

Source of Elevation Elev Well No. 1 = 1017'

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

- Fracture.....
- New Location.....
- Drill Deeper.....
- Abandonment.....

Map No. _____ Signed: [Signature]
Squares: N S E W

Company Eastern American Energy Corp.
 Address P.O. Box 67, Glenville, W. Va.
 Farm Luvilla Radcliff, Russell & Bass Bush
 Tract _____ Acres 112.94 Lease No. _____
 Well (Farm) No. E.A. No 2 Serial No. _____
 Elevation (Spirit Level) 1153
 Quadrangle Glenville 7 1/2 NE
 County Gilmer District Glenville
 Engineer [Signature]
 Engineer's Registration No. 1227 LLS 200
 File No. _____ Drawing No. _____
 Date Nov. 13, 1978 Scale 1" = 500'

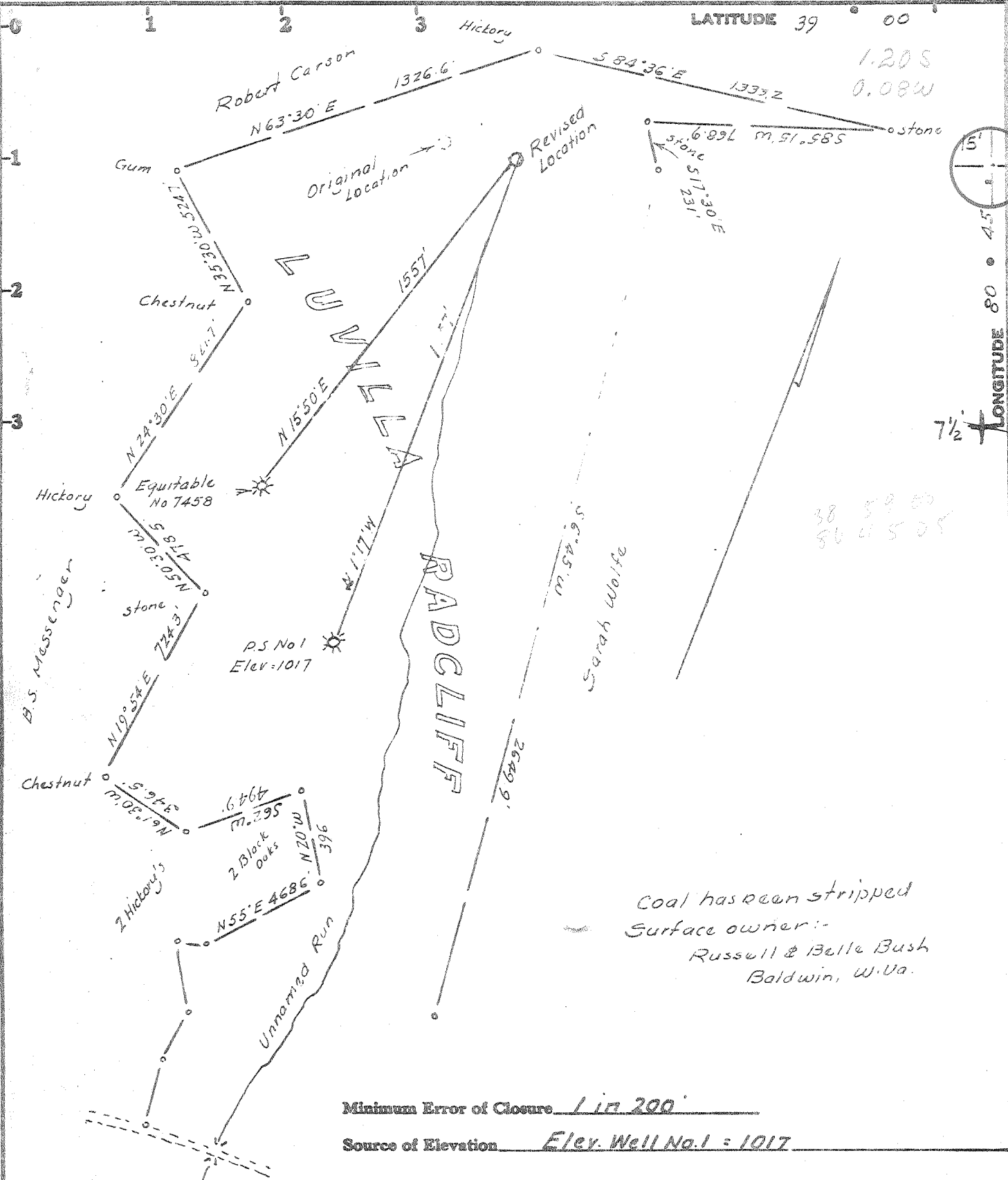
STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. GIL - 3391 - REV - DD

+ Denotes location of well on United States Topographic Maps, scale 1 to _____, latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

9/19/78 E



Minimum Error of Closure 1 in 200'
 Source of Elevation Elev. Well No. 1 = 1017

- Fracture.....
- New Location.....
- Drill Deeper.....
- Abandonment.....

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Signed: _____
 Squares: N S E W

Company Pacific States Gas and Oil Inc.
 Address P.O. Box 67, Glenville, W. Va.
 Farm Luvilla Radcliff, RUSSELL & BESS Bush
 Tract _____ Acres 11294 Lease No. _____
 Well (Farm) No. PS 2 Serial No. _____
 Elevation (Spirit Level) 1188
 Quadrangle Glenville 7 1/2, 15' NE
 County Gilmer District Glenville
 Engineer Murphy J.
 Engineer's Registration No. 1727 LLS 200
 File No. _____ Drawing No. _____
 Date Sept 4, 1978 Scale 1" = 500'

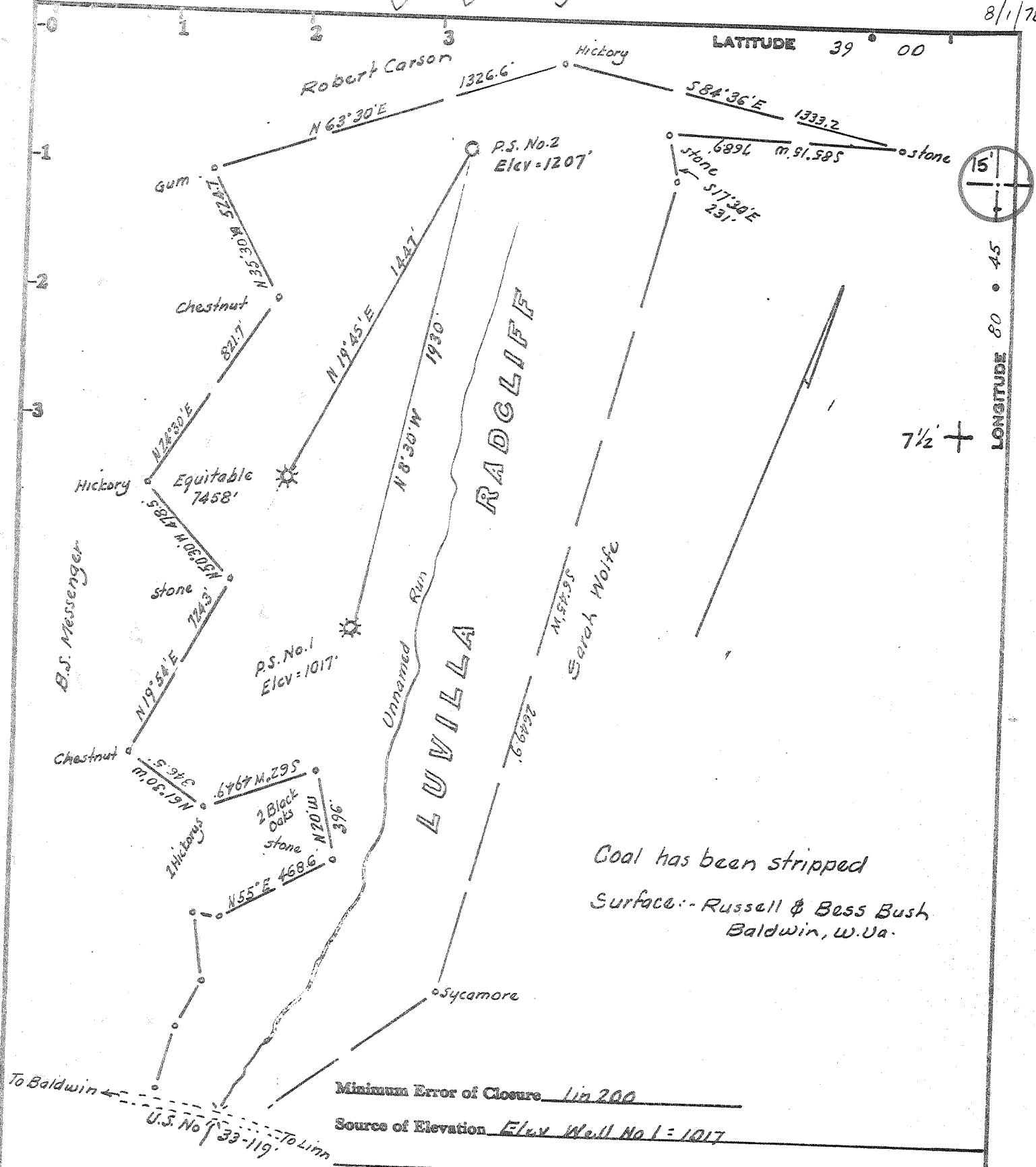
STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. GIL-3391 (Revised)

+ Denotes location of well on United States Topographic Maps, scale 1 to ^{24,000}/_{62,500}, latitude and longitude lines being represented by border lines as shown.
 - Denotes one inch spaces on border line of original tracing. **47-021**

Deep Wells also see S 6-6 Glenville North (182)

8/1/78



Minimum Error of Closure 1 in 200
 Source of Elevation Elev Well No 1 = 1017

- Fracture.....
- New Location.....
- Drill Deeper.....
- Abandonment.....

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Signed: *W. H. Hall*
 Squares: N S E W

Map No. _____

Company PACIFIC STATES GAS & OIL, INC.
 Address P.O. Box 67, Glenville, West Va.
 Farm Luvilla Radcliff, Russell & Bess Bush
 Tract _____ Acres 112.96 Lease No. _____
 Well (Farm) No. P.S. No. 2 Serial No. _____
 Elevation (Spirit Level) 1207'
 Quadrangle Glenville 7 1/2, 15' NE
 County Gilmer District Glenville
 Surveyor *W. H. Hall*
 Engineers' Registration No. 1227 L.S. 200
 File No. _____ Drawing No. _____
 Date July 26, 1978 Scale 1" = 500'

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

WELL LOCATION MAP
 FILE NO. GIL-3391

+ Denotes location of well on United States Topographic Maps, scale 1 to 24,000 to 62,500, latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

5250' Devonian

FORM IV-35
(Obverse)

Operator's Well No. L. Radcliff #2

[08-78,

WELL OPERATOR'S REPORT
OF

API Well No. 47 - 021 3391

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE State County Perm

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

LOCATION: Elevation: 1140 Watershed: Stewart's Creek
District: Glenville County: Gilmer Quadrangle: Glenville

WELL OPERATOR Eastern American Energy Corporation DESIGNATED AGENT James C. Recht
Address P.O. Box N Address P.O. Box N
Glenville, WV 26351 Glenville, WV 26351

PERMITTED WORK: Drill / Convert / Drill deeper / Redrill / Fracture or stimulate
Plug off old formation / Perforate new formation
Other physical change in well (specify) _____

APR - 9 1979

PERMIT ISSUED ON November 14, 1978

OIL & GAS INSPECTOR FOR THIS WORK:

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

Name Paul Goodnight
Address Smithville, WV

LOGICAL TARGET FORMATION: Devonian Shale Depth 6,800 feet

Depth of completed well, 6,784 feet Rotary / Cable Tools

Water strata depth: Fresh, 0 feet; salt, _____ feet.

Coal seam depths: 160-164; 672-676 Is coal being mined in the area? No

Work was commenced November 20, 1978, and completed April 3, 1979

LOGGING AND TUBING PROGRAM

LOGGING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft	New	Used	For drilling		
Drill pipe	20	--	--		X	0 - 20	0	Kinds
Water	8-5/8	H40	20	X		0 - 747	747	
Intermediate								Sizes
Production	4 1/2	CW 55	10.5	X		0 - 6711	6711	600 SKS
Gas	1 1/2	H40	2.5	X		0	4717	Deaths set
								Perforations:
								4653 - 4655
								Top Bottom
								4890 - 5332
								6550 - 6620

FLOW DATA

Producing formation Devonian Shale (Benson/Elk/Marcellus) Pay zone depth 4653 - 6620 feet

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

Final open flow, 900 Mcf/d Final open flow, N/A Bbl/d

Time of open flow between initial and final tests, _____ hours

Static rock pressure, 2310 psig (surface measurement) after 48 hours shut in

If applicable due to multiple completion--]

Second producing formation N/A Pay zone depth _____ feet

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

APR 27 1979

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

1st Stage - 20,000 lbs. 80/100 sand, 20,000 lbs. 20/40 sand, 750 gals. 15% HCL, 16 gals. Cla-Sta, 16 gals. Pen 5, 275 lbs. WG-12, Avg. PSI 1000
 2nd Stage - 20,000 lbs. 80/100 sand, 40,000 lbs. 20/40 sand, 500 gals. 15% HCL, 18 gals. Cla-Sta, 18 gals. Pen 5, 425 lbs. WG-12, Avg. PSI 1700
 Perfs: 1st Stage - 12-0.49" holes 6550-6620
 12-0.49" holes 4890-5332
 2nd Stage - 8-0.39" holes 4653-4655

WELL LOG

FORMATION	Color	Hard or Soft	§ Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Surface Mud/Sod			0	5	
and			5	110	
and & Shale			110	136	
and			136	160	
coal			160	164	
and			164	195	
and, Shale, Red Rock			195	383	
and			383	395	
ed Rock			395	400	
and, Shale, Red Rock			400	636	
and & Shale			636	672	
coal			672	676	
and & Shale			676	704	
hite Sand			704	712	
and & Shale			712	1461	
and			1461	1566	
and & Shale			1566	1584	
and			1584	1670	
and, Shale, Red Rock			1670	1734	---E log top @ 1700'
ittle Lime			1734	1759	
shale			1759	1786	
g Lime			1786	1850	
g Injun			1850	1940	
shale			1940	2005	
ir			2005	2129	
shale			2129	4644	
nson			4644	4664	
shale			4664	4879	
k Alex			4879	5348	
shale			5348	6518	
lly Lime			6518	6563	
rcellus Shale			6563	6619	
ert Hunterville			6619	6783	
			6783		

(Attach separate sheets to complete as necessary)

Eastern American Energy Corporation
 Well Operator
 By John Mark
 Pres. President

REG: 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."



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

RECEIVED
AUG 01 1978
OIL AND GAS DIVISION
DEPARTMENT OF MINES

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

DATE July 28, 1978

Surface Owner Russell and Bess Bush
Address Baldwin, WV
Mineral Owner Luvilla Radcliff
Address Gilmer County
Coal Owner Eastman Associated Coal
Address Pittsburgh, PA
Coal Operator None
Address _____

Company Pacific States Gas & Oil, Inc.
Address P.O.Box 67, Glenville, WV 26351
Farm Luvilla Radcliff Acres 112.94
Location (waters) Stewarts Creek
Well No. P.S. No. 2 Elevation 1207
District Glenville County Gilmer
Quadrangle Glenville

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 12-16-78.

INSPECTOR
TO BE NOTIFIED Paul Goodnight
ADDRESS Smithville, WV 26178
PHONE 477-3660

Deputy Director - Oil & Gas Division

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated August 18, 1905 by Luvilla Radcliff made to J. M. Basaw and recorded on the 15th day of January 1912, in Gilmer County, Book 73 Page 36

NEW WELL DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. *

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

Very truly yours,
(Sign Name)
Well Operator

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND
ECONOMIC SURVEY
P. O. BOX 879
MORGANTOWN, WEST VIRGINIA 26505
AC-304 - 292-6331

Address
of
Well Operator

Post Office Box 67
Street
Glenville
City or Town
West Virginia 26351
State

*SECTION 3 If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

BLANKET BOND

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12b and will carry out the specified requirements."

Signed by

GIL-3391 PERMIT NUMBER

47-021

THIS IS AN ESTIMATE ONLY
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO XX DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:
 NAME S. W. Jack Drilling NAME John Mork
 ADDRESS Buckhannon, WV 26201 ADDRESS P.O. Box 67, Glenville, WV 26351
 TELEPHONE 472-2161 TELEPHONE 462-8118
 ESTIMATED DEPTH OF COMPLETED WELL: 5250 ft. ROTARY XX CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Devonian Shale
 TYPE OF WELL: OIL _____ GAS XX COMB. _____ STORAGE _____ DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10			
9 - 5/8			
8 - 5/8	400	400	Surface
7			
5 1/2			
4 1/2	5250	5250	250 sks
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 100 FEET _____ SALT WATER _____ FEET _____
 APPROXIMATE COAL DEPTHS Unknown
 IS COAL BEING MINED IN THE AREA? No BY WHOM? _____

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for _____ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the _____ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

 For Coal Company

 Official Title



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

NOV 14 1978

WEST VIRGINIA OIL & GAS
CONSERVATION COMMISSION

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

Surface Owner Russell Bush
Address Baldwin, WV
Mineral Owner Luvilla Radcliff
Address Gilmer Co., WV
Coal Owner Eastman Associated Coal
Address Pittsburgh, PA
Coal Operator None
Address _____

DATE November 8, 1978
Company Eastern American Energy Corp. dba Pacific States Gas & Oil, Inc.
Address P.O. Box N, Glenville, WV
Farm Luvilla Radcliff Acres 112.94
Location (waters) Stewarts Creek
Well No. P.S. #2 Elevation _____
District Glenville County Gilmer
Quadrangle Glenville

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved for deepening. This permit shall expire if operations have not commenced by 3-15-79

INSPECTOR
TO BE NOTIFIED Paul Goodnight
ADDRESS Smithville, WV 26178
PHONE 477-3660

Deputy Director - Oil & Gas Division

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated August 18 19 05 by Luvilla Radcliff made to J.M. Basaw and recorded on the 15th day of Jan. 19 12, in Gilmer County, Book 73 Page 86
X NEW WELL X DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE
OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. *

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND
ECONOMIC SURVEY
P. O. BOX 879
MORGANTOWN, WEST VIRGINIA 26505
AC-304 - 292-6331

Address
of
Well Operator

Very truly yours,
(Sign Name) Tom Cully III
Well Operator
Post Office Box N _____
Street _____
Glenville _____
City or Town _____
West Virginia _____
State _____

*SECTION 3 If no objections are filed or found-by the Department of mines, within said period-of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

GIL-3391-DD PERMIT NUMBER

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

47-021

Signed by Tom Cully III

THIS IS AN ESTIMATE ONLY
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:
 NAME S.W. Jack Drilling NAME John Mork
 ADDRESS Buckhannon, WV ADDRESS P.O. Box N, Glenville, WV
 TELEPHONE 472-2161 TELEPHONE 462-8118
 ESTIMATED DEPTH OF COMPLETED WELL: 6800 ft. ROTARY CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Devonian Shale
 TYPE OF WELL: OIL _____ GAS COMB. _____ STORAGE _____ DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10			
9 - 5/8			
8 - 5/8	400	400	Surface
7			
5 ½			
4 ½	6800	6800	400 sks
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 100 FEET _____ SALT WATER _____ FEET _____
 APPROXIMATE COAL DEPTHS Unknown
 IS COAL BEING MINED IN THE AREA? No BY WHOM? _____

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

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WAIVER: I the undersigned, Agent for _____ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the _____ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

 For Coal Company

 Official Title