

CERTIFICATE

- NEW LOCATION
- RECONDITION
- 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."
Minimum degree of accuracy is one part in 200

Signed Amel J. Boy L.L.S. #247

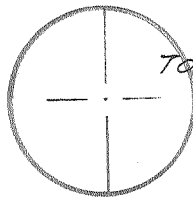
COMPANY JACKSON DEVELOPMENT CO.
 ADDRESS PO BOX 498, HAMLIN, WV 25523
 FARM MARGARET Y. DICKINSON
 MAP _____ ACRES 2636 LEASE NO. _____
 WELL (FARM) NO. 27-1-10 SERIAL NO. _____
 ELEVATION (SPIRIT LEVEL) 1312.08
 QUADRANGLE CLENDENIN 15'
 COUNTY KANAWHA DISTRICT MALDEN
 POINT OF PROVEN ELEVATION WELL N° 26. ELEV. BASED ON U.S.G.S. 500' WEST OF BIG TENMILE FORK. ELEV. = 921'
 FILE NO. _____ DRAWING NO. W-2-73
 DATE JUNE 8, 1973 SCALE 1" = 2000'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON
WELL LOCATION MAP
 FILE NO. Kan-2640-Frac
 1984

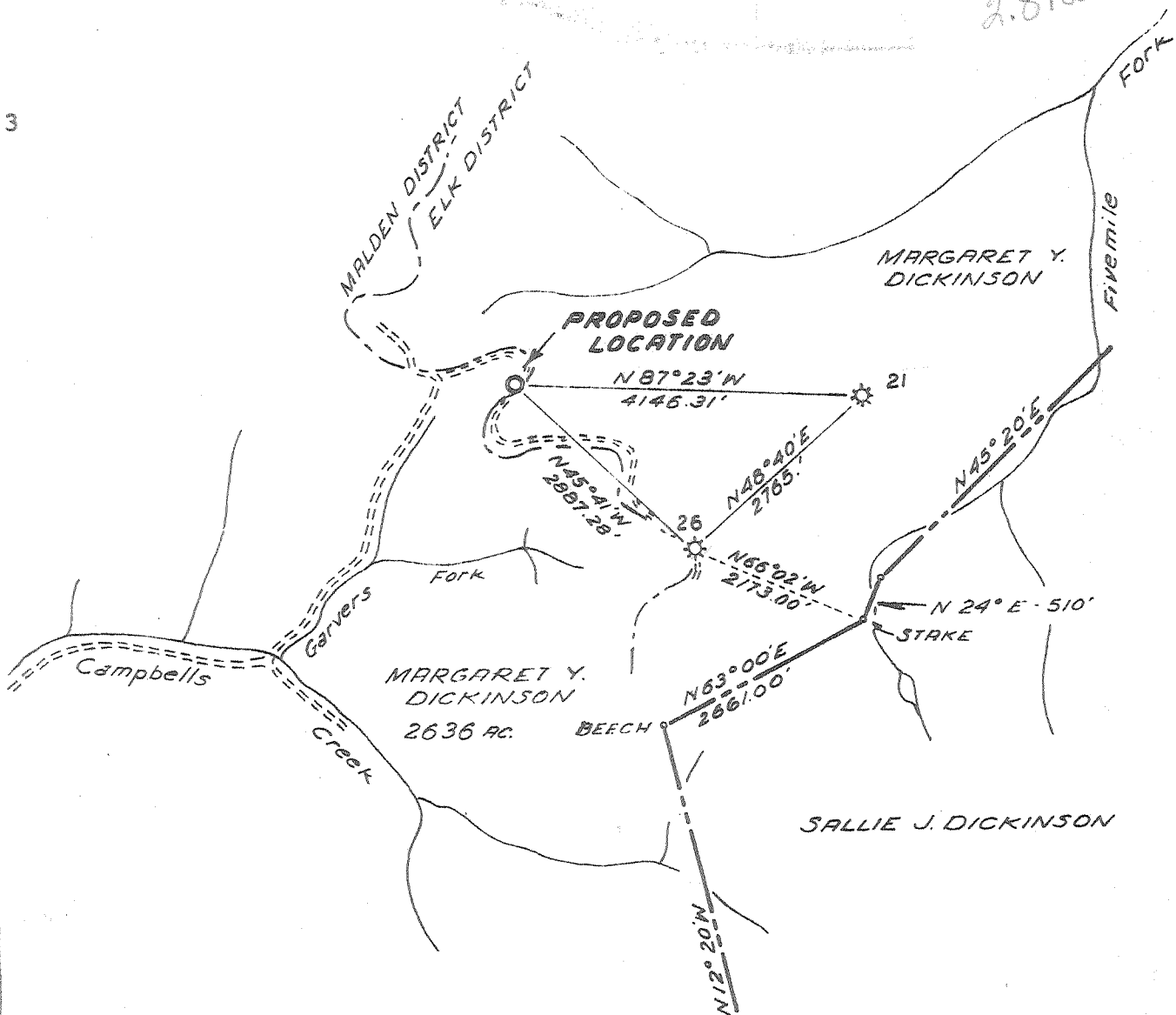
+ DEMOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS SCALE 1 TO 62 500. LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.
 - DEMOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

OWWO - DEEP WELL

47-039



TOPOGRAPHICAL LOCATION



CERTIFICATE

- NEW LOCATION
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"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."

Minimum degree of accuracy is one part in 200

Signed James J. Boy L.L.S. #247

COMPANY <u>SOUTHEASTERN ENERGY CORPORATION</u>	
ADDRESS <u>414 G.N.A. TOWERS, ORLANDO, FLORIDA</u>	
FARM <u>MARGARET Y. DICKINSON</u>	
MAP _____	ACRES <u>2636</u> LEASE NO. _____
WELL (FARM) NO. <u>1-10</u>	SERIAL NO. _____
ELEVATION (SPIRIT LEVEL) <u>1312.08</u>	
QUADRANGLE <u>CLENDENIN SC</u>	
COUNTY <u>KANAWHA</u>	DISTRICT <u>MALDEN</u>
POINT OF PROVEN ELEVATION <u>WELL N°26. ELEV. BASED ON U.S.G.S. 500' WEST OF BIG TENMILE FORK. ELEV. = 921'</u>	
FILE NO. _____	DRAWING NO. <u>W-2-73</u>
DATE <u>JUNE 8, 1973</u>	SCALE <u>1" = 2000'</u>

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES

OIL AND GAS DIVISION

CHARLESTON

WELL LOCATION MAP

1973-0
3-0 Fivemile FILE NO. Ken-2640
Carpenter 21/1994-6-6/214-216

* 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



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division
WELL RECORD

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

Quadrangle Clendenin
Permit No. KAN-2640

Company Southeastern Energy Corp.
Address Orlando, Florida
Farm Margaret Y. Dickinson Acres 2636
Location (waters) 5 Mi. Fk. of Campbells Ck.
Well No. 1-10 Elev. 1312'
District Malden County Kanawha
The surface of tract is owned in fee by _____
Margaret Dickinson
Address _____
Mineral rights are owned by _____
Address _____
Drilling Commenced 6-7-73
Drilling Completed 7-18-73
Initial open flow _____ cu. ft. _____ bbls.
Final production _____ cu. ft. per day _____ bbls.
Well open _____ hrs. before test _____ RP.
Well treatment details:

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 13-1/8"	60	60	
9 5/8			
8 5/8	1950	1950	
7			
5 1/2	6452	6452	
4 1/2			
3			
2			
Liners Used			

Attach copy of cementing record.

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
Sand - Shale			126	986		
Sand			986	1289		
Shale			1289	1510		
Sand - Quartz			1510	1610		
Sand - Shale			1610	1760		
Red Rock			1760	1784		
Sand - Shale			1784	1835		
Shale			1835	1843		
Big Lime			1843	1930		
Sand - Shale - Lime			1930	1957		
Lime			1957	2060		
Injun Gray			2060	2071		
Shale - Sand	Red		2071	2107		
Sand - Shale	Gray		2107	2130		
Sand			2130	2160		
Sand - Shale			2160	2349		
Sand - Shale			2349	5579		
Lime			5579	5688		
Oriskany Sand			5688	5725		
Lime - Sand			5725	5880		
Lime			5880	6436		
Lime - Shale			6436	6455		
Shale			6455	6485		
Sand Newburg			6485	6497		
Shale			6497	6555 TD		

5 1/2" casing cut and removed @4500
Final Drilling Report - loaded hole with mud.
Rig released 4:00 PM 7-18-73

* Indicates Electric Log tops in the remarks section.

6555
2160
4895 expl. ftg.



RECEIVED

JUN 1973

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

OIL & GAS DIVISION
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

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

DATE June 8, 1973

Surface Owner Margaret Dickinson
Address _____
Mineral Owner _____
Address _____
Coal Owner Dickinson Fuel Co. -Kan. Valley
Address Charleston, W. Va. 25301
Coal Operator _____
Address _____

Company Southeastern Energy Corporation
Address 414 C.N.A. Towers, Orlando, Florida
Farm Margaret Y. Dickinson Acres 2636
Location (waters) Fivemile Fork of Campbells Ck.
Well No. 27 Elevation 1312.08'
District Malden County Kanawha
Quadrangle Clendenin

INSPECTOR TO BE NOTIFIED Mr. Fred Burdette
Box 190
Cicerone Route PH: 984-9263
Sissonville, W. Va. 25185

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 10-8-73.

[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 _____ 19__ by Margaret Y. Dickinson made to Southeastern Energy Corp and recorded on the _____ day of _____ 19__ in Kanawha County, Book 46 Page 595

XX 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, For: Southeastern Energy Corp.
(Sign Name) [Signature] Well Operator

Address of Well Operator 414 C. N. A. Towers Street
Orlando City or Town
Florida 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

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 Pace, Preble & Poole, Inc. NAME John Pace
 ADDRESS Commerce Square, Charleston, W. Va. 25301 ADDRESS (Same as contractor)
 TELEPHONE 344-2534 TELEPHONE _____
 ESTIMATED DEPTH OF COMPLETED WELL: 5500' ROTARY XX CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Newburg
 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	65'	65'	CTS
9 - 5/8			
8 - 5/8	1900'	1900'	CTS
7			
5 1/2	5450'	5450'	12 Sacks
4 1/2			
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 160' FEET _____ SALT WATER _____ FEET _____
 APPROXIMATE COAL DEPTHS 120' , 265'
 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.



1) Date: November 30, 19 83
 2) Operator's Well No. 29
 3) API Well No. 47 - 039 - 2640 - FRAC
 State County Permit

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES, OIL AND GAS DIVISION
 APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil / Gas X / B (If "Gas", Production / Underground storage / Deep / Shallow X)
- 5) LOCATION: Elevation: 1312.08 Watershed: Five Mile Fork of Campbells Creek (K49H)
 District: Malden County: Kanawha Quadrangle: Clendenin
- 6) WELL OPERATOR Jackson Development Co. 7) DESIGNATED AGENT Lloyd G. Jackson
 Address P O Box 498 Address P O Box 498
Hamlin, W. Va. 25523 Hamlin, W. Va. 25523
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Craig Duckworth 9) DRILLING CONTRACTOR:
 Name RODNEY DILLON Name
 Address Dawson Rt. Box 107 Address
Gassaway, W. Va. 26624 469-2015
- 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Simulate X
 Plug off old formation / Perforate new formation
 Other physical change in well (specify) Frac.
- 11) GEOLOGICAL TARGET FORMATION, Weir
- 12) Estimated depth of completed well, feet
 13) Approximate trata depths: Fresh, feet; salt, feet
 14) Approximate coal seam depths: Is coal being mined in the area? Yes

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 JUN 6 - 1984
 OIL & GAS DIVISION
 DEPT. OF MINES

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		Left in well	Kinds
Conductor	13	H	32		X	60	60		
Fresh water									
Coal									
Intermediate	8 5/8	J	24		X	1950	1950		
Production	5 1/2	J	14	X		2300	2300	by rule 15.01	depths set
Tubing									
Liners									Perforations: Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-039-2640-FRAC Date July 5, 1984

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 July 5, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>Blanket</u>	Agent: <u>MH</u>	Plat: <u>MH</u>	Casing: <u>MH</u>	Fee: <u>14.09</u>
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Margaret J. Hesse
 Administrator, Office of Oil and Gas



RECEIVED
 (Rev 8-8)
 JUN 28 1985
 OIL & GAS DIVISION
 DEPT. OF MINES

RECEIVED
 JUN 18 1985
 OIL & GAS DIVISION
 DEPT. OF MINES
 (Revised)

State of West Virginia
 Department of Mines
 Oil and Gas Division

Date 7/13/84
 Operator's _____
 Well No. _____
 Farm M.Y. Dickinson 1-10
 API No. 47 - 039 - 2640

WELL OPERATOR'S REPORT
 OF

~~DRILLING, FRACTURING AND/OR SPELLETTING, OR PRODUCTION CHANGE~~

FRAC

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

LOCATION: Elevation: 1312' Watershed Five Mile Fork of Campbells Creek
 District: Malden County Kanawha Quadrangle Clendenin

Was Southeastern Energy Corp.

COMPANY Jackson Development Co., Inc.
 ADDRESS P.O. Box 498, Hamlin, WV 25523
 DESIGNATED AGENT Mr. Lloyd Jackson
 ADDRESS Same
 SURFACE OWNER Margaret Dickinson
 ADDRESS _____
 MINERAL RIGHTS OWNER Same
 ADDRESS _____
 OIL AND GAS INSPECTOR FOR THIS WORK Rodney G. Dillon
 ADDRESS Williamstown, WV 26187

Casing Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13 1/2"	60'	60'	
9 5/8			
8 5/8	1950'	1950'	
7			
5 1/2	6452'	1952' at	4500-6452'
4 1/2	Plugged back originally		
5 1/2	—	2256'	139.5
2			
Liners used			

PERMIT ISSUED _____
 DRILLING COMMENCED 6/7/73
 DRILLING COMPLETED 7/18/73

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

GEOLOGICAL TARGET FORMATION Injun Squaw Depth 2064-2098' 2154-2173' feet

Depth of completed well 2650' feet Rotary ___ / Cable Tools ___

Water strata depth: Fresh ___ feet; Salt ___ feet

Coal seam depths: _____ Is coal being mined in the area? _____

OPEN FLOW DATA

Producing formation Injun Pay zone depth 2068 - 2078' 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 250 psig (surface measurement) after 60 hours shut in
 (If applicable due to multiple completion--)

Second producing formation Squaw Pay zone depth 2156 - 2164' feet

Gas: Initial open flow 157 Mcf/d Oil: Initial open flow _____ Bbl/d

Final open flow 1000 Mcf/d Oil: Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ hours

Static rock pressure 300 psig (surface measurement) after 24 hours shut in

(Continue on reverse side)

revised

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

Injun 2068 to 2078 with 11 Holes
Foam frac with 30,000 lbs. 20/40 sand, 500 gal HCl & 162 MScf N₂

Squaw 2156 to 2164 with 9 Holes
Foam frac with 30,000 lbs. 20/49 sand, 500 gal. Hcl & 240 MScf N₂

This well was fractured 6/29/84.

DEPT. OF MINES
OHIO STATE DIVISION

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
SAME AS ORIGINAL RECORD EXCEPT FOLLOWING DEPTHS FROM GAMMA LOG:					
Big Lime			—	2064	
Injun			2064	2098	
Sandy shale			2098	2154	
Squaw			2154	2173	
Shale			2173	2254	
Weir horizon			2254	2276	
Shale			2276	2510	
Coffee Shale			2510	2524	
Berea			2524	2527	
Siltstone			2527	2594	
Shale			2594	—	
Bottom Log Interval 2644'					
					Initial open flow - 157 Mcf/D
					Logged by: Allegheny Nuclear Surveys

(Attach separate sheets as necessary)

Jackson Development Co., Inc.

Well Operator

By:

Date: 6/14/85

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."



IV-35
(Rev 8-81)

RECEIVED

SEP 21 1984

State of West Virginia

OIL & GAS DIVISION
DEPT. OF MINES

Department of Mines
Oil and Gas Division

Date 7/13/84
Operator's
Well No. 29
Farm M.Y. Dickinson 1-10
API No. 47 - 039 - 2640 FRAC

WELL OPERATOR'S REPORT
OF

~~DRILLING, FRACTURING AND PRODUCTION LOGGING, OR PHYSICAL CHANGE~~

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

LOCATION: Elevation: 1312' Watershed Five Mile Fork of Campbells Creek
District: Malden County Kanawha Quadrangle Clendenin

COMPANY Jackson Development Co., Inc.

ADDRESS P.O. Box 498, Hamlin, WV 25523

DESIGNATED AGENT Lloyd G. Jackson

ADDRESS Same

SURFACE OWNER Margaret Dickinson

ADDRESS _____

MINERAL RIGHTS OWNER Same

ADDRESS _____

OIL AND GAS INSPECTOR FOR THIS WORK Rodney

G. Dillon ADDRESS Williamstown, WV 26187

PERMIT ISSUED 7-5-84

DRILLING COMMENCED 6/7/73

DRILLING COMPLETED 7/18/73 *Original only*

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

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13 5/8"	60'	60'	
9 5/8			
8 5/8	1950'	1950'	
7			
5 1/2	(6452')	1952' at 4500-	(6452')
4 1/2	Plugged back originally ✓		
5 1/2	---	2256'	139.5
2			
Liners used			

GEOLOGICAL TARGET FORMATION Injun Squaw Depth 2064-2098' 2154'-2173' feet

Depth of completed well 2650' feet Rotary ___ / Cable Tools ___

Water strata depth: Fresh ___ feet; Salt ___ feet

Coal seam depths: _____ Is coal being mined in the area? _____

OPEN FLOW DATA

Producing formation Injun Pay zone depth 2068 - 2078' feet

Gas: Initial open flow 850 Mcf/d Oil: Initial open flow ___ Bbl/d

Final open flow 550 Mcf/d Final open flow ___ Bbl/d

Time of open flow between initial and final tests 12 hours

Static rock pressure 250 psig (surface measurement) after 60 hours shut in

(If applicable due to multiple completion--)

Second producing formation Squaw Pay zone depth 2156 - 2164' feet

Gas: Initial open flow 157 Mcf/d Oil: Initial open flow ___ Bbl/d

Final open flow 1000 Mcf/d Oil: Final open flow ___ Bbl/d

Time of open flow between initial and final tests ___ hours

Static rock pressure 300 psig (surface measurement) after 24 hours shut in

(Continue on reverse side)

OCT 29 1984

NO comp rate 11/3/84

FOF 1550 mcf

All records record

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

- ⑤ Injun 2068 to 2078 with 11 Holes
Foam frac with 30,000 lbs. 20/40 sand, 500 gal. Hcl & 162 MScf N₂
- ⑥ Squaw 2156 to 2164 with 9 Holes
Foam frac with 30,000 lbs. 20/49 sand, 500 gal Hcl & 240 MScf 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
SAME AS ORIGINAL RECORD EXCEPT FOLLOWING DEPTHS FROM GAMMA LOG:					
Big Lime			—	2064	
Injun			2064	2098	
Sandy shale			2098	2154	
Squaw			2154	2173	
Shale			2173	2254	
Weir horizon			2254	2276	
Shale			2276	2510	
Coffee Shale			2510	2524	
Berea			2524	2527	
Siltstone			2527	2594	
Shale			2594	—	
Bottom Log Interval 2644'					
					Initial open flow - 157 Mcf/D
					Logged by: Allegheny Nuclear Surveys

(Attach separate sheets as necessary)

Jackson Development Co., Inc.
Well Operator
By: [Signature]
Date: 7/13/84

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."