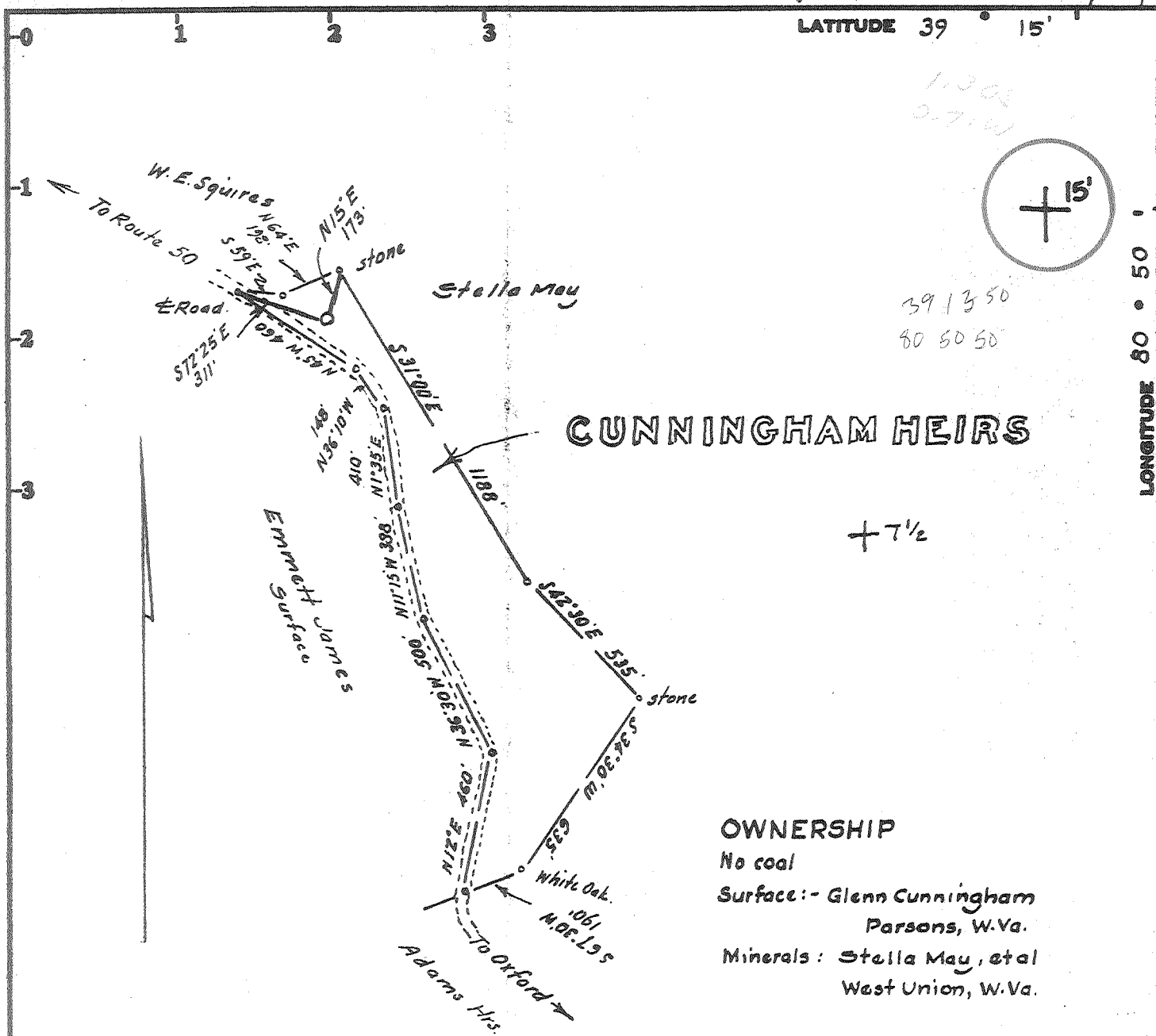


7/17/79 RE



LATITUDE 39 15'

LONGITUDE 80 50'

**CUNNINGHAM HEIRS**

**OWNERSHIP**

No coal  
 Surface: - Glenn Cunningham  
 Parsons, W.Va.  
 Minerals: Stella May, et al  
 West Union, W.Va.

**LEGEND**

- — Lines plotted from deed calls
- Surveyed Lines
- Roads
- o Well Location

Minimum Error of Closure 1 in 200

Source of Elevation USGS elev on road NW of Location = 928'

- 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: [Signature]  
 Squares: N S E W

Map No.

Company UNITED OPERATING CO.  
 Address 600 Commerce Square, Charleston, W.Va.  
 Farm Cunningham Heirs  
 Tract \_\_\_\_\_ Acres 19.5 Lease No. \_\_\_\_\_  
 Well (Farm) No. Four Serial No. \_\_\_\_\_  
 Elevation (Spirit Level) 1035 NC  
 Quadrangle Oxford 7 1/2, HOLBROOK 15'  
 County Doddridge District Central  
 Engineer [Signature]  
 Engineer's Registration No. 1227  
 File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 Date Sept 8, 1979 Scale 1" = 500'

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

**WELL LOCATION MAP**

FILE NO. 47-017-2488

+ 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.

OCT 9 1979

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

(Obverse)

Operator's Well No. Cunningham #4  
API Well No. 47 - 017 - 2488  
State County Permit

NOV 28 1979

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

OIL & GAS DIVISION WELL OPERATOR'S REPORTS  
OF  
DEPT. OF MINES DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1035 Watershed: Cabin Run  
District: Central County: Doddridge Quadrangle: Oxford 7 1/2

WELL OPERATOR United Operating Company DESIGNATED AGENT Jack L. Trittipio  
Address 600 Commerce Square Address 600 Commerce Square  
Charleston, WV 25301 Charleston, WV 25301

PERMITTED 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 Sept. 18, 19 79

OIL & GAS INSPECTOR FOR THIS WORK:

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

Name Paul Garrett  
Address 321 Beech Street  
Ph: 622-3871 Clarksburg, WV 26301

GEOLOGICAL TARGET FORMATION: Weir Depth 2,450 feet

Depth of completed well, 2450 feet Rotary X / Cable Tools \_\_\_

Water strata depth: Fresh, \_\_\_ feet; salt, \_\_\_ feet.

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

Work was commenced 9-30, 1979, and completed 10-3, 1979

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								
Coal								Sizes
Intermediate	<u>8 5/8</u>	<u>H</u>	<u>20</u>	<u>✓</u>		<u>268</u>	<u>268</u>	<u>Circulated</u>
Production	<u>4 1/2</u>	<u>ERW</u>	<u>10.5</u>	<u>-</u>		<u>0</u>	<u>2440</u>	<u>1000 Fillup</u>
Tubing								Depths set
Liners								Perforations:
								Top <u>2274</u> Bottom <u>2392</u>

OPEN FLOW DATA

Producing formation Weir Pay zone depth 2274-2392 feet

Gas: Initial open flow, N/T Mcf/d Oil: Initial open flow, N/T Bbl/d

Final open flow, 200 MCF Mcf/d Final open flow, 5 Bbl/d

Time of open flow between initial and final tests, X hours

Static rock pressure, 1160 psig (surface measurement) after 22 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

(Continue on reverse side)

NOV 28 1979

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

Fractured interval from 2274-2394 in T60 stages with  
500 bbls. fluid - 20,000# silica sand - 40,000# 20/40 sand

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil, and gas
Sand - shale	G	H	0	1570	
	G	H	1570	1622	
Shale	G	S	1622	1644	
	G	H	1644	<del>1670</del>	
	G	S	<del>1670</del>	1944	
Shale	G	H	1944	2038	
Low c	G	H	2038	2108	
inj Injun	G	S	2108	2274	
shale	G	S	2274	2394	
reib. SS	G	S	2394	2452	T.D.
shale					

(Attach separate sheets to complete as necessary)

United Operating Company  
Well Operator  
By Jack L. Trittipio (Jack L. Trittipio)  
Its President

NOTE: Regulation 2.02(4) 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."

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

OIL AND GAS WELL PERMIT APPLICATION

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

LOCATION: Elevation: 1035 Watershed: Gabin Run  
District: Central County: Doddridge Quadrangle: Oxford 7 1/2

WELL OPERATOR United Operating Company  
Address 600 Commerce Square  
Charleston, WV 25301

DESIGNATED AGENT Jack L. Trittipo  
Address 600 Commerce Square  
Charleston, WV 25301

OIL & GAS ROYALTY OWNER Stella May & Richard Cunningham  
Address West Union, WV (ST. May)  
(R. Cunn) Cucamonga, Calif.

COAL OPERATOR NA  
Address \_\_\_\_\_

SURFACE OWNER Glenn Cunningham  
Address P. O. 337  
Parsons, WV 26287  
Acreage 19 acre

COAL OWNER(S) WITH DECLARATION ON RECORD:  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_

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

COAL LESSEE WITH DECLARATION ON RECORD:  
Name \_\_\_\_\_  
Address \_\_\_\_\_

OIL & GAS INSPECTOR TO BE NOTIFIED  
Name Paul Garrett  
Address 321 Beech Street  
Clarksburg, WV 622-3871

RECEIVED  
SEP 17 1979

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed  / lease  / other contract  / dated July 24, 1978, to the undersigned well operator from Stella May and Richard D. Cunningham.

[If said deed, lease, or other contract has been recorded:]  
Recorded on January 30, 1979, in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Lease Book 107 at page 376. 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  
1615 WASHINGTON STREET EAST  
CHARLESTON, WV 25311  
TELEPHONE: (304) 348-3092

United Operating Company  
Well Operator  
By Jack L. Trittipo (Jack L. Trittipo)  
Its President

BLANKET BOND

PROPOSED WORK ORDER

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

DRILLING CONTRACTOR (IF KNOWN) \_\_\_\_\_

Address \_\_\_\_\_

GEOLOGICAL TARGET FORMATION, Weir

Estimated depth of completed well, 2500 feet Rotary  / Cable tools

Approximate water strata depths: Fresh, 60 feet; salt, \_\_\_\_\_ feet.

Approximate coal seam depths: NA 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		Kinds	Sizes
Conductor										
Fresh water	8-5/8	H	20	X		300	300	circulated		
Coal										
Intermediate										
Production	4 1/2	K	10.5	X		0	2500	1,000'	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-8, "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.

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22, of the W. Code, the location is hereby approved for \_\_\_\_\_ing. This permit shall expire if operations have not commenced by 5-18-80.

  
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 \_\_\_\_\_