

Longitude - 80° 42' 02.5"

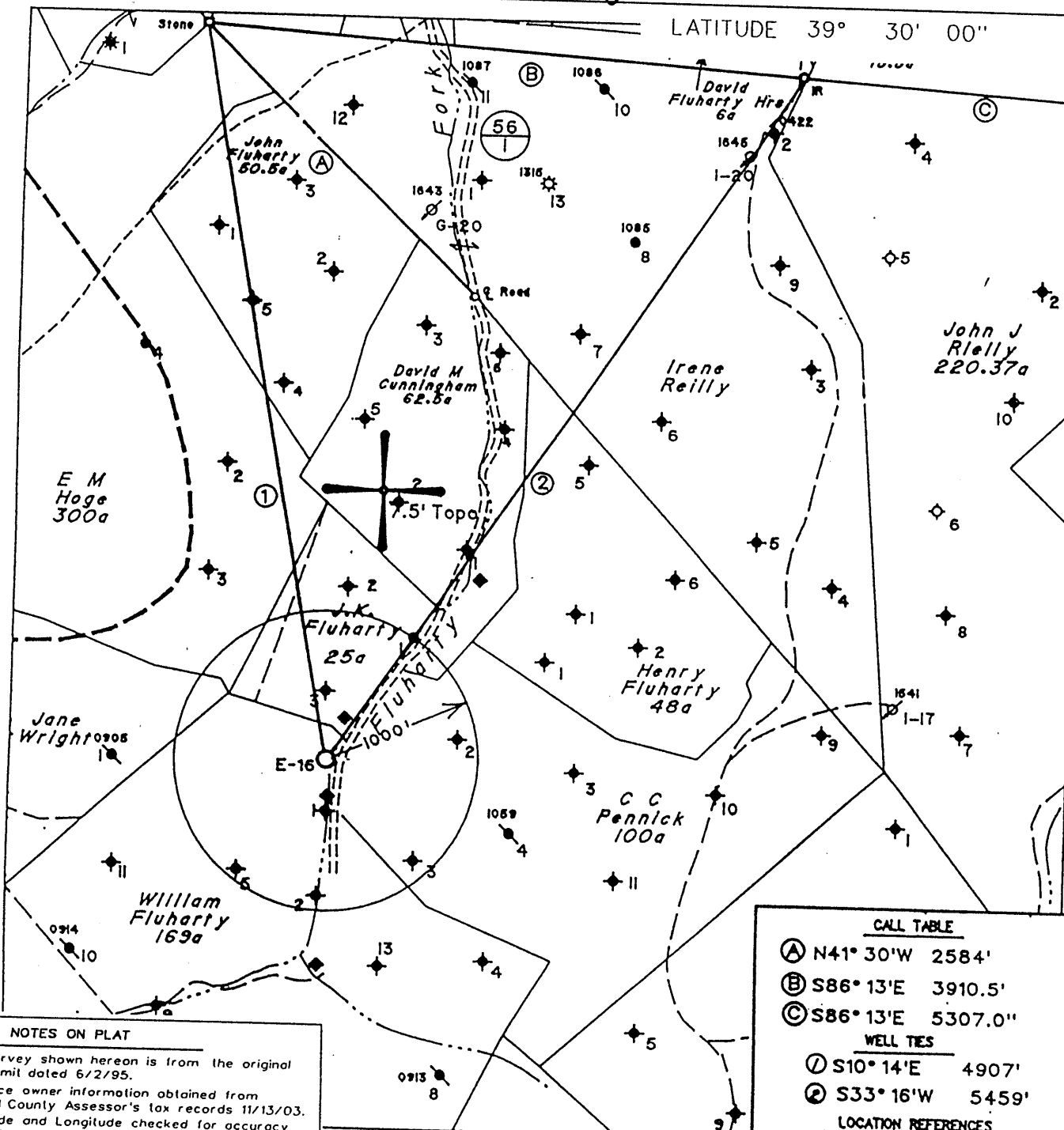
9,600'

LATITUDE 39° 30' 00"

LONGITUDE 80° 40' 00"

6,575'

Latitude - 39° 28' 55.0"



NOTES ON PLAT

- 1 - The survey shown hereon is from the original drilling permit dated 6/2/95.
- 2 - Surface owner information obtained from the Wetzel County Assessor's tax records 11/13/03.
- 3 - Latitude and Longitude checked for accuracy on 11/3/03.

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

CALL TABLE

- (A) N41° 30' W 2584'
- (B) S86° 13' E 3910.5'
- (C) S86° 13' E 5307.0'

WELL TIES

- (1) S10° 14' E 4907'
- (2) S33° 16' W 5459'

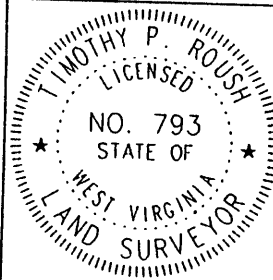
LOCATION REFERENCES

- N62° 53' W 59' 8" Ash
- S36° 53' W 127' 5" Buckeye
- N7° 32' E 148' SE House Corner

FILE NO. _____
 MAP NO. _____ N _____ S _____ E _____ W _____
 SCALE _____ 1" = 1000'
 MINIMUM DEGREE OF ACCURACY _____ 1 in 200
 PROVEN SOURCE OF ELEVATION WVDEP Records

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) [Signature]
 TIMOTHY P. ROUSH PS 793



WEST VIRGINIA
 Division of Environmental Protection
 Office of Oil and Gas
 1356 Hansford St.
 Charleston, West Virginia 25301



DATE November 13, 2003
 FARM William Fluharty NO. E-16
 API WELL NO. 47-103-1672F

WELL TYPE: OIL _____ GAS _____ LIQUID INJECTION X WASTE DISPOSAL _____
 (IF "GAS") PRODUCTION _____ STORAGE _____ DEEP _____ SHALLOW _____
 LOCATION: ELEVATION 963' WATERSHED Fluharty Fork
 DISTRICT Green COUNTY Wetzel
 QUADRANGLE Centerpoint 7.5'

SURFACE OWNER W.Va. Public Land Corporation ACREAGE 168.5
 OIL & GAS ROYALTY OWNER East Resources, et al. LEASE ACREAGE 10 Ac.
 LEASE NO. 15577-50

PROPOSED WORK: DRILL _____ CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION Gordon ESTIMATED DEPTH 2,942'

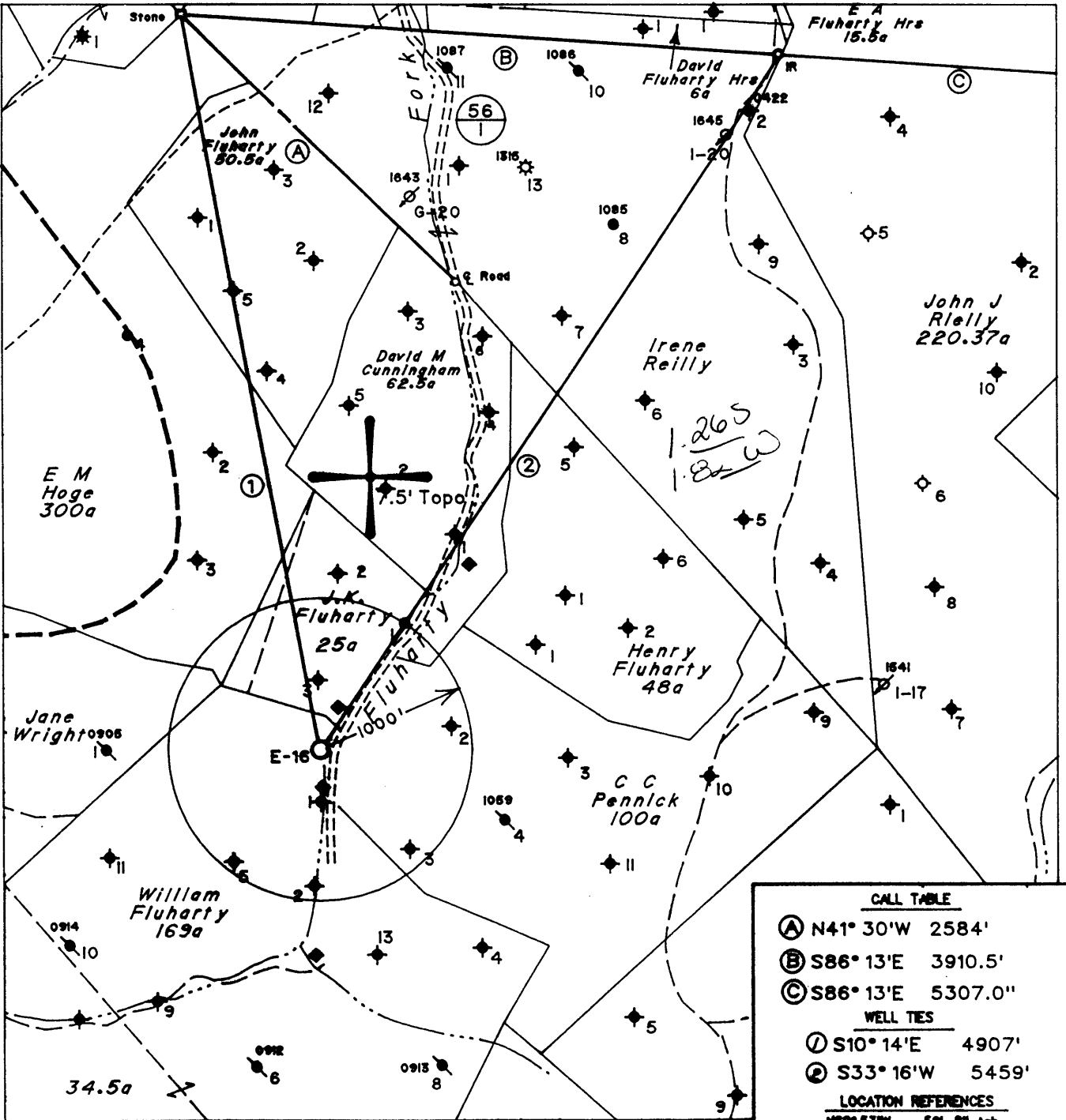
WELL OPERATOR East Resources, Inc. DESIGNATED AGENT Michael McCown
 ADDRESS P. O. Box 5519 ADDRESS P. O. Box 5519
Vienna, W.Va. 26105 Vienna, W.Va. 26105

8-0095

WET 1672 F

9,650'

LATITUDE 39° 30' 00"



Note: All Known Water Supply Sources Within 1000' Of Proposed Well Are Shown

◆ Denotes a Water Supply Source

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

CALL TABLE

- Ⓐ N41° 30' W 2584'
 - Ⓑ S86° 13' E 3910.5'
 - Ⓒ S86° 13' E 5307.0"
- WELL TIES
- ① S10° 14' E 4907'
 - ② S33° 16' W 5459'

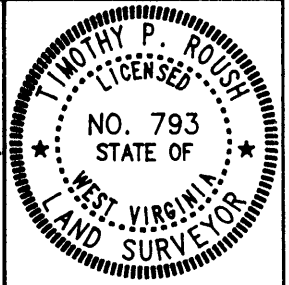
LOCATION REFERENCES

- N82° 53' W 59' 8" Ash
- S36° 53' W 127' 5" Buckeye
- N7° 32' E 148' SE House Corner

FILE NO. 1061
 MAP NO. N57 N 3 S E W 5
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION USGS BM - 902

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) Timothy P. Roush
 TIMOTHY P. ROUSH PS 793



STATE OF WEST VIRGINIA
 DIVISION OF ENERGY
 OIL AND GAS SECTION



DATE June 2, 1995
 FARM William Fluharty NO. E-16
 API WELL NO. 47-103-01672-5

WELL TYPE: OIL GAS LIQUID INJECTION X WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 963' WATERSHED Fluharty Fork
 DISTRICT Green COUNTY Wetzel
 QUADRANGLE Centerpoint N15 NW

SURFACE OWNER Virginia Fluharty Drew et al ACREAGE 168.5 Ac.
 OIL & GAS ROYALTY OWNER Pennzoil Products Co. et al. LEASE ACREAGE 240 Ac.
 LEASE NO. 15577-50

PROPOSED WORK: DRILL X CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

JUL 10 1995

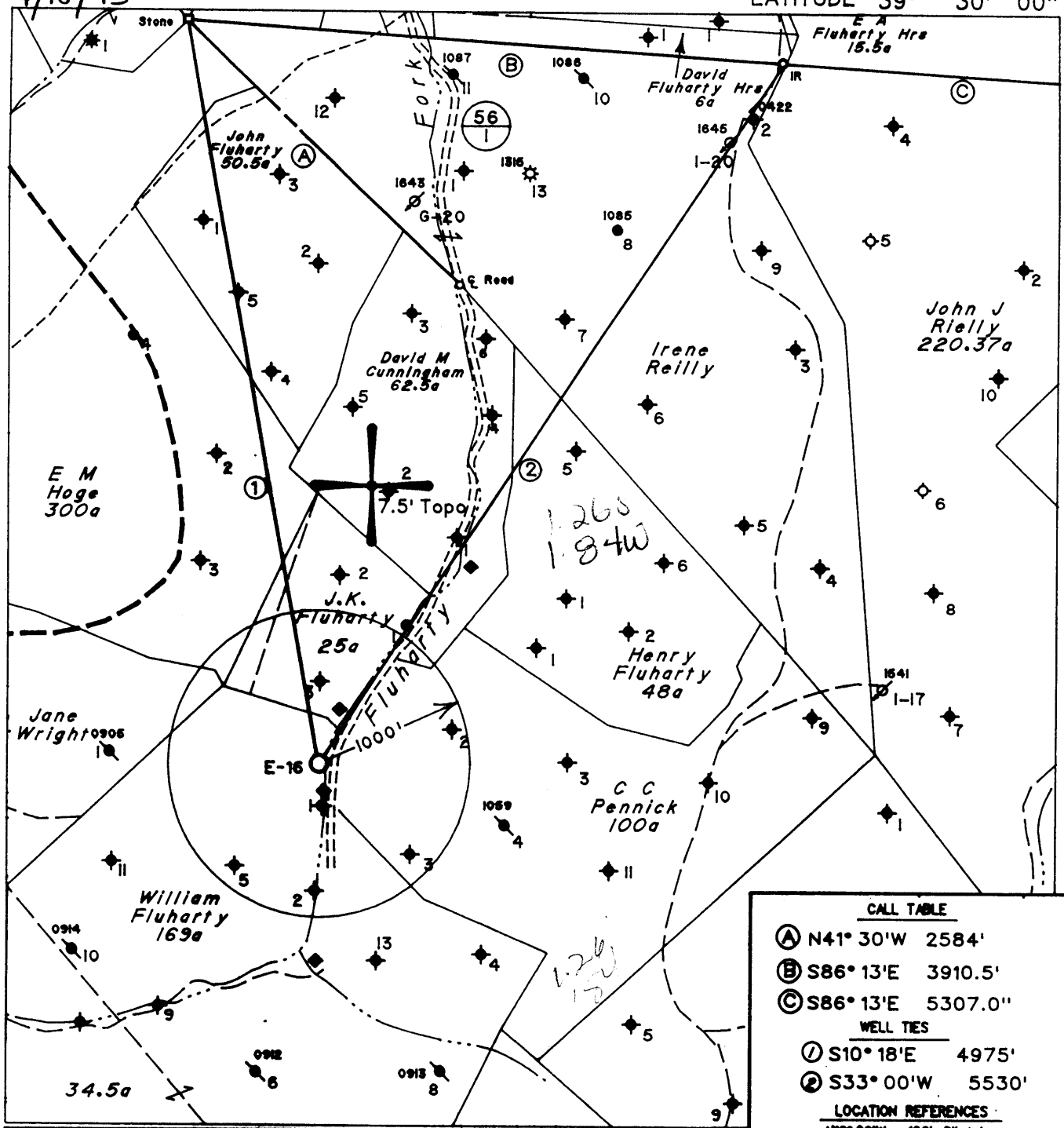
PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION Gordon ESTIMATED DEPTH 2950'
 WELL OPERATOR Pennzoil Products Company DESIGNATED AGENT James A. Crews
 ADDRESS P. O. Box 5519 ADDRESS P. O. Box 5519
Vienna, W. Va. 26105 673 8-0(0) Vienna, W. Va. 26105 8-0 95

FORM IV-6

GS 4/10/95

LATITUDE 39° 30' 00"

LONGITUDE 80° 40' 00"



Note: All Known Water Supply Sources Within 1000' Of Proposed Well Are Shown

Denotes a Water Supply Source

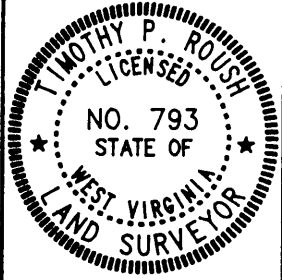
CALL TABLE	
(A)	N41° 30' W 2584'
(B)	S86° 13' E 3910.5'
(C)	S86° 13' E 5307.0'
WELL TIES	
(1)	S10° 18' E 4975'
(2)	S33° 00' W 5530'
LOCATION REFERENCES	
N18° 09' W	106' 8" Ash
S63° 47' W	86' 5" Buckeye
S3° 32' E	276' 5" Casing

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

FILE NO. 1061
 MAP NO. N57 N 3 S E W 5
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION USGS BM - 902

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) *Timothy P. Roush*
 TIMOTHY P. ROUSH PS 793



STATE OF WEST VIRGINIA
 DIVISION OF ENERGY
 OIL AND GAS SECTION



DATE March 23, 19 95
 FARM William Fluharty NO. E-16
 API WELL NO. 47-103-1672-5

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 963' WATERSHED Fluharty Fork
 DISTRICT Green COUNTY Wetzel
 QUADRANGLE Centerpoint
 SURFACE OWNER Virginia Fluharty Drew et al ACREAGE 168.5 Ac.
 OIL & GAS ROYALTY OWNER Pennzoil Products Co. et al. LEASE ACREAGE 240 Ac.
 LEASE NO. 15577-50
 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 Gordon ESTIMATED DEPTH 2950'
 WELL OPERATOR Pennzoil Products Company DESIGNATED AGENT James A. Crews
 ADDRESS P. O. Box 5519 ADDRESS P. O. Box 5519
Vienna, W.Va. 26105 Vienna, W.Va. 26105

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

COPY

Well Operator's Report of Well Work

Farm name: WV PUBLIC LAND CORP.

Operator Well No.: FLUHARTY E-16

LOCATION: Elevation: 963'

Quadrangle: CENTERPOINT 7.5'

District: GREEN

County: WETZEL

Latitude: 6,625 Feet south of 39 Deg 30 Min 0 Sec.

Longitude: 9,650 Feet west of 80 Deg 40 Min 0 Sec.

Company: EAST RESOURCES, INC.
P.O. BOX 5519
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: DAVID SCRANAGE

Permit Issued: 12/30/09

Well work Commenced: 03/25/10

Well work Completed: 03/26/10

Verbal plugging

permission granted on:

Rotary Cable Rig

Total Depth (feet) 2942'

Fresh water depths (ft) NA

Salt water depths (ft) NA

Is coal being mined in area (Y/N) N

Coal Depths (ft): NA

Casing Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	219'	219'	75 sks
4 1/2"	2877.45'	2877.45'	170 sks

OPEN FLOW DATA

* WATERFLOOD INJECTOR

Producing formation Gordon Pay zone depth (ft) 2814'-2829'

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

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.

RECEIVED

Office of Oil & Gas

AUG 08 2011

For: EAST RESOURCES, INC.

By:

Date: 5/12/10

WV Department of
Environmental Protection

Jacksonburg-Stringtown (189) 8-0

08/12/2011

103-1672

Treatment :

Treated perms. 2814'-2829' w/ 250 gals. 15% HCl acid,
329 bbls cross linked gel, and 19,000 # 20/40 sand.

Well Log :

SEE ORIGINAL WELL RECORD

RECEIVED
Office of Oil & Gas

AUG 08 2011

WV Department of
Environmental Protection

08/12/2011

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

MP

Well Operator's Report of Well Work

Farm name: DREW, VIRGINIA FLUHARTY Operator Well No.: WM FLUHARTY E-16
LOCATION: Elevation: ~~1,416.00~~ ^{see permits 963 and other below} 963 and other below
District: GREEN County: WETZEL
Latitude: 6,625 Feet south of 39 Deg 30 Min 0 Sec.
Longitude: 9,650 Feet west of 80 Deg 40 Min 00 Sec.

Company: EAST RESOURCES, INC.
P.O. BOX 5519
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: MIKE UNDERWOOD

Permit Issued: 12/04/03

Well work Commenced: 02/14/04

Well work Completed: 02/18/04

Verbal plugging permission granted on: _____

Rotary Cable _____ Rig _____

Total Depth (feet) 2942

Fresh water depths (ft) NA

Salt water depths (ft) NA

Is coal being mined in area (Y/N) N

Coal Depths (ft): NA

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	219.00'	219.00'	75 sks
4 1/2"	2877.45'	2877.45'	170 sks

RECEIVED
Office of Oil & Gas
Office of Chief
MAY 20 2004
WV Department of Environmental Protection

OPEN FLOW DATA Water Injection Well

Producing formation Gordon Pay zone depth (ft) 2786-2849

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

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: EAST RESOURCES, INC.

By: *[Signature]*
Date: 5/18/04

NET 1672

JUN 18 2004

Treatment :

Treated perforations 2820' -2828' w/ 250 gals 15% HCL, 305 Bbls cross linked gel and 20,100 # 20/40 sand

Well Log :

See original well record

WR-35
RECEIVED
 WV Division of
 Environmental Protection
 APR 10 1996

07-05-95
 API # 47-103-1672 S

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

Well Operator's Report of Well Work

Permitting
 Office of Oil & Gas

Farm name: DREW, VIRGINIA FLUHARTY
 LOCATION: Elevation: 1,416 *963 correct*
 District: GREEN *7128197*
 Latitude: 6,625 Feet south of
 Longitude: 9,650 Feet west of

Operator Well No.: WM FLUHARTY E-16

Quadrangle: CENTERPOINT

County: WETZEL
 39 Deg 30 Min 0 Sec.
 80 Deg 40 Min 0 Sec.

Company: PENNZOIL PRODUCTS COMPANY
 P.O. BOX 5519
 VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: RANDAL MICK
 Permit Issued: 7/5/95
 Well work Commenced: 8/9/95
 Well work Completed: 10/3/95
 Verbal plugging permission granted on:
 Rotary X Cable _____ Rig _____
 Total Depth (feet) 2,942'
 Fresh water depths (ft) NA
 Salt water depths (ft) NA
 Is coal being mined in area (Y/N) N
 Coal Depths (ft): NA

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8-5/8	219'	219'	75 SKS
4 1/2"	2877.45'	2877.45'	170 SKS

OPEN FLOW DATA *Waterflood Injection Well

Producing formation GORDON Pay zone depth (ft) 2786-2849
 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

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: PENNZOIL PRODUCTS COMPANY

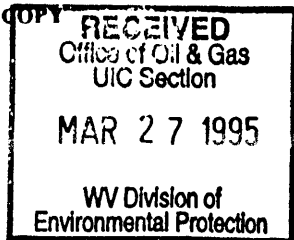
By: _____
 Date: 4/8/96

Treatment :

Perforated Gordon 2820-2828 (32 Holes) Treated via 4 1/2" with 300 gals
15% HCl Acid, 152 BBLs gelled water & 15,200# 20/40 Sand

Well Log :

Sand & Shale	0	-	1273'
Sand	1273'	-	1298'
Sand & Shale	1298'	-	1764'
Sand	1764'	-	1788'
Shale	1788'	-	1926'
Sand	1926'	-	1974'
Shale	1974'	-	2027'
Sand	2027'	-	2212'
Shale	2212'	-	2786'
Gordon	2786'	-	2849'
T.D.	2942'		



- 1) Date: March 24, 19 95
 2) Operator's Well No. Wm. Fluharty No. E-16
 3) SIC Code _____
 4) API Well NO. 47 - 103 - 1672
 State County Permit
 5) UIC Permit No. _____

Issued 05/03/95
Expires 05/03/95

STATE OF WEST VIRGINIA
 NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION,
 for the
 DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

20608

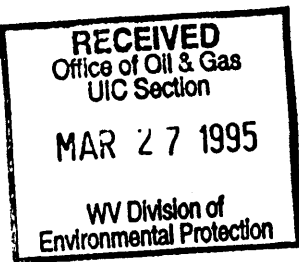
- 6) WELL TYPE: Liquid injection / Gas injection (not storage) _____ / Waste disposal _____
 7) LOCATION: Elevation: 963 Watershed: Fluharty Fork
 District: Green County: Wetzel Quadrangle: Centerpoint
 8) WELL OPERATOR: Pennzoil Products Co. 37450 9) DESIGNATED AGENT: James A. Crews
 Address: P. O. Box 5519 Address: P. O. Box 5519
Vienna, WV 26105 Vienna, WV 26105
 10) OIL & GAS INSPECTOR TO BE NOTIFIED: Name: Mike Underwood
 Address: Route 2, Box 135
Salem, WV 26426
 11) DRILLING CONTRACTOR: Name: _____
 Address: _____
 12) PROPOSED WELL WORK: Drill / Drill deeper _____ / Redrill _____ / Stimulate
 Plug off old formation _____ / Perforate new formation _____ / Convert _____
 Other physical change in well (specify): _____
 13) GEOLOGICAL TARGET FORMATION: Gordon 419 Depth 2843 feet(top) to 2858 feet(bottom)
 14) Estimated depth of completed well, (or actual depth of existing well) 2950 ft.
 15) Approximate water strata depths: Fresh, 143 feet; salt, 1170 feet.
 16) Approximate coal seam depths: 775
 17) Is coal being mined in the area? Yes _____ / No
 18) Virgin reservoir pressure in target formation 1400 psig. Source Estimated
 19) Estimated reservoir fracture pressure 3500 psig (BHFP)
 20) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour: 25 Bottom hole pressure 2332
 21) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES: Fresh water, produced water, bactericides and other chemicals as needed to maintain water quality & improve oil recovery.
 22) FILTERS (IF ANY): Cartridge and/or Coalbed filters
 23) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL: _____

24) 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		
Conductor									Kinds
Fresh water	8-5/8	L.S.	20	X		213	213	Cement to surface	Sizes
Coal									
Intermediate									
Production	4-1/2	J-55	10.5	X		2950	2950	Cement over salt sand	Depths set
Tubing									Perforations:
Liners									Top Bottom

- 25) APPLICANT'S OPERATING RIGHTS were acquired from Wm. Fluharty et al
 by deed / lease _____ / other contract _____ / dated April 9, 1995, of record in
Wetzel County Clerk's office in Deed Book 49 at page 133

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



- 1) Date March 24, 1995
Operator's
- 2) Well No. Wm. Fluharty No. E-16
- 3) SIC Code _____
- 4) API Well No. 47 - 103 - 167
State County Perm

STATE OF WEST VIRGINIA

NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
for the

DIVISION OF OIL AND GAS, DEPARTMENT OF ENERGY

- 6) SURFACE OWNER(S) OF RECORD TO BE SERVED
- (i) Name Virginia Fluharty Drew
Address 2831 Washington Avenue
St. Albans, WV 25177
 - (ii) Name _____
Address _____
 - (iii) Name _____
Address _____
- 7 (i) COAL OPERATOR N/A
Address _____
- 7 (ii) COAL OWNER(S) WITH DECLARATION ON RECORD:
Name _____
Address _____
- 7 (iii) COAL LESSEE WITH DECLARATION ON RECORD:
Name _____
Address _____

c/k #
21496

TO THE PERSON(S) NAMED ABOVE: You should have received this Form and the following documents

- (1) The Application for a Liquid Injection or Waste Disposal Well Work Permit on Form WW-3(B), which sets out the parties involved in the drilling or other work, and
- (2) The plat (surveyor's map) showing the well location on Form WW-6; and
- (3) The Construction and Reclamation Plan on Form WW-9 (unless the well work is only to plug a well), which sets out the plan for erosion and sediment control and for reclamation for the site and access road.

The date proposed for the first injection or waste disposal is _____, 19____.

THE REASON YOU RECEIVED THESE DOCUMENTS IS THAT YOU HAVE RIGHTS REGARDING THE APPLICATION WHICH ARE SUMMARIZED IN THE "INSTRUCTIONS" ON THE REVERSE SIDE OF THE COPY OF THE APPLICATION (FORM WW-3(B)) DESIGNATED FOR YOU. HOWEVER, YOU ARE NOT REQUIRED TO TAKE ANY ACTION AT ALL.

Take notice that under Chapter 22B of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a Well Work Permit with the Director of the Division of Oil and Gas, West Virginia Department of Energy, with respect to a well at the location described on the attached Application and depicted on attached Form WW-6. Copies of this Notice, the Application, the plat, and the Construction and Reclamation Plan have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Director.

The person signing this document shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document 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.

Pennzoil Products Company

Well Operator
By [Signature] Timothy P. Roush
Its Supervisor, Surveying/Mapping

Telephone (304) 422-6565

10/91

20608

UIC Section
MAR 27 1995
WV Division of Environmental Protection



Well No. Wm. Fluharty No. E-16
3) SIC Code _____
4 API Well NO. 47 - 103 - 1672-LI
State County Permit
5. UIC Permit No. _____

Issued 7/5/95

STATE OF WEST VIRGINIA
NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
for the

Expires 7/5/97

DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

- 6) WELL TYPE: Liquid injection / Gas injection (not storage) _____ / Waste disposal _____
- 7) LOCATION: Elevation: 963 Watershed: Fluharty Fork District: Green County: Wetzel Quadrangle: Centerpoint
- 8) WELL OPERATOR Pennzoil Products Co. 37450 9) DESIGNATED AGENT James A. Crews
Address P. O. Box 5519 Address P. O. Box 5519
Vienna, WV 26105 Vienna, WV 26105
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED Name Mike Underwood 11) DRILLING CONTRACTOR:
Address Route 2, Box 135 Name _____
Salem, WV 26426 Address _____
- 12) PROPOSED WELL WORK: Drill / Drill deeper _____ / Redrill _____ / Stimulate
Plug off old formation _____ / Perforate new formation _____ / Convert _____
Other physical change in well (specify) _____
- 13) GEOLOGICAL TARGET FORMATION, Gordon Depth 2843 feet(top) to 2858 feet(bottom)
- 14) Estimated depth of completed well, (or actual depth of existing well) 2950 ft.
- 15) Approximate water strata depths; Fresh, 143 feet; salt, 1170 feet.
- 16) Approximate coal seam depths: 775 feet
- 17) Is coal being mined in the area? Yes _____ / No
- 18) Virgin reservoir pressure in target formation 1400 psig. Source Estimated
- 19) Estimated reservoir fracture pressure 3500 psig (BHFP)
- 20) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour: 25 Bottom hole pressure 2332
- 21) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES: Fresh water, produced water, bactericides and other chemicals as needed to maintain water quality & improve oil recovery.
- 22) FILTERS (IF ANY): Cartridge and/or Coalbed filters
- 23) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL: _____

24) 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		
Conductor									Kinds
Fresh water	8-5/8	L.S.	20	X		213	213	Cement to surface	Sizes
Coal									
Intermediate									
Production	4-1/2	J-55	10.5	X		2950	2950	Cement over salt sand	Depths set
Tubing									Perforations:
Liners									Top Bottom

25) APPLICANT'S OPERATING RIGHTS were acquired from Wm. Fluharty et al
by deed / lease _____ / other contract _____ / dated April 9, pgs 1896, of record in the
Wetzel County Clerk's office in Deed Book 49 at page 133

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

File

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-103-1672-LI

July 5th.

~~5-3---~~

19 95

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 (if required) construction and reclamation plan, subject to any modifications and conditions specified below.

Permit expires 7-5-97 ~~5-3-97~~ 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: <u>AB</u>	Casing: <u>AB</u>	Fee: <u>CK 21496</u>
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Michael W. Lewis

CHIEF, OFFICE OF OIL AND GAS

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

PERMIT MODIFICATIONS AND CONDITIONS (IF ANY) TO THE PROPOSED WELL WORK

OFFICE USE ONLY

This part of Form IV-3(b) is to record the dates of certain occurrences and any follow-up inspections.

	Date	Follow-up inspection(s)	Date(s)
Application received			
Well work started		" "	
Total depth reached		" "	
Well Record received		" "	
Reclamation completed		" "	

OTHER INSPECTIONS

Reason: _____

Reason: _____