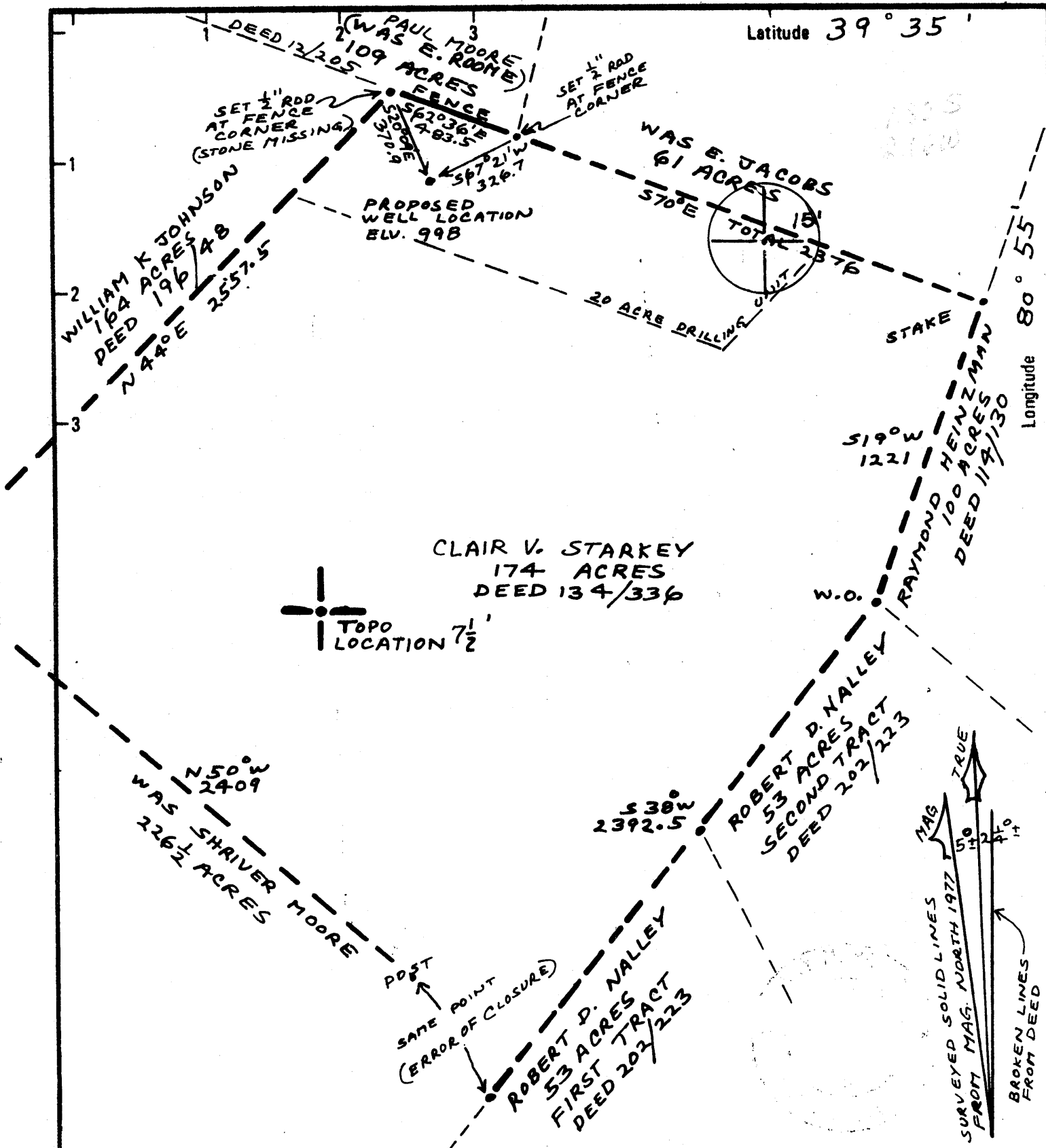


Latitude 39° 35'

Longitude 80° 55'



New Location
 Drill Deeper
 Abandonment

Minimum Error of Closure **METHODS USED SHOULD PRODUCE 1 IN 2500**
 Source of Elevation **BASE ELEV. POINTS WERE 1108 AND 1042 FROM NEAREST ROAD INTERSECTIONS SHOWN ON TOPO MAP**
 "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."
Henry M. Parsons

Company EMES PETROLEUM
 Address 619 LACONIA BLDG, WHEELING WV 26003
 Farm CLAIR STARKEY (20 ACRE DRILLING UNIT)
 Tract 20 Ac. Unit Acres 174 Lease No. _____
 Well (Farm) No. CLAIR STARKEY #1 Serial No. _____
 Elevation (Spirit Level) 998
 Quadrangle PADEN CITY; New Martinsville SW
 County TYLER District LINCOLN
 SURVEYOR HENRY M. PARSONS
 Engineer's Registration No. 98
 File No. 78-5288 Drawing No. 78-5288
 Date NOV. 13, 1978 Scale 1" = 500

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

WELL LOCATION MAP
FILE NO. 47-095-0683

+ 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.

MAR 9 1979

OCT 19 1979

OIL & GAS DIVISION STATE OF WEST VIRGINIA DEPARTMENT OF MINES, OIL AND GAS DIVISION
FORM 435-1 (Obverse)

Date 8-23, 1979

Operator's Well No. STARKEY #1

API Well No. 47-095-0683 State County Permit

WELL OPERATOR'S REPORT 47 OF DRILLING, FRACURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 998' Watershed: BADGER RUN
District: LINCOLN County: TYLER Quadrangle: Paden City, W.Va.

WELL OPERATOR EMOS PETROLEUM DESIGNATED AGENT C.W. Riggs, Inc.
Address 119 LACONIA BLDG. WHEELING, W.VA. Address Box 358 St. Martins, W.Va.

PERMITTED WORK: Drill / Convert ___ / Drill deeper ___ / Redrill ___
Plug off old formation ___ / Perforate new formation / Other physical change in well (specify) _____
RECEIVED SEP 24 1979

PERMIT ISSUED ON 2-9, 1979 OIL & GAS INSPECTOR FOR THIS WORK: PHIL TRACY
(IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED) 8-29-1979 Address MIDDLEBOURNE, W.VA.

GEOLOGICAL TARGET FORMATION: Fifth Sand Depth 3198'
Depth of completed well, 3059 feet Rotary / Cable Tools ___
Water strata depth: Fresh, N/A feet; salt, N/A feet.
Coal seam depths: N/A Is coal being mined in the area? No
Work was commenced 4-7, 1979, and completed 4-12, 1979

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	REMARKS
	Size	Grade	Weight per ft	New	Used		
Conductor	<u>11 3/4</u>			<input checked="" type="checkbox"/>		<u>120'</u>	<u>75 SKS.</u> Kinds
Fresh water	<u>8 3/8</u>		<u>20#</u>	<input checked="" type="checkbox"/>		<u>1329'</u>	<u>320 SKS.</u>
Coal							Sizes
Intermediate							
Production	<u>4 1/2</u>		<u>10.5#</u>	<input checked="" type="checkbox"/>		<u>3059'</u>	<u>415 SKS</u> Depth set
Tubing							
Liners							Perforations: Top Bottom

OPEN FLOW DATA
Producing formation GORDON Pay zone depth 2792' feet
Gas: Initial open flow, N/A Mcf/d Oil: Initial open flow, N/A Bbl/d
Final open flow, N/A Mcf/d Final open flow, N/A Bbl/d
Time of open flow between initial and final tests, 1925 MCF/D hours
Static rock pressure, _____ psig (surface measurement) After _____ hours shut in
[If applicable due to multiple completion--]
Second producing formation N/A Pay zone depth _____ feet

NOV 14 1979

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

PERFORATIONS

14 .50 HOLES 2792'-2813'

FRACTURING

1500 BBL H₂O, 100,000 # SAND, 122,000 N₂

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
1ST Cow Run	SAND	SOFT	No RECORD		HOLE CASED 8 5/8" CEMENTED NO LOG
2ND Cow Run	SAND	SOFT	No RECORD		
SALT SAND	SAND	HARD	No RECORD		
SALT SAND STRIPPERS	SAND	HARD	No RECORD		
MAXTON	SAND	SOFT-HARD	1598	1652	
LITTLE LIME	LIME	HARD	NOT PRESENT		
PENCIL CAVE	SHALE	SOFT	1696	1710	
Big LIME	LIME	HARD	1730	1748	
KEENER	SAND	SOFT	1768	1808	
Big INJUN	SAND + SHALE	HARD	1850	1940	
SQUAW	SAND	HARD	1970	2000	
WEIR	SAND + SHALE	HARD	2244	2316	
BERGER	SAND	HARD	2372	2380	
GORDON	SILTSTONE	SOFT	2790	2822	→ OIL + GAS
FLEET SAND	SHALE	SOFT	2900	2930	→ GAS
	Shale		2930	3059	

(Attach separate sheets to complete as necessary)

3059
2380

679 EXPL FT

X Jim Ames Petroleum Co. Inc.
Well Operator
By James T. Ames
Its PLC

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."



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

FEB 13 1979

Oil and Gas Division

DEPARTMENT OF MINES

OIL AND GAS WELL PERMIT APPLICATION

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

DATE 1-19-79

Surface Owner Clair Starkey
Address Sistersville, W. Va.
Mineral Owner Clair Starkey
Address Sistersville, W. Va.
Coal Owner Clair Starkey
Address Sistersville, W. Va.
Coal Operator None
Address _____

Company Emes Petroleum
Address 619 Laconia Bldg., Wheeling, W. Va.
Farm Starkey Acres 174
Location (waters) Badger Run
Well No. 1 Elevation 998'
District Lincoln County Tyler
Quadrangle Paden City, W. Va.

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 10-13-79.

INSPECTOR
TO BE NOTIFIED Philip Tracy
ADDRESS Middlebourne, W. Va.
PHONE 758-4573

Robert H. [Signature]
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 Oct. 4 1978 by John Richmond made to James T. Emes and recorded on the 4th day of Oct. 1978, in Tyler County, Book 217 Page 9

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,
(Sign Name) James T. Emes
Well Operator
619 Laconia Bldg.
Street
Wheeling
City or Town
W. Va.
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

47-095-0683

PERMIT NUMBER

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

PROPOSED WORK ORDER TO X DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) _____ RESPONSIBLE AGENT: _____
 NAME Haught Drilling _____ NAME C. W. Riggs, Inc. _____
 ADDRESS Smithville, W. Va. _____ ADDRESS Box 358, St. Marys, W. Va. _____
 TELEPHONE 477-3333 _____ TELEPHONE 684-3974 _____
 ESTIMATED DEPTH OF COMPLETED WELL: 3198' _____ ROTARY X _____ CABLE TOOLS X _____
 PROPOSED GEOLOGICAL FORMATION: Fifth Sand _____
 TYPE OF WELL: OIL _____ GAS _____ COMB. X _____ 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 - 5/8 250'		250'	Cement Top-Bottom
7			
5 1/2			
4 1/2		3198'	200 sks.
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 143' FEET _____ SALT WATER _____ FEET _____
 APPROXIMATE COAL DEPTHS _____
 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