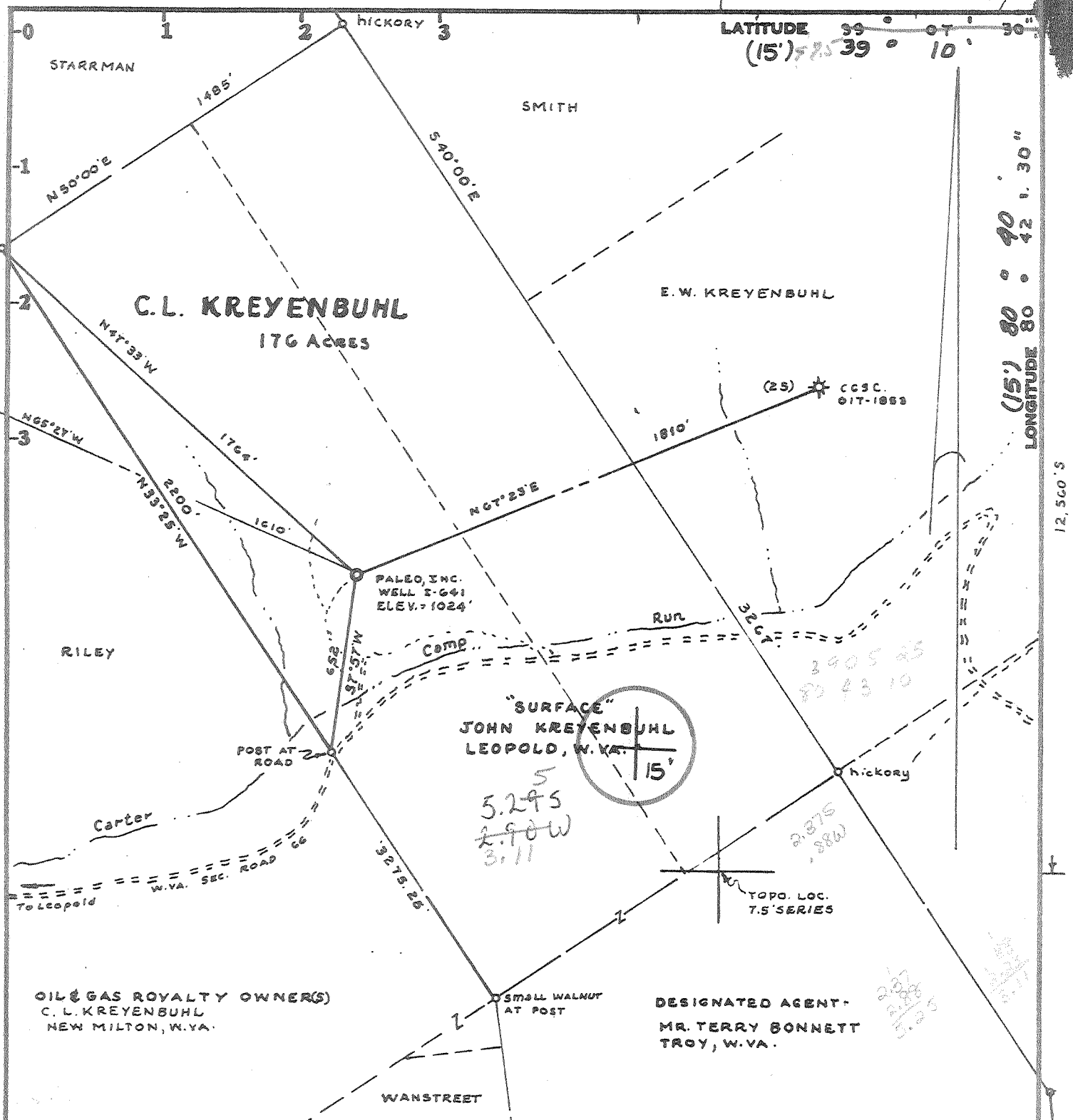


4650 10/5/79



OIL & GAS ROYALTY OWNERS(S)
C. L. KREYENBUHL
NEW MILTON, W. VA.

DESIGNATED AGENT
MR. TERRY BONNETT
TROY, W. VA.

Minimum Error of Closure 0.04 PART IN 200'

Source of Elevation USGS SPOT ELEV. AT FARM ROAD & STATE ROUTE

IS INTERSECTION AT SMITH SCHOOL 2700' N. OF LOC. ELEV. 896'

Fracture..... DRILL GAS SHALLOW
New Location..... DEVONIAN SHALE-TR
Drill Deeper..... EST. DEPTH = 5100'
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: Mark C. Echard
Squares: N S E W

Map No. _____

WELL OPERATOR/
Company PALEO, INC.
Address SUITE 208-MAY-EX-BLDG 3022 N.W. EXPRESSWAY OKLAHOMA CITY, OKLAHOMA 73112

Farm C. L. KREYENBUHL

Tract _____ Acres 176 Lease No. _____

Well (Farm) No. I-641 Serial No. _____

Elevation (Spirit Level) 1024' *WC*

Quadrangle NEW MILTON 7.5' VADIS 15'

County ODDRIDGE District COVE

Surveyor MARK C. ECHARD

Surveyor's Registration No. 490

File No. _____ Drawing No. _____

Date SEPTEMBER 29, 1979 Scale 1" = 500'

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

WELL LOCATION MAP
FILE NO. 47-017-2495

+ Denotes location of well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown. *2320*
OCT 22 1979

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

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

Date: December 12, 1979

FORM IV-35
(Obverse)

Operator's
Well No. Kreyenbuhl #I-641

[08-78]

WELL OPERATOR'S REPORT

API Well No. 47 - 017 - 2495
State County Permit

OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1024' Watershed: Carter Camp Run
District: Cove County: Doddridge Quadrangle: New Milton

WELL OPERATOR Paleo, Inc. DESIGNATED AGENT Terry Bonnett
Address Suite 207, May-Ex Building Address Troy, WV
3022 N.W. Expressway
Oklahoma City, OK 73112

PLANNED 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 October 4, 1979 OIL & GAS INSPECTOR FOR THIS WORK:
Name Paul Garrett
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED Address Clarksburg, WV
622-3871

GEOLOGICAL TARGET FORMATION: Devonian Shale Depth 5309 feet
Depth of completed well, 5449 feet Rotary / Cable Tools
Water strata depth: Fresh, 98 feet; salt, _____ feet.
Coal seam depths: None Is coal being mined in the area? No
Work was commenced November 19, 1979, and completed _____, 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		
Conductor								Kinds
Fresh water	8 5/8					1134'	1134'	To surface
Gal								Sizes
Intermediate								Depth set
Production								Perforations:
Tubing								Top Bottom
Packers								

RECORDED
JAN - 9 1980
OIL & GAS DIVISION
DEPT. OF MINES

OPEN FLOW DATA

Producing formation Benson Pay zone depth 5093 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
Static rock pressure, _____ psig (surface measurement) after _____ hours shut in

[If applicable due to multiple completion--]

Second producing formation Elk ALEX Pay zone depth 5309 feet
Gas: Initial open flow, _____ Mcf/d Oil: Initial open flow, _____ Bbl/d
Final open flow, 384 Mcf/d Final open flow, _____ Bbl/d
Time of open flow between initial and final tests, 6 hours
Static rock pressure 1750 psig (surface measurement) after 72 hours

FEB 13 1980

[08-78]

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

Fractured November 28, 1979

Benson - 20,000 lb. 80/100 sand
40,000 lb. 20/40 sand
613 bbls. water
25 BPM at 1600 lb.
2900 lb. breakdown

~~ALEX~~ Elk - 20,000 lb. 80/100 sand
40,000 lb. 20/40 sand
575 bbls. water
25 BPM at 1500 lb.
2250 lb. breakdown

Perforations - 4864 - 5093, 6 holes

Perforations - 5223 - 5309, 7 holes

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			0	91		
Sand			91	98	Water	
Shale			98	122		
Red Rock			122	141		
Shale			141	209		
Red Rock			209	229		
Shale			229	521		
Red Rock			521	538		
Shale			538	620		
Sand			620	641		
Shale			641	798		
Sand			798	810		
Red Rock			810	902		
Shale			902	1101		
Red Rock			1101	1142		
Shale			1142	1300		
Sand			1300	1340		
Shale			1340	1362		
Sand			1362	1382		
Sandy Shale			1382	1480		
Sand			1480	1532		
Shale			1532	1660		
Sand			1660	1710		
Sandy Shale			1710	1820		
Sand			1820	1842		
Shale			1842	2012		
Sand			2012	2032		
Lime			2032	2054		
Sand			2054	2078		
Slate			2078	2085		
Lime			2085	2225		
Sandy Shale			2225	2400		
Shale			2400	2500		
Sand			2500	2518	Show of gas, water, and oil	
Shale			2518	3048		
Sand			3048	3058		
Shale			3058	4860		
Sandy Shale			4860	4870	Show of gas	
Shale			4870	4990		
Sandy Shale			4990	5100	Show of gas	
Shale	5100	5218				
Sandy Shale	5218	5230				
Shale	5230	5250				
Sandy Shale	5250	5286	Show of gas	Shale	5312	5449
Shale	5286	5305		Total Depth	5449	
Sandy Shale ALEX	5305	5312				

NOTE: Regulation 2.02(i) provides as follows:
The well operator shall maintain a systematic, detailed record of all formations, perforations, and physical changes encountered in the drilling of a well.

Paleo, Inc.
Well Operator
By Mark R. Wolf
Its Agent

[08-78]

COPY

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. Kreyenbuhl #I-641

API Well No. 47-017-2495
State County Permit

WELL TYPE: Oil / Gas X /
(If "Gas", Production X / Underground storage / Deep / Shallow X /)

LOCATION: Elevation: 1024' Watershed: Carter Camp Run
District: Cove County: Doddridge Quadrangle: New Milton

WELL OPERATOR Paleo, Inc.
Address: Suite 207, May-Ex Building
3022 N.W. Expressway
Oklahoma City, OK 73112

DESIGNATED AGENT Terry Bonnet
Address Troy, WV

OIL & GAS ROYALTY OWNER C. L. Kreyenbuhl
Address New Milton, WV

COAL OPERATOR None
Address

ACREAGE 176
SURFACE OWNER John Kreyenbuhl
Address Leopold, WV
ACREAGE 176

COAL OWNER(S) WITH DECLARATION ON RECORD:
Name None
Address

FIELD SALE (IF MADE) TO:
Name N/A
Address

Name None
Address
OIL & GAS DIVISION
DEPT. OF MINES
OCT 4 1979

OIL & GAS INSPECTOR TO BE NOTIFIED
Name Paul Garrett
Address Clarksburg, WV
622-3871

COAL LESSEE WITH DECLARATION ON RECORD:
Name None
Address

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed / lease X / other contract / dated October 19, 19 73, to the undersigned well operator from Consolidated Gas Supply Corporation

[If said deed, lease, or other contract has been recorded:]
Recorded on , 19 , in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Lease Book 98 at page 97. A permit is requested as follows:

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

--planned as shown on the work order on the reverse side hereof.

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code § 22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the Department.

Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:
WEST VIRGINIA OIL AND GAS CONSERVATION COMMISSION
1015 WASHINGTON STREET EAST
CHARLESTON, WV 25311
TELEPHONE: (304) 348-3092

BLANKET BOND

Paleo, Inc.
Well Operator
By Mark R. Worl
Its Agent

[08-78]

COPY

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY:
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) Union Drilling, Inc.
Address Drawer 40
Buckhannon, WV 26201

GEOLOGICAL TARGET FORMATION, Devonian Shale

Estimated depth of completed well, 5100 feet Rotary / Cable tools /

Approximate water strata depths: Fresh, 160 feet; salt, feet.

Approximate coal seam depths: None Is coal being mined in the area? Yes / No /

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		
Conductor								Kinds
Fresh water	8 5/8					1100'	1100'	To surface
Coal								Sizes
Intermediate								
Production	4 1/2						5100	160 sks
Tubing								Depths set
Liners								Perforations:
								Top Bottom

NOTE: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code § 22-4-12a, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.

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 6-5-80

Robert R. [Signature]

Deputy Director - Oil & Gas Division

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code § 22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof:

W A I V E R

The undersigned coal operator / owner / lessee / of the coal under this well location, has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: , 19

By
Its