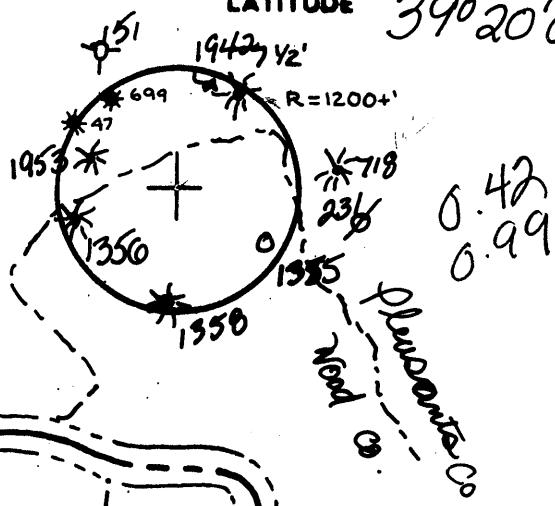


C.C. "CALCULATED COR" - FROM FEN. LOCATION & DEED INFO. - NO PHYSICAL EVIDENCE FOUND-

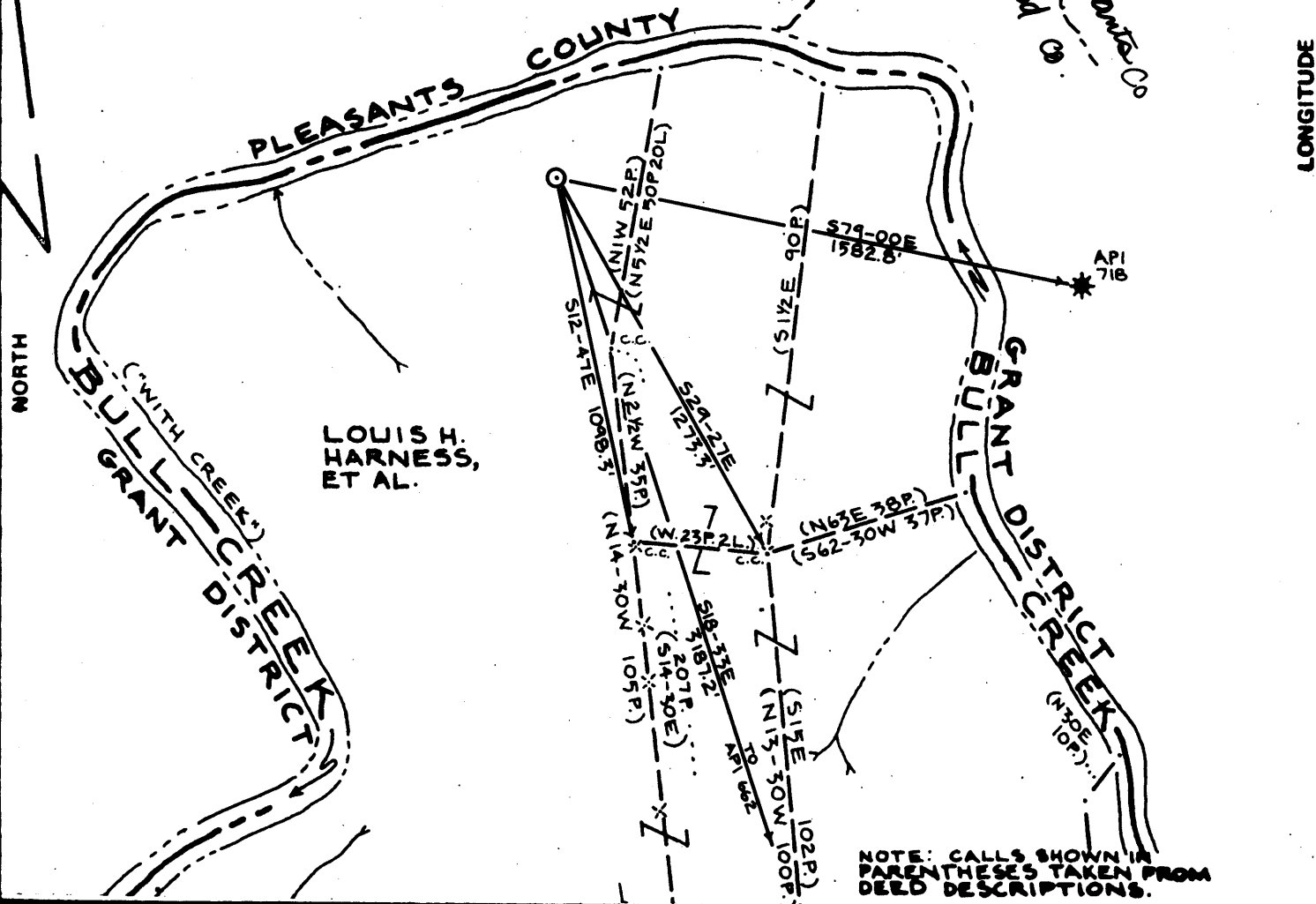
LOCATION TIES: 10° BUCKEYE N87W 77.2'
10° PINE S36°42'W 95.6'

Jamie
1/30/98

LATITUDE 39°20'00"



LONGITUDE 81°20'00"



NOTE: CALLS SHOWN IN PARENTHESES TAKEN FROM DEED DESCRIPTIONS.

FILE NO. 85111
DRAWING NO. _____
SCALE 1" = 300'
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

WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
#10 McJUNKIN ROAD
NITRO, WEST VIRGINIA 25143-2506



DATE 13 FEBRUARY, 1987
OPERATOR'S WELL NO. HARNES502
API WELL NO. 47-107-013547
STATE WV COUNTY WOOD PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
(IF "GAS") PRODUCTION STORAGE _____ DEEP _____ SHALLOW _____
LOCATION: ELEVATION 644 WATER SHED BULL CREEK
DISTRICT UNION COUNTY WOOD
QUADRANGLE WILLOW ISLAND
SURFACE OWNER LOUIS H. HARNES5, ET AL. ACREAGE 90
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) _____
Well drilled in 1985 by Cuparonga Exp. Co. 3 1/2" Diameter is to free existing
PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____ Speckley, Brad & Gordon
TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH 5000'

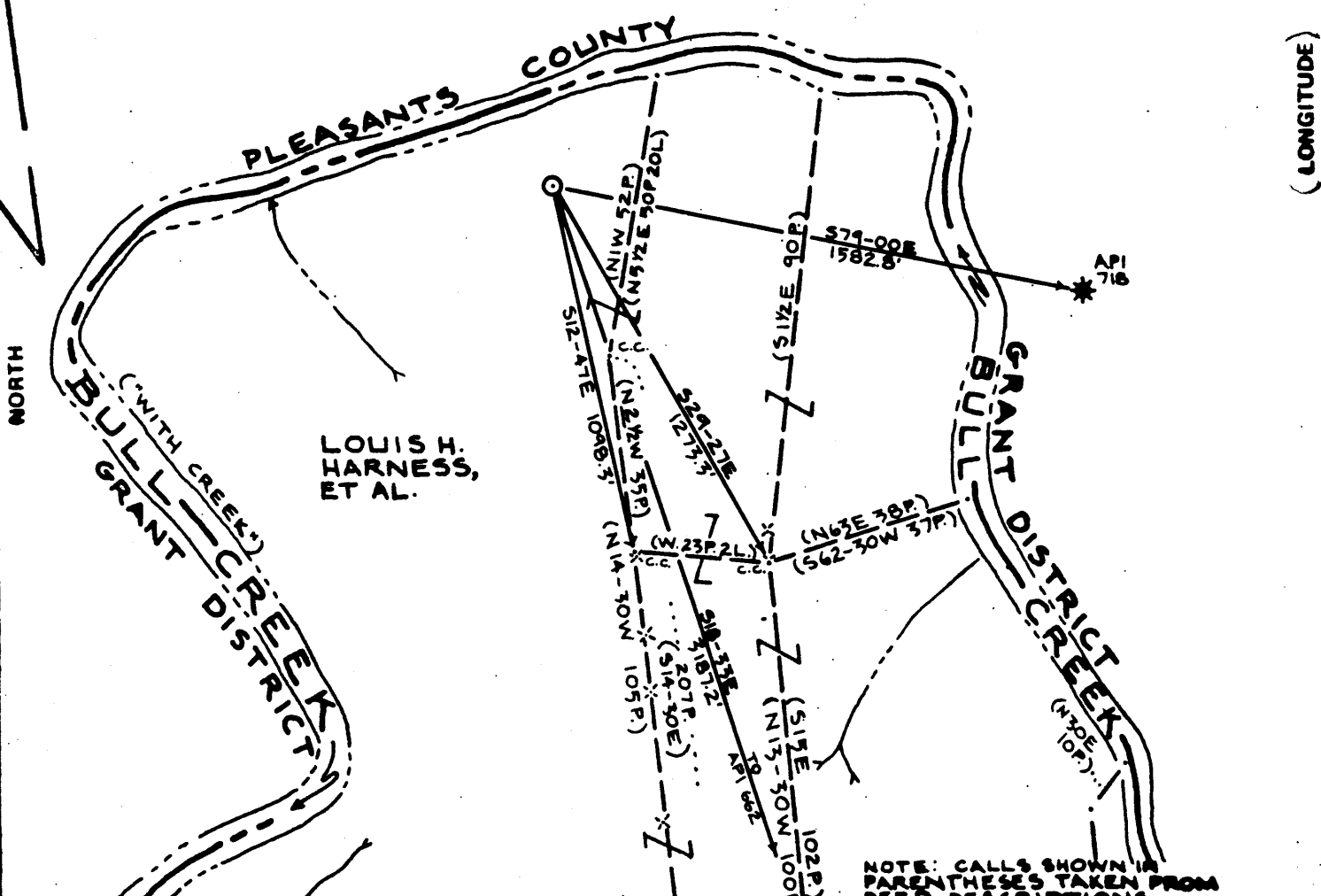
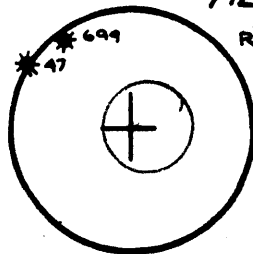
Attn: Rick Zickefoose
GasSearch Corporation
13 Industrial Boulevard
Parkersburg, Wva. 26101

AGNATED AGENT
ADDRESS _____
PH; 304-464-4666

WOOD - 1354

C.C. "CALCULATED COR" - FROM FEN.
 LOCATION & DEED INFO.
 -NO PHYSICAL EVIDENCE FOUND-

LOCATION TIES: 10° BUCKEYE N87W 77.2'
 10° PINE S36°2'W 95.6'



FILE NO. 85111
 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 #2
 API WELL NO. 47-107-1354
 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 644 WATER SHED BULL CREEK
 DISTRICT UNION COUNTY WOOD
 QUADRANGLE WILLOW ISLAND Marietta 15 1/2 SC
 SURFACE OWNER LOUIS H. HARNESS, ET AL. ACREAGE 8 1/2 90
 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 GYANDOGA EXPLORATION DESIGNATED AGENT ROGER HUNTER
 ADDRESS ROUTE 1 MARIETTA OHIO 45750 ADDRESS P.O. BOX 1386 CHARLESTON WEST VIRGINIA 25325

MAR 11 1985

WR-35

30-Jan-98

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Office of Oil & Gas
Permitting

API # 47-107-01354 F

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

Reviewed AS

APR 05 1999

WV Division of
Environmental Protection

Well Operator's Report of Well Work

Farm name: ANDERSON, BILL

Operator Well No.: HARNESS #2

LOCATION: Elevation: 644.00 Quadrangle: WILLOW ISLAND

District: UNION County: WOOD
Latitude: 2090 Feet South of 39 Deg. 22Min. 30 Sec.
Longitude 5150 Feet West of 81 Deg. 20 Min. 0 Sec.

Company: GASSEARCH CORPORATION
13 INDUSTRIAL BOULEVARD
PARKERSBURG, WV 26101-0000

Agent: NOBLE ZICKEFOOSE

Inspector: GLEN ROBINSON
Permit Issued: 01/30/98
Well work Commenced: 02/10/99
Well work Completed: 02/10/99
Verbal Plugging _____
Permission granted on: _____
Rotary X Cable _____ Rig _____
Total Depth (feet) 3826'
Fresh water depths (ft) _____
None Recorded
Salt water depths (ft) _____
1554'
Is coal being mined in area (Y/N)? N
Coal Depths (ft): None

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
9 5/8"	208'	208'	to surface
7"	1848'	1848'	to 1000'
4 1/2"		3828	to 1980'

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth (ft) see treatment
Gas: Initial open flow 6.7 MCF/d Oil: Initial open flow 1 Bbl/d
Final open flow 6.7 MCF/d Final open flow 1 Bbl/d
Time of open flow between initial and final tests 24 Hours
Static rock Pressure 200 psig (surface pressure) after _____ Hours

Second producing formation Berea-Balltown Pay zone depth (ft) see treatment
Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl/d
Final open flow 531 MCF/d Final open flow 10 Bbl/d
Time of open flow between initial and final tests N/A Hours
Static rock Pressure 360 psig (surface pressure) after 24 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

Noble Zickefoose

By: Noble Zickefoose

Date: 03/29/99

APR 05 1999

W000 1354 F

Treatment

- 1st Stage (1985) - Speechly - 3100' to 3116' - 16 Holes, 350 Gal. 15% Hcl., 1,144 BBL Treated water at 35 BPM.
- 2nd Stage (1999) - Gordon, Speechly, Balltown - 2372' to 3462' - 26 Holes, 1000 Gal. 7 1/2% Hcl., 379 MCFN2 at 28 MPM, 36 Perf balls.
- 3rd Stage (1999) - Berea - 1984' to 2004' - 12 Holes, 500 Gal. 7 1/2% Hcl., 14,000 lb 20-40 sand, 250 BBL. Sand Laden fluid, average rate of 14 BPM.

Well Log (From Records 1985)

<u>Formation</u>	<u>Top Feet</u>	<u>Bottom Feet</u>	<u>Remarks</u>
Red Rock & Clay	0	800	
Second Salt Sand	1068	1144	
Third Salt Sand	1284	1278	
Maxton	1334	1364	
Big Injun - Squaw	1444	1664	Salt Water @ 1554
Weir	1727	1749	
Welsh Stray	1921	1923	
Berea	1981	2004	
Gantz	2098	2102	
Thirty Foot Sand	2210	2248	
Gordon	2350	2379	
Speechly	3414	3438	
Total Depth		3826	

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WV Division of
Environmental Protection

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(Rev 8-81)

DIVISION OF OIL & GAS
DEPT. OF ENERGY State of West Virginia

Department of ~~Energy~~
Oil and Gas Division

Date 12/13/85
Operator's Well No. #2
Farm Harness
API No. 47 - 107 - 1354

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: 644' 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
Route #2, Box 135
Underwood ADDRESS Salem, WV 26426

PERMIT ISSUED 3-1-85

DRILLING COMMENCED 4-18-85

DRILLING COMPLETED 4-23-85

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	208	208	SURFACE
8 5/8			
7	1848	1848	1000'
5 1/2			
4 1/2	3828	3828	1920
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 3826' feet

Depth of completed well 3826' feet Rotary X / Cable Tools

Water strata depth: Fresh N/A feet; Salt 1554' feet

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

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 3100'-3116' feet

Gas: Initial open flow 6.7 Mcf/d Oil: Initial open flow 1 Bbl/d

Final open flow (6.7) Mcf/d Final open flow (1) 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: 3100' - 3116' 16' 16 holes HSC .49
 FRAC: Breakdown 950 psi
 4½ casing
 2 pump trucks
 Rate 35 bbl min.
 Treat PSI 1980
 Total Fluid used 48,080 gal
 Acid HCL 350 gal 15% CI-23
 FRA - 10
 Adomite Aqua
 Clatrol - 3
 GW -8
 NE - 2
 InFlo - 100

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Red Rock & Clay			0'	800'	
Second Salt Sand			1068'	1144'	
Third Salt Sand			1284'	1278'	
Maxton			1334'	1364'	
Big Injun-Squaw			1444'	1664'	
Weir			1727'	1749'	
Welsh Stray			1921'	1923'	
Berea			1981'	2004'	
Devonian Shale			2004'		
Gantz			2098'	2102'	
Thirty-foot			2210'	2248'	
Gordon			2350'	2379'	
Speechly			3414'	3438'	
Total Depth				3826'	
from nearby log: top thickness 20 Upper Devonian 2004 1250 Lower Huron 3254					Huron @ T.D.

(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 coal, encountered in the drilling of a well."

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MAR 1 1985



1) Date: February 26, 19 85
 2) Operator's Well No. Harness #2
 3) API Well No. 47 - 107 - 1354
 State _____ County _____ Permit _____

OIL & GAS DIVISION STATE OF WEST VIRGINIA
DEPT. OF MINES DEPARTMENT OF MINES, 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: 644 Watershed: Bull Creek
 District: Union County: Wood Quadrangle: Willow Island
 6) WELL OPERATOR Cuyahoga Exp. & Dev. Corp. 7) DESIGNATED AGENT Roger Hunter
 Address Route #1 Address P. O. Box 1386
Marietta, OH 45750 12125 Charleston, WV 25325
 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Robert Lowther Name not yet determined
 Address General Delivery Address _____
Middlebourne, WV 26149
 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 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 FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling		
Conductor	11 3/4		38.0	X		60'	60'	Kinds <u>CTS by rule 15.05</u>
Fresh water	9 5/8		36.0	X		200'	200'	
Coal								Sizes
Intermediate	7		20.0	X		2500'	2500'	Depths <u>at least 100 SX</u> <u>300 SX relaps required by rule 15.01</u>
Production	4.5		10.5	X		5000'	5000'	
Tubing								Perforations:
Liners								Top Bottom

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-107-1354

March 1, 19 85
Date

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 1, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
<u>52</u>	<u>mxj/mxj</u>	<u>mxj</u>	<u>mxj</u>	<u>1240</u>

Margaret Chase
 Administrator, Office of Oil and Gas

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

File

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