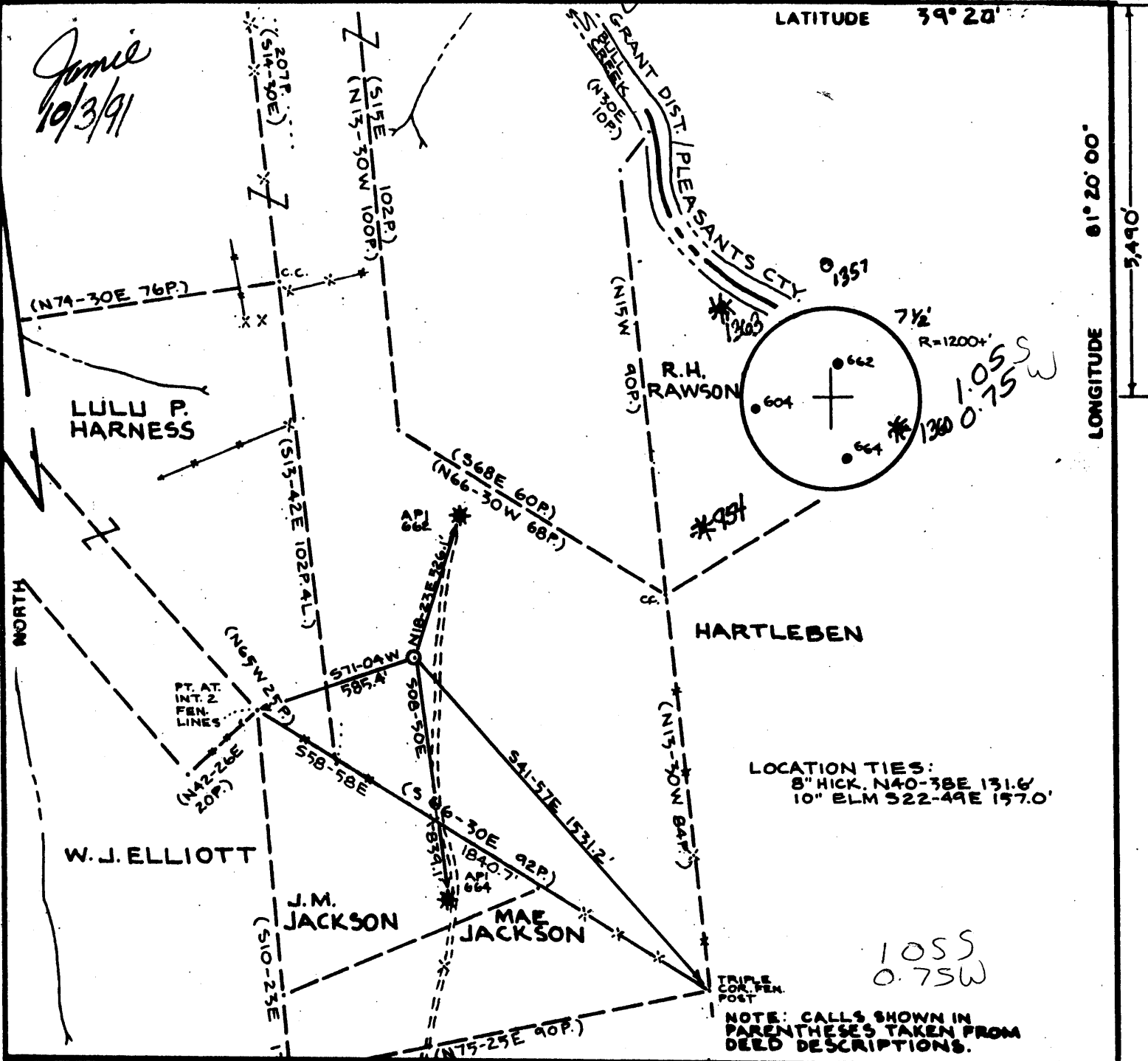


Janie  
10/3/91



LOCATION TIES:  
 8" HICK. N40-38E 131.6'  
 10" ELM S22-49E 157.0'

1055  
 0.75W

NOTE: CALLS SHOWN IN PARENTHESES TAKEN FROM DEED DESCRIPTIONS.

FILE NO. 85116  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1:200  
 PROVEN SOURCE OF ELEVATION USGS MONUMENT "791"

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 MINES.  
 (SIGNED) William Ambrose  
 R.P.E. \_\_\_\_\_ L.L.S. 568

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6 (8-78)



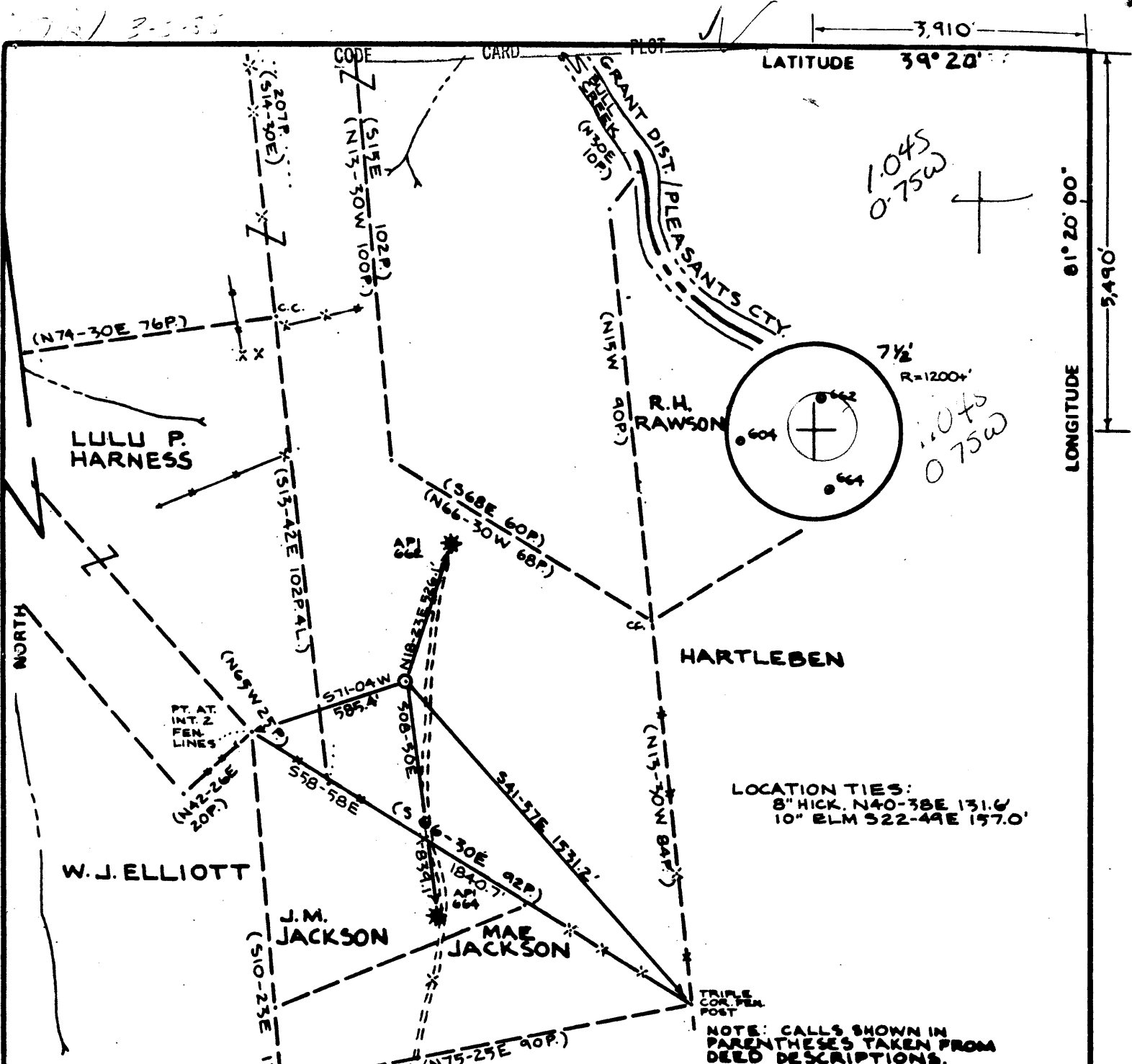
DATE 13 FEBRUARY, 1985  
 OPERATOR'S WELL NO. HARNESS #7  
 API WELL NO. \_\_\_\_\_  
47 - 107 - 1359-Frac  
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

WELL TYPE: OIL  GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS,") PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW \_\_\_\_\_  
 LOCATION: ELEVATION 977 WATER SHED BULL CREEK  
 DISTRICT UNION 8 COUNTY WOOD  
 QUADRANGLE WILLOW ISLAND Marietta SC  
 SURFACE OWNER LOUIS H. HARNESS, ET AL. ACREAGE 60  
 OIL & GAS ROYALTY OWNER \_\_\_\_\_ LEASE ACREAGE 215  
 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 DEVONIAN SHALE ESTIMATED DEPTH 5000'  
 WELL OPERATOR Producers Corp DESIGNATED AGENT Noble Zickrose  
 ADDRESS 1845 EMERSON AVE 4576 ADDRESS \_\_\_\_\_  
Bakersburg, W. Va. 26101

Wood - 1359

DWWD 6-6 Waverly (071)



LOCATION TIES:  
 8" HICK. N40-38E 131.6'  
 10" ELM S22-49E 157.0'

FILE NO. 85116  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1:200  
 PROVEN SOURCE OF ELEVATION USGS MONUMENT "791"

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 MINES.  
 (SIGNED) William Ambrose  
 R.P.E. \_\_\_\_\_ L.L.S. 568

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6  
 (8-78)



DATE 13 FEBRUARY 1985  
 OPERATOR'S WELL NO. HARNESSES 7  
 API WELL NO. 47-107-1359  
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

WELL TYPE: OIL  GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS,") PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW \_\_\_\_\_  
 LOCATION: ELEVATION 977 WATERSHED BULL CREEK  
 DISTRICT UNION COUNTY WOOD  
 QUADRANGLE WILLOW ISLAND Marietta 15' SC8  
 SURFACE OWNER LOUIS H. HARNESSES, ET AL. ACREAGE 60  
 OIL & GAS ROYALTY OWNER \_\_\_\_\_ LEASE ACREAGE 215  
 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 DEVONIAN SHALE ESTIMATED DEPTH 5000'  
 WELL OPERATOR WYANDOTA EXPLORATION DESIGNATED AGENT ROGER HUNTER  
 ADDRESS ROUTE 1 MARIETTA OHIO 45750 ADDRESS PO. BOX 1386 CHARLESTON WEST VIRGINIA 25325

MAR 11 1985

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

Reviewed TM6  
Recorded \_\_\_\_\_

Well Operator's Report of Well Work

Farm name: ANDERSON, BILL Operator Well No.: HARNESS 7

LOCATION: Elevation: 977.00 Quadrangle: WILLOW ISLAND

District: UNION County: WOOD  
Latitude: 5490 Feet South of 39 Deg. 20Min. 0 Sec.  
Longitude 3910 Feet West of 81 Deg. 20 Min. 0 Sec.

Company: GASSEARCH CORPORATION  
7845 EMERSON AVENUE  
PARKERSBURG, WV 26101-0000

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
9 5/8"	417'	417'	to surface
7"	2288'	2288'	to 1000'
4 1/4"		3810'	to 2400'

Agent: NOBLE ZICKEFOOSEE

Inspector: GLEN P. ROBINSON  
Permit Issued: 10/03/91  
Well work Commenced: 10/14/91  
Well work Completed: 10/21/91  
Verbal Plugging \_\_\_\_\_  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig \_\_\_\_\_  
Total Depth (feet) 3820'  
Fresh water depths (ft) N/A

Salt water depths (ft) 1915'

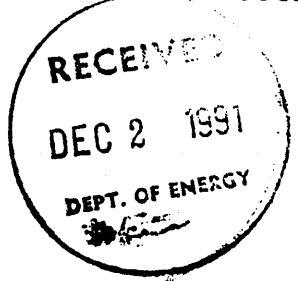
Is coal being mined in area (Y/N)? N  
Coal Depths (ft): None reported

OPEN FLOW DATA

Producing formation Balltown, Speerly, Warren Pay zone depth (ft) see  
Gas: ~~Initial open flow~~ None Taken MCF/d Oil: ~~Initial open flow~~ None Taken Bbl/d  
Final open flow 500 MCF/d Final open flow show Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock Pressure 400 psig (surface pressure) after 48 Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
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

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: GASSEARCH CORPORATION

By: Noble Zickfoose  
Date: 11-14-91

TREATMENT REPORT

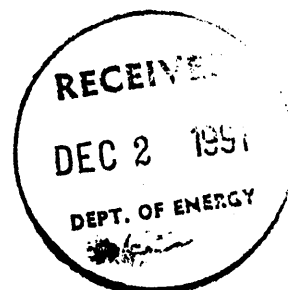
1st STAGE: Balltown - 3606' to 3642' - 24 holes, 1500 gal 15% Hcl  
 902 BBL foam, 10,000lb 80-100, 20,000lb 20-40  
 10 perf balls

2nd STAGE: Speechly - 3306' to 3476' - 26 holes - 750 gal 15%Hcl  
 840 BBL foam, 10,000lb 80-100, 20,000lb 20-40  
 10 perf balls

3rd STAGE: Warren - 3002' to 3040' - 20 holes - 750gal 15%Hcl  
 774 BBL foam, 10,000lb 80-100, 20,000lb 20-40, 8 perf balls

WELL LOG \*Note: Information taken from original report 12/13/85

<u>Formation</u>	<u>Top</u>	<u>Bottom</u>
Red Rock, Clay	0'	800'
First Cow Run	803'	828'
Second Cow Run	1013'	1032'
First Salt Sand	1235'	1286'
Second Salt Sand	1357'	1498'
Third Salt Sand	1560'	1610'
Maxon	1706'	1724'
Big Injun - Squaw	1805'	2026'
Weir	2082'	2102'
Welsh Stray	2277'	2279'
Berea	2337'	2347'
Devonian Shale	2347'	
Gantz	2450'	2456'
Thirty Foot Sand	2577'	2589'
Gordon	2700'	2589'
Speechly	3306'	3600'
Balltown	3600'	3820' - TD



62901

WV-35  
(Rev 8-81)

**RECEIVED**  
DEC 16 1985



DIVISION OF OIL & GAS  
**DEPT. OF ENERGY**

State of West Virginia  
Department of ~~Mines~~ *Energy*  
Oil and Gas Division

Date 12/13/85  
Operator's  
Well No. #7  
Farm Harness  
API No. 47 - 107 - 1359

WELL OPERATOR'S REPORT  
OF  
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 977' Watershed Bull Creek  
District: Union County Wood Quadrangle Willow Island

COMPANY Cuyahoga Exploration & Development Corp.

ADDRESS Route #1, Marietta, Ohio 45750

DESIGNATED AGENT Roger Hunter

ADDRESS P. O. Box 1386, Charleston, WV 25325

SURFACE OWNER Lulu Harness et al

ADDRESS Highland Ave. Williamstown, WV 26187

MINERAL RIGHTS OWNER Lulu Harness et al

ADDRESS Highland Ave., Williamstown, WV 26187

OIL AND GAS INSPECTOR FOR THIS WORK Mike  
Underwood ADDRESS Route #2, Box 135  
Salem, WV 26426

PERMIT ISSUED 3-5-85

DRILLING COMMENCED 5-11-85

DRILLING COMPLETED 5-16-85

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

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"			
9 5/8	<u>418</u>	<u>418</u>	<u>SURFACE</u>
8 5/8			
7	<u>2288</u>	<u>2288</u>	<u>1000</u>
5 1/2			
4 1/2	<u>3810</u>	<u>3810</u>	<u>1522</u>
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 3820' feet

Depth of completed well 3820' feet Rotary X / Cable Tools    

Water strata depth: Fresh N/A feet; Salt 1915' feet

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

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 3632'-3642' feet

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

Final open flow 54.49 Mcf/d Final open flow 3 Bbl/d

Time of open flow between initial and final tests 24 hours

Static rock pressure 200 psig (surface measurement) after 24 hours shut in

(If applicable due to multiple completion--)

Second producing formation None 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

DEC 30 1985

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

PERFORATION: 3632'-3642' 10' 10 holes HSC .49  
 FRAC: Breakdown 1450 psi  
 one pump truck  
 4½" casing  
 treat psi 1360  
 rate bbl per min 24  
 total fluid 48,100 gal  
 Acid 500 gal HCL 15%  
 KCL 4500 lbs  
 NDL -100  
 Unislik  
 PenSurf  
 Cla Chek

WELL LOG

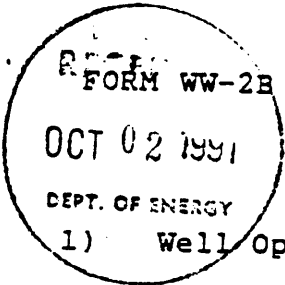
FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fres and salt water, coal, oil and ga
Red Rock & Clay			0'	800'	
First Cow Run			803'	828'	
Second Cow Run			1013'	1032'	
First Salt Sand			1235'	1286'	
Second Salt Sand			1357'	1498'	
Third Salt Sand			1560'	1610'	
Maxton			1706'	1724'	
Big Injun-Squaw			1805'	2026'	
Weir			2082'	2102'	
Welsh Stray			2277'	2279'	
Berea			2337'	2347'	
Devonian Shale			2347'		
Gantz			2450'	2456'	
Thirty-foot			2577'	2589'	
Gordon			2700'	2734'	
Speechly			3776'	3793'	
Total Depth				3820'	
up: Devonian 2347' Huron@ Low Huron 2597' ID.					

(Attach separate sheets as necessary)

Cuyahoga Exploration & Development Corporation  
Well Operator

By: Timothy Hudson Field Co-ordinator  
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 ..., encountered in the drilling of a well."



Issued 10/03/91  
Expires 10/03/93  
Page \_\_\_ of \_\_\_

47-107-1359 - Free  
STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

- 1) Well Operator: 4576 GASSEARCH CORPORATION 19005 (S) 1085
- 2) Operator's Well Number: HARNESS #7 3) Elevation: 977
- 4) Well type: (a) Oil X/ or Gas X/  
(b) If Gas: Production X/ Underground Storage     /  
Deep     / Shallow X/  
433
- 5) Proposed Target Formation(s): BALLTOWN, SPEECHLY, WARREN
- 6) Proposed Total Depth: 3820 feet
- 7) Approximate fresh water strata depths: N/A
- 8) Approximate salt water depths: 1915'
- 9) Approximate coal seam depths: NONE
- 10) Does land contain coal seams tributary to active mine? Yes     / No X/  
11) Proposed Well Work: RESTIMULATE LOWER BALLTOWN, PERFORATE AND STIMULATE  
UPPER BALLTOWN, SPEECHLY AND WARREN IN EXISTING WELL
- 12)

CASING AND TUBING PROGRAM

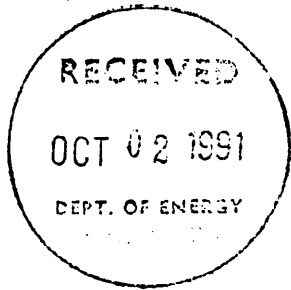
TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor						
Fresh Water	9 5/8"			417	417	to surface
Coal						
Intermediate	7"			2288'	2288'	to 1000'
Production	4 1/2"	J-55	10.5		3769'	to 2520'
Tubing					13911 1522	
Liners						

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

For Division of Oil and Gas Use Only

Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond C.D. Blanket  Agent  
 (Type)

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



1) Date: 9-27-91  
2) Operator's well number  
HARNESS #7  
3) API Well No: 47 - 107 - 1359-FRAC  
State - County - Permit

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

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

<p>4) Surface Owner(s) to be served:</p> <p>(a) Name <u>BILL ANDERSON</u> Address <u>1011 HIGHLAND AVE</u> <u>WILLIAMSTOWN WV 26187</u></p> <p>(b) Name _____ Address _____</p> <p>(c) Name _____ Address _____</p>	<p>5) (a) Coal Operator:</p> <p>Name _____ Address _____</p> <p>(b) Coal Owner(s) with Declaration</p> <p>Name _____ Address _____</p> <p>Name _____ Address _____</p> <p>(c) Coal Lessee with Declaration</p> <p>Name _____ Address _____</p>
<p>6) Inspector <u>GLEN P. ROBINSON</u> Address <u>BOX 1</u> <u>BELLEVILLE WV 26133</u> Telephone (304)-<u>863-8766</u></p>	

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)

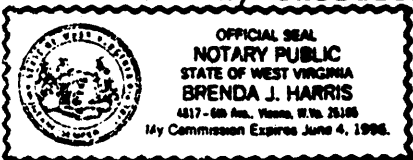
I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_\_\_ on the above named parties, by:

- 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 GASSEARCH CORPORATION  
By: Noble Zuckerman  
Its: AGENT  
Address 7845 EMERSON AVE.  
PARKERSBURG WV 26101  
Telephone 304-464-4666

Subscribed and sworn before me this 30<sup>th</sup> day of September, 1991

Brenda Harris  
My commission expires 6/4/96 Notary Public





1) Date: February 26, 19 85  
 2) Operator's Well No. Harness #7  
 3) API Well No. 47 - 107 - 1359  
 State \_\_\_\_\_ County \_\_\_\_\_ Permit \_\_\_\_\_

**RECEIVED**

MAR 1 1985

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

OIL & GAS DIVISION

APPLICATION FOR A WELL WORK PERMIT

DEPT. OF MINES

- 4) WELL TYPE:  Oil  Gas   
 B (If "Gas", Production  / Underground storage \_\_\_\_\_ / Deep \_\_\_\_\_ / Shallow  /)
- 5) LOCATION: Elevation: 977 Watershed: Bull Creek  
 District: Union County: Wood Quadrangle: Willow Island
- 6) WELL OPERATOR Cuyahoga Exp. & Dev. Corp. 7) DESIGNATED AGENT Roger Hunter  
 Address Rt. #1 Address P. O. Box 1386  
Marietta, OH 45750 Charleston, WV 25325
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:  
 Name Mike Underwood Name not yet determined  
 Address Route 2, Box 135 Address \_\_\_\_\_  
Salem, WV 26426
- 10) PROPOSED WELL WORK: Drill  / Drill deeper \_\_\_\_\_ / Redrill \_\_\_\_\_ / Stimulate  /  
 Plug off old formation \_\_\_\_\_ / Perforate new formation  /  
 Other physical change in well (specify) \_\_\_\_\_
- 11) GEOLOGICAL TARGET FORMATION, Devonian Shale/Benson Formation
- 12) Estimated depth of completed well, 5,000 feet
- 13) Approximate trata depths: Fresh, 100-1325 feet; salt, 1,500 feet.
- 14) Approximate coal seam depths: not applicable Is coal being mined in the area? Yes \_\_\_\_\_ / No  /

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILLUP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor	11 3/4		38.0	X		60'	60'		
Fresh water	9 5/8		36.0	X		405'	200'		Wings
Coal									Sizes
Intermediate	7		20.0	X		2500'	2500'	300 sacks	
Production	4.5		10.5	X		5000'	5000'	300 sacks	Depths set
Tubing									
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY  
DRILLING PERMIT

Permit number 47-107-1359 Date March 5, 19 85

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 March 5, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
52	MU	MU	MU	1240

*Margaret J. Hesse*  
 Administrator, Office of Oil and Gas

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

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

File