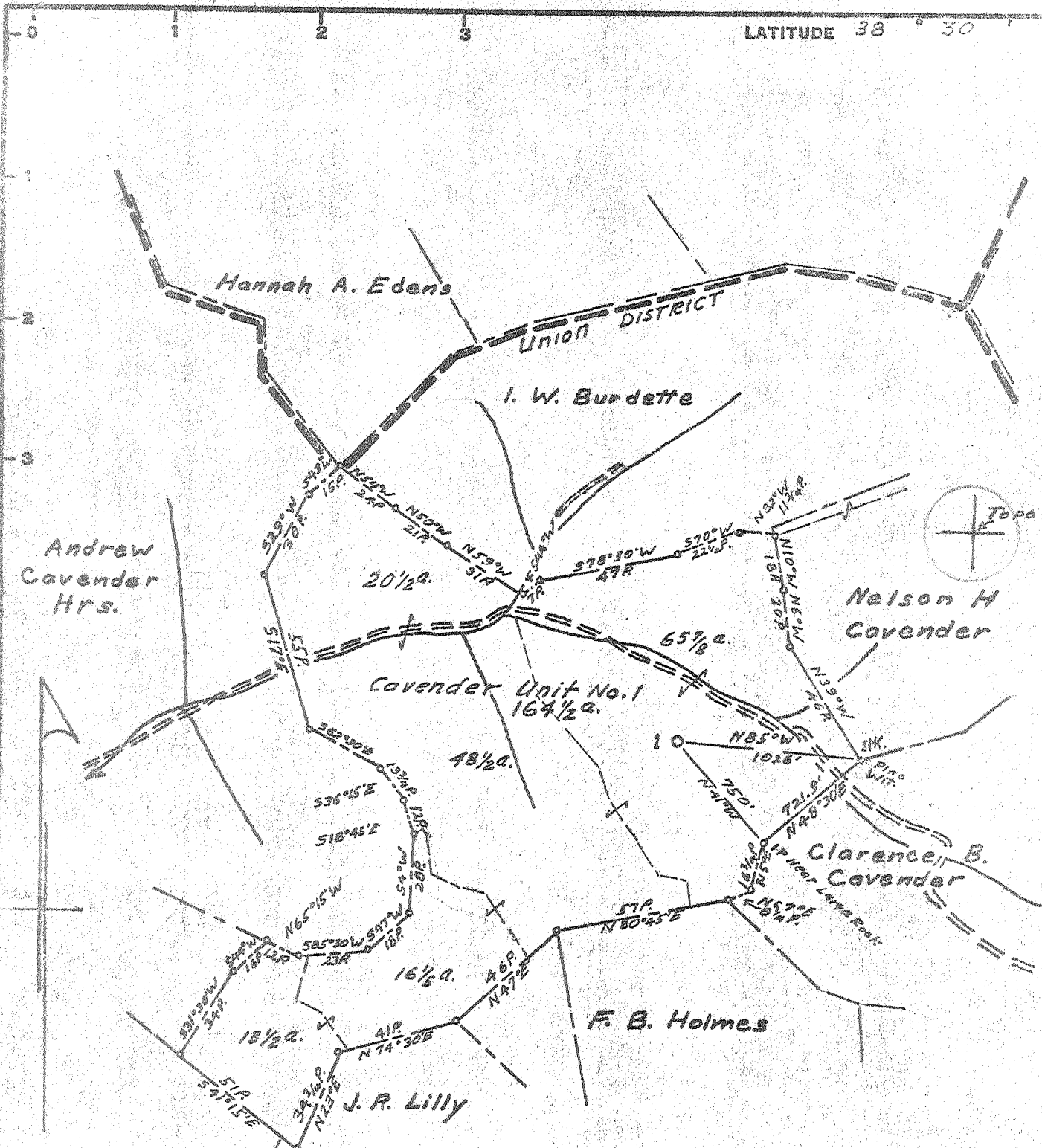


LATITUDE 38° 30'

LONGITUDE 81° 35'



Surface: Frances Cavender  
Rt. 1 Box 360  
Charleston, W. Va.

Minimum Error of Closure 1' in 200'

Source of Elevation Nelson H. Cavender Well #1 Col. Car. Co.

Ser. C-295, Permit Kan-513, Elevation 1031.0 Gr.

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
- Drill Deeper
- Abandonment

Signed: *A.C. Hillert*

Map No. 91W Squares: N S 58 E W 56

*Used 5-26-69*

Company	PENNZOIL UNITED, INC.		
Address	P. O. BOX 1388, PARKERSBURG, W. VA.		
Farm	Cavender Unit No. 1		
Tract	5	Acres	164 1/2
Lease No.	82909		
Well (Farm) No.	1	Serial No.	
Elevation (Spirit Level)	901.43 Ground		
Quadrangle	Charleston <i>NC</i>		
County	Kanawha	District	Union
Engineer	<i>A.C. Hillert</i>		
Engineer's Registration No.	2534		
File No.			
Drawing No.			
Date	April 11, 1969		
Scale	1" = 800'		

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

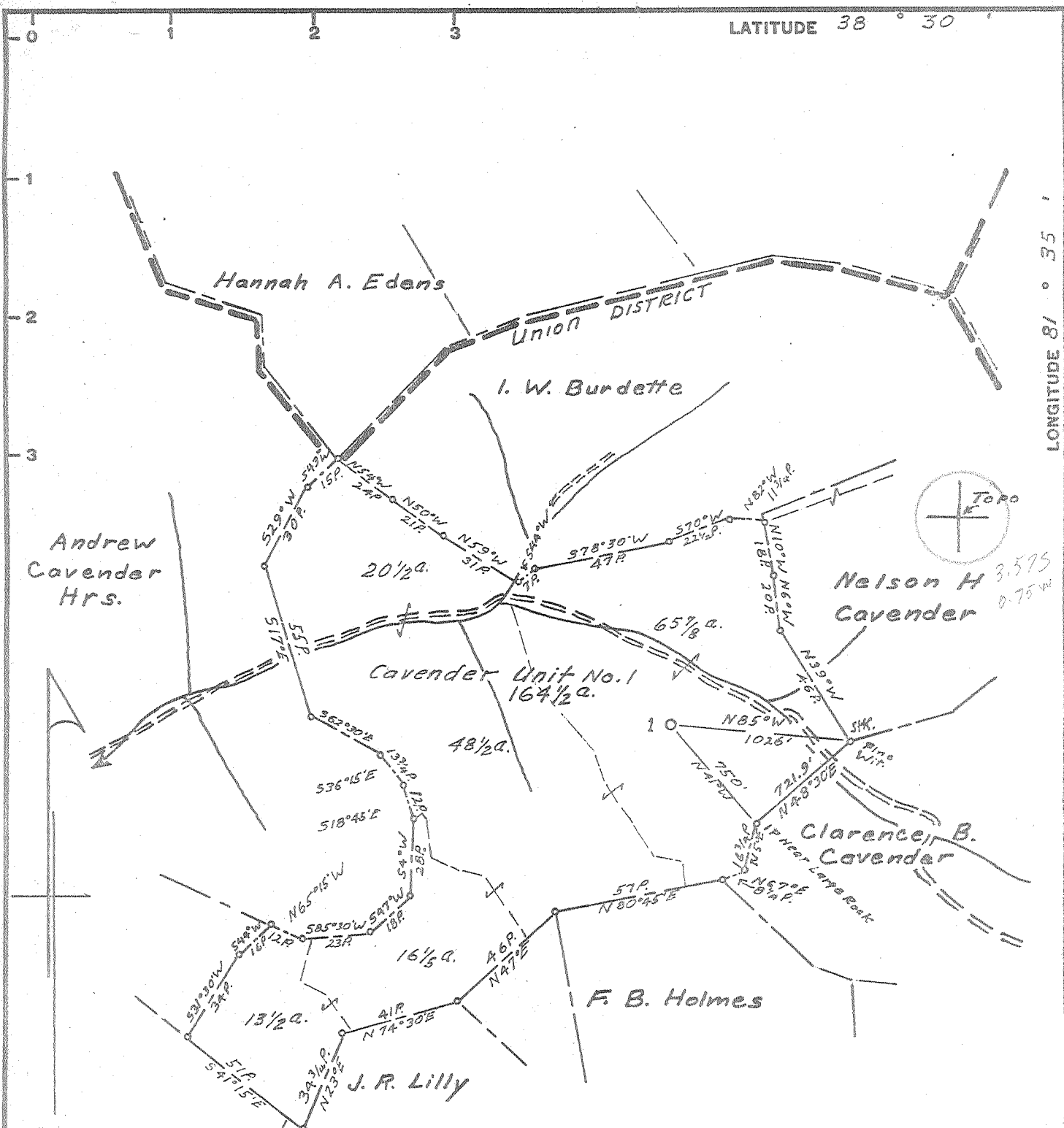
**WELL LOCATION MAP**

FILE NO. *Kan-2385-P*

+ 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.

JUN 22 1969



Surface: Frances Cavender  
Rt. 1 Box 360  
Charleston, W. Va.

Minimum Error of Closure 1' in 200'  
Source of Elevation Nelson H. Cavender Well #1 Col. Car. Co.  
Ser. C-295, Permit Kan-513, Elevation 1031.0 Gr.

- Fracture.....
- New Location.....
- 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.

Signed: A.C. Hillert

Map No. 91W Squares: N S 58 E W 56

Company	PENNZOIL UNITED, INC.		
Address	P. O. BOX 1588, PARKERSBURG, W. VA.		
Farm	Cavender Unit No. 1		
Tract	Acres	Lease No.	
	164 1/2	82909	
Well (Farm) No.	1	Serial No.	
Elevation (Spirit Level)	901.43 Ground		
Quadrangle	Charleston	NC	
County	Kanawha	District	Union
Engineer	<u>A.C. Hillert</u>		
Engineer's Registration No.	2534		
File No.	Drawing No.		
Date	April 11, 1969	Scale	1" = 800'

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

WELL LOCATION MAP

FILE NO. Kan-2385

+ 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 WELLS DIVISION

Rotary   
Spudder   
Cable Tools   
Storage

Oil or Gas Well  (KIND)

WELL RECORD

County CHARLESTON  
Permit No. KAN-2385

Company PENNZOIL UNITED, INC.  
Address P. O. Box 1588, Parkersburg, W. Va.  
Farm Cavender Unit #1 Acres 164 1/2  
Location (waters) \_\_\_\_\_  
Well No. 1 Elev. 901.43 gr. 13  
District Union County Kanawha  
The surface of tract is owned in fee by Frances Cavender  
Rt. 1 Box 360  
Address Charleston, W. Va.  
Mineral rights are owned by Homer L. Cavender, Agent  
806 Red Oak Street  
Address Charleston, W. Va.  
Drilling commenced 5-15-69  
Drilling completed 5-24-69  
Date Shot - From - To -  
With \_\_\_\_\_

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer, Guide Shoe, Insert Valve, Centralizers, Guide Shoe, Float Collar, Centralizer
16			Size of 8-5/8", 8-5/8", 8-5/8", 5-1/2", 5-1/2"
TO 8-5/8"	36.00		Depth set 1905.50, 5757.99
TO 5-1/2"	1905.50		
5-1/2"	5757.99		
6%			
5 3/16			
4 1/2			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

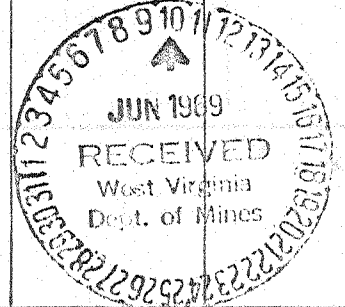
Open Flow - /10ths Water in \_\_\_\_\_ Inch  
Show of gas /10ths Merc. in \_\_\_\_\_ Inch  
Volume Water in Newburg Cu. Ft.  
Rock Pressure \_\_\_\_\_ lbs. \_\_\_\_\_ hrs.  
Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
WELL ACIDIZED (DETAILS) \_\_\_\_\_  
WELL FRACTURED (DETAILS) \_\_\_\_\_

Attach copy of cementing record.  
CASING CEMENTED See back of sheet Date \_\_\_\_\_  
Amount of cement used (bags) \_\_\_\_\_  
Name of Service Co. \_\_\_\_\_  
COAL WAS ENCOUNTERED AT \_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES

RESULT AFTER TREATMENT (Initial open Flow or bbls.) \_\_\_\_\_ well abandoned 5-26-69  
ROCK PRESSURE AFTER TREATMENT \_\_\_\_\_ HOURS  
Fresh Water \_\_\_\_\_ Feet Salt Water \_\_\_\_\_ Feet  
Producing Sand \_\_\_\_\_ Depth \_\_\_\_\_

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Sand & Shale			0	950			
Sand			950	1255			
Sand & Shale			1255	1582	5807	5807	
Salt Sand			1582	1622	901	5031	
Little Lime			1628	1662	4906	776	
Pencil Cave			1662	1673			
Big Lime			1673	1826			
Big Injun			1826	1874			
Shale			1874	2282			
Berea			2282	2288			
Shale			2288	4894			
Marcellus S.			4894	4933			
Onondago L.			4933	5031			
Driskany			5031	5077			
Lime & Shale			5077	5807			
Newburg			5807	5830			
Shale			5830	5850			
Total Depth				5850			

*McKenzie*



Formation	Color	Hard or Soft	Top X	Bottom	Oil, Gas or Water	Depth Found	Remarks
							13-3/8" Casing @ 36.00 ft. - 5-16-69 - Used 50 bags Cement 2% CaCl <sub>2</sub>
							8-5/8" Casing @ 1905.50 Ft. - 5-19-69 - Used 450 bags cement 2% CaCl <sub>2</sub>
							5-1/2" Casing @ 5757.99 ft. - 5-23-69 - Used 175 bags Cement 10% Salt

Date June 9, 1969

APPROVED PENNZOIL UNITED, INC., Owner

By A. C. Hilbert  
A. C. Hilbert (Title) Engineer