



COAL : EASTERN ASSOC. COAL CORP., et al
KOPPERS BLDG., PITTSBURG, P.A. 15219

FILE NO. _____
DRAWING NO. _____
SCALE 1 inch = 1000 feet
MINIMUM DEGREE OF ACCURACY 1/200
PROVEN SOURCE OF ELEVATION Jct. Rds. 3400' NE
of Location Elev. = 839'

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.
Mark C. Echard
(SIGNED) MARK C. ECHARD
R.P.E. _____ L.L.S. 490



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
FORM IV-6
(8-78)



DATE DECEMBER 29, 19 80
OPERATOR'S WELL NO. ONE
API WELL NO. _____
47 - 017 - 2931
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL TYPE: OIL GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
(IF "GAS,") PRODUCTION STORAGE _____ DEEP _____ SHALLOW
LOCATION: ELEVATION 1115' WATER SHED SAND FORK
DISTRICT COVE COUNTY DODDRIDGE
QUADRANGLE VADIS 7.5' WCC 15'
SURFACE OWNER PAUL BRAGG ACREAGE 466
OIL & GAS ROYALTY OWNER CONSOLIDATED GAS SUPPLY CORP LEASE ACREAGE 466
LEASE NO. _____
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 DEVONIAN SHALE ESTIMATED DEPTH 5700'
WELL OPERATOR CARSON PETROLEUM CORP. DESIGNATED AGENT MR. LOWELL M. JOHNSON
ADDRESS BOX 133 ADDRESS BOX 133
SAND FORK, W.V. 26430 SAND FORK, W.V. 26430

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

Date February 25, 1981

FORM IV-35
(Obverse)

Operator's
Well No. Kreen #1

[08-78]

WELL OPERATOR'S REPORT 24
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

API Well No. 47 - 017 - 2931
State County Permi

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

LOCATION: Elevation: 1115' Watershed: Sand Fork
District: Cove County: Doddridge Quadrangle: Vadis

WELL OPERATOR - Carson Petroleum Corporation DESIGNATED AGENT Lowell M. Johnson
Address P O Box 133 Address P O Box 133
Sand Fork, WV 26430 Sand Fork, WV 26430

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

PERMIT ISSUED ON January 5, 1981 OIL & GAS INSPECTOR FOR THIS WORK:
Name Steve Casey
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED Address Jane Lew, WV
_____, 19_____ 884-7470

GEOLOGICAL TARGET FORMATION: Elk Depth 5320 feet
Depth of completed well, 5450 feet Rotary / Cable Tools
Water strata depth: Fresh, _____ feet; salt, _____ feet.
Coal seam depths: None Is coal being mined in the area? No
Work was commenced January 16, 1981, and completed January 21, 1981

GRADING AND TUBING PROGRAM

GRADING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft	New	Used	For drilling		
Conductor								Kinds
Fresh water	8 5/8					1171'	1171'	To surface
Galv.								Sizes
Intermediate								
Production	4 1/2						5368'	320 sks
Tubing								Depths set
Liners								Perforations:
								Top Bottom

OIL & GAS DIVISION
DEPT. OF MINES

OPEN FLOW DATA
Producing formation Benson Pay zone depth 4842-4939 feet
Gas: Initial open flow, _____ Mcf/d Oil: Initial open flow, 0 Bbl/d
Final open flow, _____ Mcf/d Final open flow, 0 Bbl/d
Time of open flow between initial and final tests, _____ hours
Static rock pressure, _____ psig (surface measurement) after _____ hours shut in
[If applicable due to multiple completion--]
Second producing formation Elk Alec Pay zone depth 5203-5320 feet
Gas: Initial open flow, _____ Mcf/d Oil: Initial open flow, 0 Bbl/d
Final open flow, 561,000 Mcf/d Final open flow, 0 Bbl/d
Time of open flow between initial and final tests, 10 hours
Static rock pressure, 1700 psig (surface measurement) after 72 hours shut in

MAR 23 1981

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

Fractured February 13, 1981

Elk - 20,000 lb. 80/100 sand
40,000 lb. 20/40 sand
2500 lb. breakdown
490 bbls. water
23.3 BPM at 1800 lb.

Benson - 20,000 lb. 80/100 sand
40,000 lb. 20/40 sand
1600 lb. breakdown
485 bbls. water
16.7 BPM at 1500 lb.

Perforations - 5203 - 5320, 7 holes

Perforations - 4842 - 4939, 6 holes

WELL LOG

FORMATION	Color	Hard or Soft	24		Remarks Including indication of all fresh and salt water, coal, oil and gas
			Top Feet	Bottom Feet	
Sand, Shale, Red Rock			0	1465	
First Salt Sand			1465	1532	
Shale			1532	1628	
Second Salt Sand			1628	1680	
Shale			1680	1710	
Second Salt Sand			1710	1739	
Shale			1739	1840	
Third Salt Sand			1840	1895	
Shale			1895	2026	
Little Lime			2026	2039	
Pencil Cave			2039	2048	
Blue Monday			2048	2082	
Big Lime			2082	2132	
Big Injun			2132	2237	
Gray Shale			2237	2279	
Weir Sand			2279	2404	
Gray Shale			2404	2487	
Gantz Sand			2487	2505	
Gray Shale			2505	4935	
Benson Sand			4935	4950	
Gray Shale			4950	5200	
Elk Sand			5200	5285	
Gray Shale			5285	5450	
Total Depth			5450		

(Attach separate sheets to complete as necessary)

Carson Petroleum Corporation

Well Operator

By

Lowell M. Johnson

Its

Agent

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."



Kreen #1

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

RECEIVED

JAN - 5 1981

OIL AND GAS WELL PERMIT APPLICATION OF MINES

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

DATE January 2, 1981

Surface Owner Paul Bragg
Address St. Clara, WV
Mineral Owner Consolidated Gas Supply Corp.
Address Clarksburg, WV
Coal Owner Eastern Assoc. Coal Corporation
Address Koppers Building, Pittsburgh, PA
Coal Operator N/A
Address _____

Company Carson Petroleum Corporation
Address P O Box 133, Sand Fork, WV 26430
Farm Kreen Acres 466
Location (waters) Sand Fork
Well No. One Elevation 1115'
District Cove County Doddridge
Quadrangle Vadis

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 9-8-81

Fred B. ...
Deputy Director - Oil & Gas Division

INSPECTOR TO BE NOTIFIED Steve Casey Garrett
ADDRESS Jane Lew
PHONE 884-7470

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 October 1980 by Consolidated Gas Supply Corp. made to Carson Petroleum Corporation and recorded on the _____ day of _____ 19____, in NOT OF RECORD County, Book _____ Page _____
 NEW WELL DRILL DEEPER REDRILL FRACTURE OR STIMULANTS
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:

Very truly yours, Carson Petroleum Corporation
(Sign Name) Lawell ...
Well Operator

OFFICE OF OIL AND GAS
1615 Washington Street, East
Charleston, West Virginia
Area Code 304 -348-3092 348-3096

Address of Well Operator
P O Box 133 Street
Sand Fork City or Town
West Virginia 26430 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, pending 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 be approved and the well operator authorized to proceed.

BLANKET BOND

47-017-2931 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."

Signed by ...

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 Union Drilling, Inc. NAME Lowell M. Johnson

ADDRESS Drawer 40, Buckhannon, WV 26201 ADDRESS P O Box 133, Sand Fork, WV 26430

TELEPHONE 472-4610 TELEPHONE 462-7009

ESTIMATED DEPTH OF COMPLETED WELL: 5700' ROTARY X CABLE TOOLS

PROPOSED GEOLOGICAL FORMATION: Devonian Shale

TYPE OF WELL: OIL GAS X COMB. STORAGE DISPOSAL

RECYCLING WATER FLOOD OTHER

PROPOSED TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LIFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
10 - 16			
8 - 10			
5 - 5/8			
5 - 5/8	1200'	1200'	To surface
		5700'	750 sks
			Perf. Top
			Perf. Bottom
			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 115 FEET SALT WATER FEET

APPROXIMATE COAL DEPTHS N/A

COAL BEING MINED IN THE AREA? No BY WHOM?

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

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.

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 hereof.

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