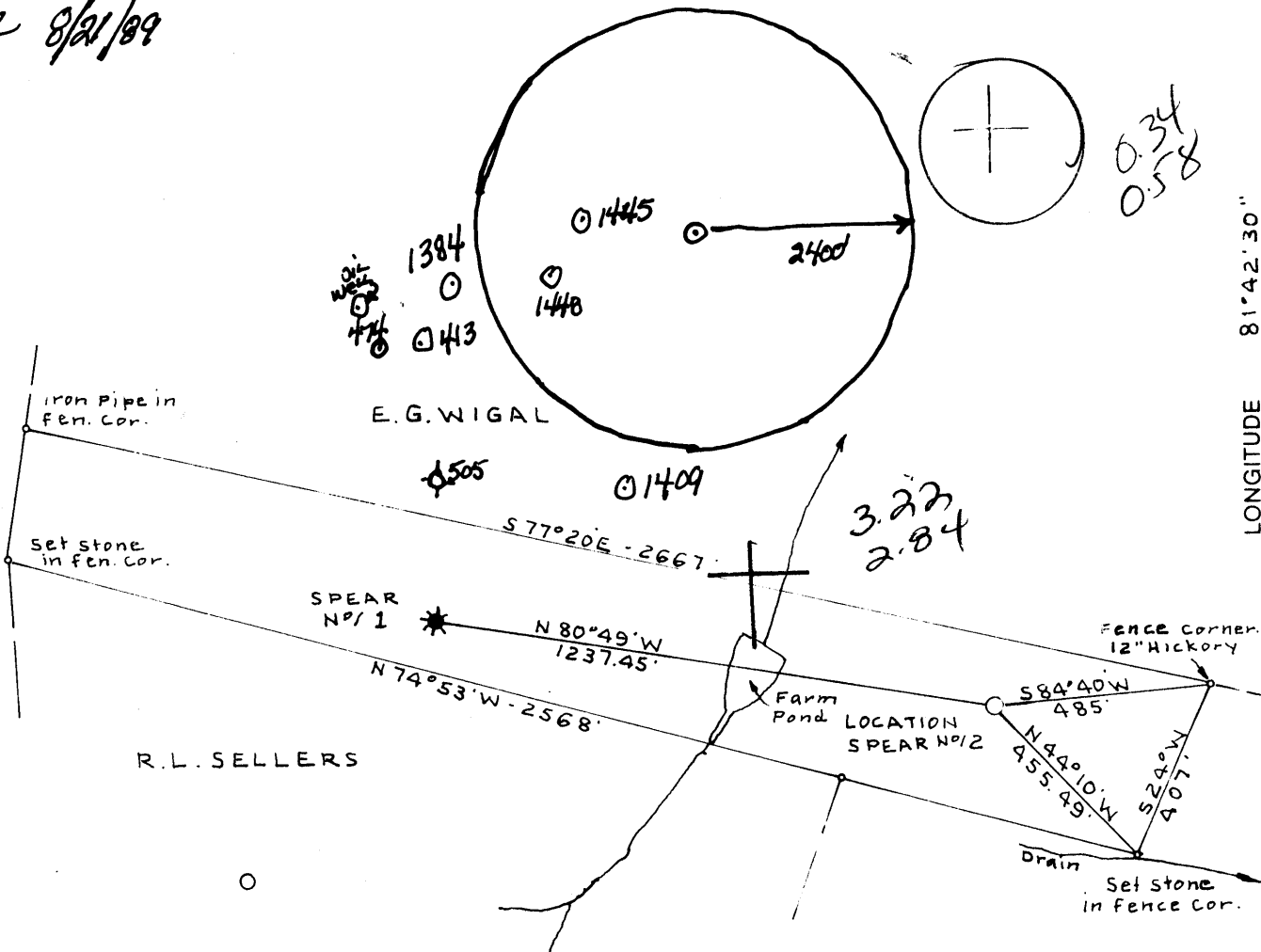
LATITUDE 39°07'30"

103.100'

2750'

LONGITUDE 81°42'30"

NORTH



1384  
1448  
1443

E.G. WIGAL

R.L. SELLERS

M.E. SELLERS

R.P.  
10" Locust  
in fence

R.P.  
14" White  
Oak in fen.

LOCATION

NO COAL OPERATIONS

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

FILE NO. BK 116 PG 87  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 400'  
 MINIMUM DEGREE OF ACCURACY 1:200  
 PROVEN SOURCE OF ELEVATION Top knob 2900' ±  
NW location El 887'

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) C. J. Solley Jr.  
 R.P.E. \_\_\_\_\_ U.S. 92 \_\_\_\_\_

PLACE SEAL HERE

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



DATE AUG 5, 1989  
 OPERATOR'S WELL NO. SPEAR NO 2  
 API WELL NO. \_\_\_\_\_

WELL TYPE: OIL  GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS,") PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW   
 LOCATION: ELEVATION 767.96 WATERSHED SOUTH FORK LEE CREEK  
 DISTRICT HARRIS 2 COUNTY WOOD  
 QUADRANGLE POND CREEK 553 009 4 Belleville WC  
 SURFACE OWNER RANDALL P. SPEAR ACREAGE 21.70  
 OIL & GAS ROYALTY OWNER RANDALL P. SPEAR LEASE ACREAGE 21.70  
 LEASE NO. \_\_\_\_\_

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 BEREA ESTIMATED DEPTH 2600'  
 WELL OPERATOR H.D. WELLS OIL & GAS EXP. & DEV. DESIGNATED AGENT H.D. WELLS  
 ADDRESS P.O. BOX 1785 CHARLESTON WV 25326 ADDRESS P.O. BOX 1785 CHARLESTON WV 25326

AUG 25 1989

COUNTY NAME

PERMIT

FORM WV-6  
H.T. HALL 48673

943

New England

(296)

State of West Virginia  
DEPARTMENT OF ENERGY  
Division of Oil and Gas

Well Operator's Report of Well Work

Farm name: SPEAR, RANDALL P. Operator Well No.: SPEAR #2

LOCATION: Elevation: 767.96 Quadrangle: POND CREEK

District: HARRIS County: WOOD  
Latitude: 2750 Feet South of 39 Deg. 7 Min. 30 Sec.  
Longitude: 3100 Feet West of 81 Deg. 42 Min. 30 Sec.

Company: WELLS, H. D. OIL & GAS EX  
POST OFFICE BOX 1785  
CHARLESTON, WV 25326-0000

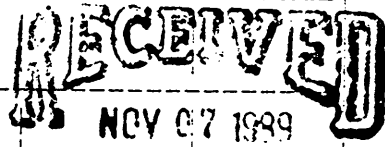
Agent: HARLEY D. WELLS

Inspector: GLEN P. ROBINSON  
Permit Issued: 08/23/89  
Well work Commenced: 9/15/89  
Well work Completed: 9/22/89  
Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary xx Cable \_\_\_\_\_ Rig  
Total Depth (feet) 2137  
Fresh water depths (ft) 107

Salt water depths (ft) 1072

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

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8	487	487	140 sks
5 1/2	2187	2187	70 sks



DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

OPEN FLOW DATA

Producing formation Berea Pay zone depth (ft) 2044  
Gas: Initial open flow 30 MCF/d Oil: Initial open flow show 551/d  
Final open flow 40 MCF/d Final open flow 2 551/d  
Time of open flow between initial and final tests 3 Hours  
Static rock Pressure 485 psig (surface pressure) after 4 Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ 551/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ 551/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

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: WELLS, H. D. OIL & GAS EXP. & DEV. INC.

By: [Signature]  
Date: 11/3/89

Perf: Berea 2043'-2045' 16 holes  
Foam Frac: 50,000 lbs. 20/40 sand  
250 gal. methanol  
496,000 scf. nitrogen

Formation	Top Ft.	Bottom Ft.	
Clay Red	0	100	
Shale Dark	100	150	Fresh Water @ 107'
Sand & Shale	150	520	
Red Rock	520	790	
Shale	790	1000	
Sand-Salt	1000	1250	Salt Water @ 1072'
Shale	1250	1680	
Injun Sand	1680	1760	
Shale	1760	2042	
Berea	2042	2044	
Shale	2044	2137	Total Depth

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NOV 07 1983  
DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

31

107-1447  
 Issued 8/23/89  
 Expires 8/23/91

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

- 1) Well Operator: <sup>943</sup> H. D. Wells Oil & Gas Exp. & Dev., Inc. 52900 (2) 552
- 2) Operator's Well Number: Spear No. 2 3) Elevation: 767.96
- 4) Well type: (a) Oil  / or Gas  /  
 (b) If Gas: Production  / Underground Storage   
 Deep  / Shallow
- 5) Proposed Target Formation(s): <sup>901</sup> Devonian Shale
- 6) Proposed Total Depth: 3800 feet
- 7) Approximate fresh water strata depths: 95', 217', 139'
- 8) Approximate salt water depths: 804 1100', 1122', 1353'
- 9) Approximate coal seam depths: n/a OK. None Reported
- 10) Does land contain coal seams tributary to active mine? Yes  / No
- 11) Proposed Well Work: Drill and 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.)
Conductor						<u>38CSR18-11.9</u>
Fresh Water	9 5/8"	J55		475'	<u>475'</u>	200 sacks
Coal						
Intermediate	7"	J55		2000'	2000'	<u>38CSR18-11.2.2</u> 100 sacks
Production	4 1/2"	J55		3800'	3800'	<u>38CSR18-11.1</u> 1500 ft.
Tubing						
Liners						

PACKERS : Kind \_\_\_\_\_  
 Sizes \_\_\_\_\_  
 Depths set \_\_\_\_\_

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 AUG 15 1989

For Division of Oil and Gas Use Only

DIVISION OF OIL & GAS  
 DEPARTMENT OF ENERGY

Fee(s) paid: Well Work Permit Reclamation Fund WPCP

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AUG 15 1989

Page 1 of 2  
Form WW2-A  
(09/87)  
File Copy

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

1) Date: August 14, 1989  
2) Operator's well number  
Spear No. 2  
3) API Well No: 47 - 107 - 1447  
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 Randall P. Spear  
Address Rt. 1, Box 40  
Belleville, WV 26133  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Glen P. Robinson  
Address Rt. 1, #6 Mt. Pleasant Estate  
Mineral Wells, WV 26150  
Telephone (304)-489-9162

5) (a) Coal Operator:  
Name n/a  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name n/a  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(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 H. D. Wells Oil & Gas Exp. & Dev., Inc.  
By: [Signature]  
Its: President  
Address P.O. Box 1785  
Charleston, WV 25326  
Telephone (304) 346-2829

Subscribed and sworn before me this 14th day of August, 1989

[Signature]

Notary Public