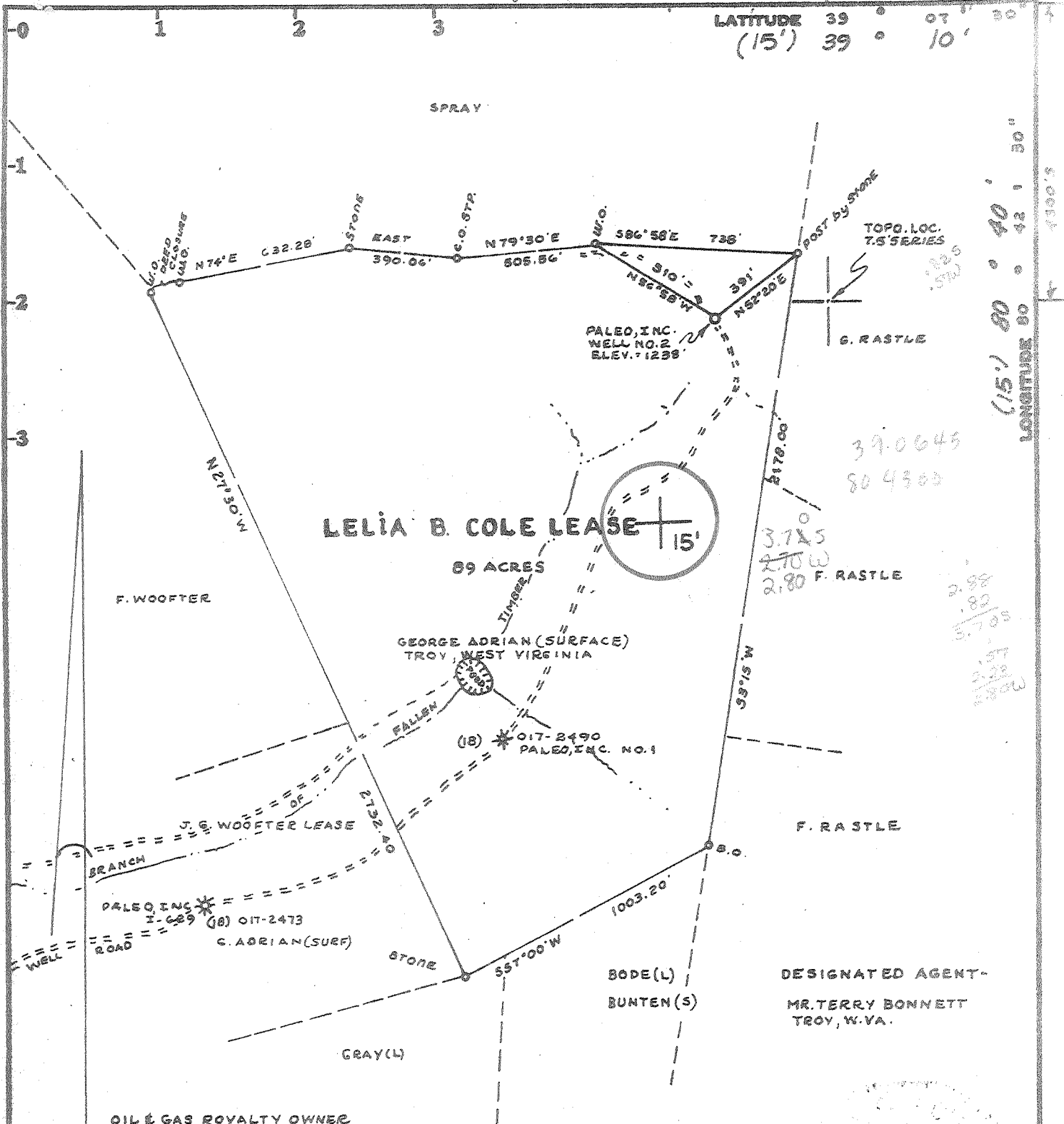


10/25/79  
3010

LATITUDE 39 07 30  
(15') 39 0 10'



LONGITUDE 80 42 1 30"  
(15') 80 0 40'

OIL & GAS ROYALTY OWNER  
AVA ROSS  
Rt 3, BOX 95  
SALEM, W. VA. 26426

Minimum Error of Closure ONE PART IN 200

Source of Elevation USGS B.M. AT POINT PLEASANT CHURCH CRY

OLD SCHOOL HOUSE ELEVATION 1030'

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.....  GAS-DRILL-SHALLOW  
Drill Deeper.....   
Abandonment.....

GANTZ - T.F.  
EST. DEPTH = 2820'

Signed: Mark C. Echard  
Squares: N S E W

Map No.

WELL OPERATOR/  
Company PALEO, INC.  
SUITE 208 MAY-EX-BLDG 3022 N.W. EXPRESSWAY  
Address OKLAHOMA CITY, OKLAHOMA 73112.  
Farm AVA ROSS, GEORGE ADRIAN  
LELIA B. COLE LEASE  
Tract \_\_\_\_\_ Acres 89 Lease No. \_\_\_\_\_  
Well (Farm) No. TWO Serial No. \_\_\_\_\_  
Elevation (Spirit Level) 1238' *WC*  
Quadrangle VADIS 7.5', 15'  
County DODDRIDGE District COVE  
Surveyor MARK C. ECHARD  
Surveyor's Registration No. 490  
File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
Date OCTOBER 17, 1979 Scale 1" = 500'

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

WELL LOCATION MAP

FILE NO. 47-017-2520

+ 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.

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

NOV 14 1979

91.6 CONINGS

142

142

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

Date: December 19, 1979

FORM IV-35  
(Obverse)

Operator's  
Well No. Cole #2

[08-78]

WELL OPERATOR'S REPORT 23  
OF  
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

API Well No. 47 - 017 - 2520  
State County Permit

TYPE: Oil \_\_\_ / Gas X / Liquid Injection \_\_\_ / Waste Disposal \_\_\_  
(If "Gas", Production X / Underground storage \_\_\_ / Deep \_\_\_ / Shallow X /)  
LOCATION: Elevation: 1238' Watershed: Fallen Timber  
District: Cove County: Doddridge Quadrangle: Vadis

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 X / Convert \_\_\_ / Drill deeper \_\_\_ / Redrill \_\_\_ / Fracture or stimulate \_\_\_  
Plug off old formation \_\_\_ / Perforate new formation \_\_\_  
Other physical change in well (specify) \_\_\_\_\_

PERMIT ISSUED ON October 24, 19 79 OIL & GAS INSPECTOR FOR THIS WORK:

APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED \_\_\_\_\_, 19 \_\_\_\_\_  
Name Paul Garrett  
Address Clarksburg, WV 26301  
622-3871

LOGICAL TARGET FORMATION: Big Injun Depth 2428 feet  
Depth of completed well, 2515 feet Rotary X / Cable Tools \_\_\_  
Water strata depth: Fresh, 92 feet; salt, \_\_\_ feet.  
Coal seam depths: None Is coal being mined in the area? No  
Work was commenced October 29, 1979, and completed December 9, 19 79

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
Production	8 5/8					913	913	To surface
Intermediate								Sizes
Production	4 1/2						2479'	130 sks Depth set
Perforations:								Top Bottom

OIL & GAS DIVISION  
DEPT. OF MINES

PRODUCTION FLOW DATA  
Producing formation Big Injun Pay zone depth 2428 feet  
Gas: Initial open flow, \_\_\_ Mcf/d Oil: Initial open flow, \_\_\_ Bbl/d  
Final open flow, 480 Mcf/d Final open flow, \_\_\_ Bbl/d  
Time of open flow between initial and final tests, 4 hours  
Static rock pressure, 600 psig (surface measurement) after 48 hours shut in  
[If applicable due to multiple completion--]  
Second producing formation \_\_\_\_\_ Pay zone depth \_\_\_\_\_ 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

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

Fractured December 19, 1979

Big Injun - 50,000 lb. 20/40 sand  
1600 lb. breakdown  
670 bbls water  
22.3 BPM at 1850 lbs.

Perforations - 2356, 2357, 2358, 2394, 2395, 2396, 2426, 2427, 2428, 1 hole each

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	88	
Sand			88	92	Water
Shale			92	108	
Sand			108	111	Water
Red Rock			111	129	
Shale			129	208	
Red Rock			208	241	
Shale			241	408	
Red Rock			408	429	
Shale			429	621	
Sand			621	649	
Shale			649	811	
Red Rock			811	862	
Shale			862	1080	
Red Rock			1080	1120	
Shale			1120	1480	
Sand			1480	1521	
Shale			1521	1629	
Sandy Shale			1629	1701	
Shale			1701	2240	
Lime			2240	2250	
Sandy Lime			2250	2292	
Slate			2292	2298	
Lime			2298	2350	
Sand			2350	2366	Show of gas
Lime			2366	2390	
Sand			2390	2404	Show of gas
Lime			2404	2428	
Sand <i>BT</i>			2428	2442	Show of gas & oil
Shale			2442	2515	
Total Depth			2515		

(Attach separate sheets to complete as necessary.)

Paleo, Inc.  
Well Operator

By Mark R. Wood  
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."

**COPY**

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. Cole #2

API Well No. 47 - 017 - 2520  
State County Permit

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

LOCATION: Elevation: 1238' Watershed: Fallen Timber  
District: Cove County: Doddridge Quadrangle: Vadis

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

DESIGNATED AGENT Terry Bonnett  
Address Troy, WV

OIL & GAS ROYALTY OWNER Ava Ross  
Address Route 3, Box 95  
Salem, WV 26426

COAL OPERATOR None  
Address \_\_\_\_\_

Acreage 89

COAL OWNER(S) WITH DECLARATION ON RECORD:  
Name None  
Address OCT 25 1979

SURFACE OWNER George Adrian  
Address Troy, WV  
Acreage 89

Name None  
Address \_\_\_\_\_  
**OIL & GAS DIVISION  
DEPT. OF MINES**

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

COAL LESSEE WITH DECLARATION ON RECORD:  
Name None  
Address \_\_\_\_\_

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

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed  / lease  / other contract  / dated August 28, 1979, to the undersigned well operator from M. Avanelle Ross and James Ross

[If said deed, lease, or other contract has been recorded:]  
Recorded on August 28, 1979, in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Lease Book 110 at page 385. A permit is requested as follows:

PROPOSED WORK: Drill  / 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) 344-1111

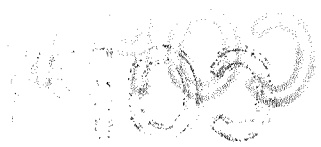
**BLANKET BOND**

Paleo, Inc. Well Operator  
Mark R. [Signature]

[08-78]

PROPOSED WORK ORDER

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



DRILLING CONTRACTOR (IF KNOWN) Robinson Drilling  
Address Tanner, WV

GEOLOGICAL TARGET FORMATION, Gantz

Estimated depth of completed well, 2820 feet Rotary  / Cable tools  /  
Approximate water strata depths: Fresh, 110 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	Left in well		
Conductor									Kinds
Fresh water	10 3/4"					300	300	To surface	
Coal									Sizes
Intermediate									
Production	4 1/2						2820	100 sks	Depths set
Tubing									
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 well permit 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 6-26-79.

*[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:         

By           
Its