



Minimum Error of Closure 1 in 200'

Source of Elevation Elev. Well No. 7025 = 879'

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.....

Signed: *M. S. ...*

Map No.

Squares: N S E W

Company PACIFIC STATES GAS & OIL

Address Postoffice Box 67, Glenville, West Va.

Farm George W. Crook's Heirs

Tract _____ Acres 124 Lease No. _____

Well (Farm) No. Pac. States No. 1 Serial No. _____

Elevation (Spirit Level) 1114

Quadrangle Vadis 7 1/2, 15' SW

County Lewis District Freemans Creek

Engineer *M. S. ...*

Engineer's Registration No. 1227 LLS No. 200'

File No. _____ Drawing No. _____

Date October 28, 1976 Scale 1" = 500'

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

WELL LOCATION MAP
FILE NO. LEW-2098

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

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

47-041



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division
WELL RECORD

RECEIVED
OCT 14 1977

OIL & GAS DIVISION
DEPT. OF MINES

Rotary Oil _____
Cable _____ Gas show
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ (Kind)

Quadrangle Vadis SW

Permit No. LEW-2098

Company Pacific States Gas & Oil, Inc.
Address PO Box 67, Glenville, WV
Farm G.W. Crook Heirs Acres 124
Location (waters) Alum Fork
Well No. PS 1 Elev. 1114
District Freeman's Creek County Lewis
The surface of tract is owned in fee by _____
Conrad Means
Address Morgantown, WV
Mineral rights are owned by Mason Crook
Address Somerville, Mass. 02144
Drilling Commenced 12-23-76
Drilling Completed 12-30-76
Initial open flow N/A cu. ft. _____ bbls.
Final production _____ cu. ft. per day _____ bbls.
Well open _____ hrs. before test _____ RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			Surface 130 sks Neat 130 sks 50/50 poz.
Cond. 13-10"			
9 5/8			
8 5/8	216	216	
7			
5 1/2			
4 1/2	2537	2537	
3			
2			
Liners Used			

Attach copy of cementing record.

Well treatment details:
Perf. 1697/2344 15 shot
Frac 707 BBLs H2O/300 # J266/ 20 gal F-52/ 20 gal. Free flo/ 40,000 # 20/40 Sand
1000 gal 15% HCL

Coal was encountered at _____ Feet _____ Inches
Fresh water _____ Feet _____ Salt Water _____ Feet _____
Producing Sand _____ Depth _____

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Top Soil			0	5		
Red Rock			5	17		
Sand			17	47		
Red Rock			47	105		
Slate			105	165		
Red Rock			165	190		
Sand			190	220		
Slate			220	240		
Sand			240	247		
Slate & Shale			247	380		
Red Rock			380	387		
Sand			387	405		
Red Rock			405	507		
Slate			507	550		
Red Rock			550	600		
Shale			600	660		
Red Rock			660	667		
Sand			667	712		
Shale			712	795		
Sand			795	825		
Shale			825	865		
Sand			865	898		
Shale			898	940		
Sand			940	980		

(over)

* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Slate			980	985		
Sand			985	1005		
Shale			1005	1055		
Salt Sand			1055	1067		
Shales			1067	1160		
Salt Sand			1160	1305		
Shales			1305	1385		
Sandy Shales			1385	1528		
Salt Sand			1528	1550		
Shales			1550	1608		
Blue Monday			1608	1622		
Little Lime			1622	1668		
Pencil Cave			1668	1678		
Big Lime			1678	1740		
Keener			1740	1800		
Injun			1800	1854		
Shales			1854	1903		
Weir			1903	2050		
Shales-Sandy			2050	2430		
4th Sand			2430	2440		
Shales			2440	2630		
5th Sand			2630	2640		
Shales			2640	2718		

Date September 12, 1977

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APPROVED _____

By *John Mark*
Executive Vice President

Owner



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

RECEIVED

DEC 16 1976

OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

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

DATE December 14, 1976

Surface Owner Conrad Means

Company Pacific States Gas & Oil, Inc.

Address 221 Wagner St., Morgantown, W. Va.

Address P. O. Box 67, Glenville, WV 26351

Mineral Owner Mason N. Crook

Farm G. W. Crook Heirs Acres 124

Address 84 Woods Ave., Somerville, Mass. 02144

Location (waters) Alum Fork

Coal Owner Mason N. Crook

Well No. PS No. 1 Elevation 1,114'

Address 84 Woods Ave., Somerville, Mass. 02144

District Freeman's Creek County Lewis

Coal Operator None

Quadrangle Vadis SW

Address _____

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 4-16-77.

[Signature]
Deputy Director - Oil & Gas Division

INSPECTOR Robert Bates

TO BE NOTIFIED ~~Paul Good~~

ADDRESS ~~Weston~~, West Virginia

PHONE ~~XXXXXXX~~ 269-3820

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 May 12 19 75 by Equitable Gas Company made to Pacific States Gas & Oil, Inc. and recorded on the 4th day of May 19 76, in Gilmer County, Book 281 Page 374

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.

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, *[Signature]* Pacific States Gas & Oil, Inc.
(Sign Name) John Mark Well Operator

P. O. 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.

CASH DEPOSIT HELD BY TREASURER

LEW-2098 PERMIT NUMBER

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 7, Section 12-b and will carry out the specified requirements."

Signed by *[Signature]*

47-041

**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 Glen L. Haught and Sons NAME John Mork
 ADDRESS Smithville, West Virginia ADDRESS P. O. Box 67, Glenville, WV 26351
 TELEPHONE 477-2222 TELEPHONE 462-8118
 ESTIMATED DEPTH OF COMPLETED WELL: 2,800 ft ROTARY XX CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Big Injun, Fifth Sand
 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	300	300	surface
7			
5 1/2			
4 1/2	2,800	2,800	200 sacks
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 150 FEET SALT WATER none FEET
 APPROXIMATE COAL DEPTHS 20 feet
 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