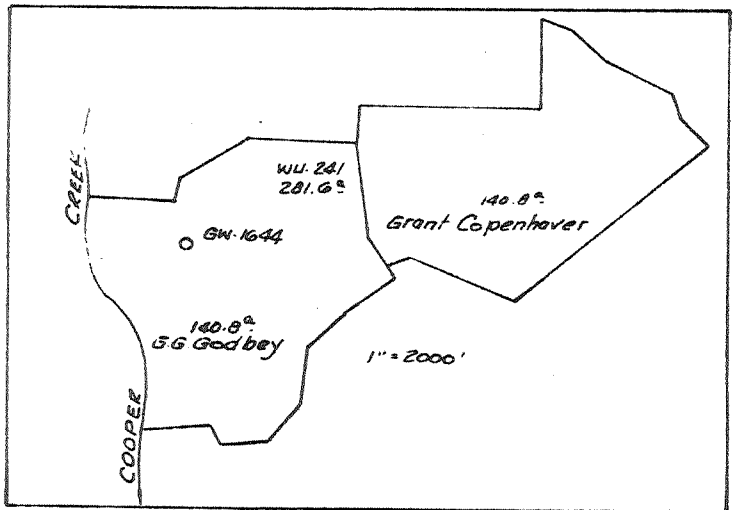
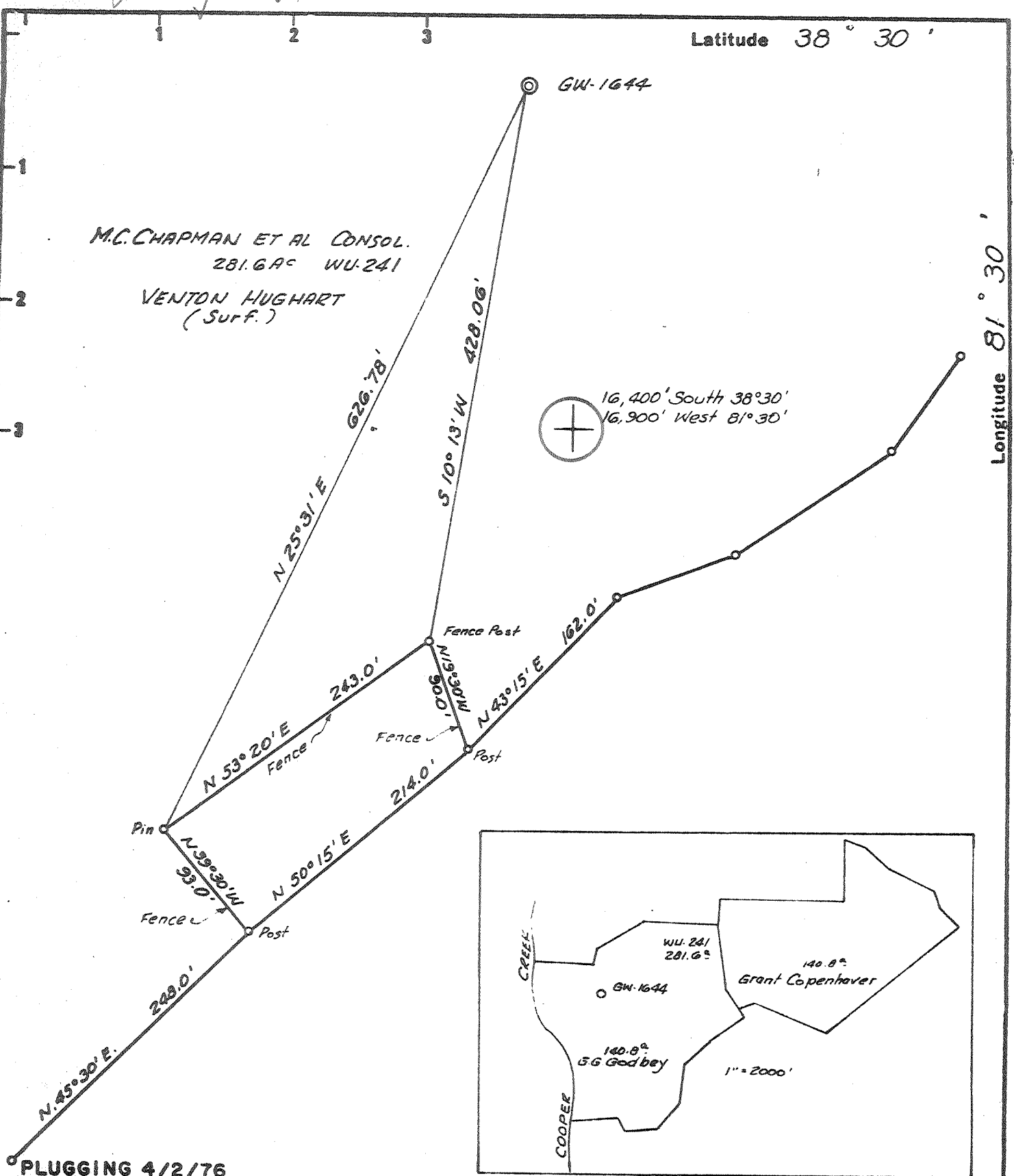


Latitude 38° 30'

Longitude 81° 30'

M.C. CHAPMAN ET AL CONSOL.  
281.6 AC WU-241  
VENTON HUGHART  
(Surf.)

16,400' South 38°30'  
16,900' West 81°30'



PLUGGING 4/2/76

Fracture Before 6/5/27   
~~New Location~~   
 Drill Deeper   
 Redrill   
 Abandonment   
~~Case 4-29-69~~  
~~Case 5-18-69~~

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 5 of the Rules and Regulations of the Oil and Gas Section of the Mining Laws of West Virginia.  
 The accuracy of this survey is within the limits and as prescribed in paragraph 5 by the Oil and Gas Division of the Department of Mines Regulations.  
 PROVEN ELEVATION U.S.G.S. 661

Company CITIES SERVICE OIL COMPANY  
 Address Box 873 CHARLESTON, W.VA.  
 Farm M.C. CHAPMAN ET AL (CONSOL.)  
 Part of 281.6 ac  
 Tract \_\_\_\_\_ Acres 55 Lease No. WU-241  
 Well (Farm) No. B-1 Serial No. GW-1644  
 Elevation (Spirit Level) 805.00  
 Quadrangle CHARLESTON NE  
 County KANAWHA District ELK  
 Engineer Wendell S. Moore  
 Engineer's Registration No. 2113  
 File No. \_\_\_\_\_ Drawing No. W-1-69  
 Date 19 MARCH 69 Scale 1" = 100'

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

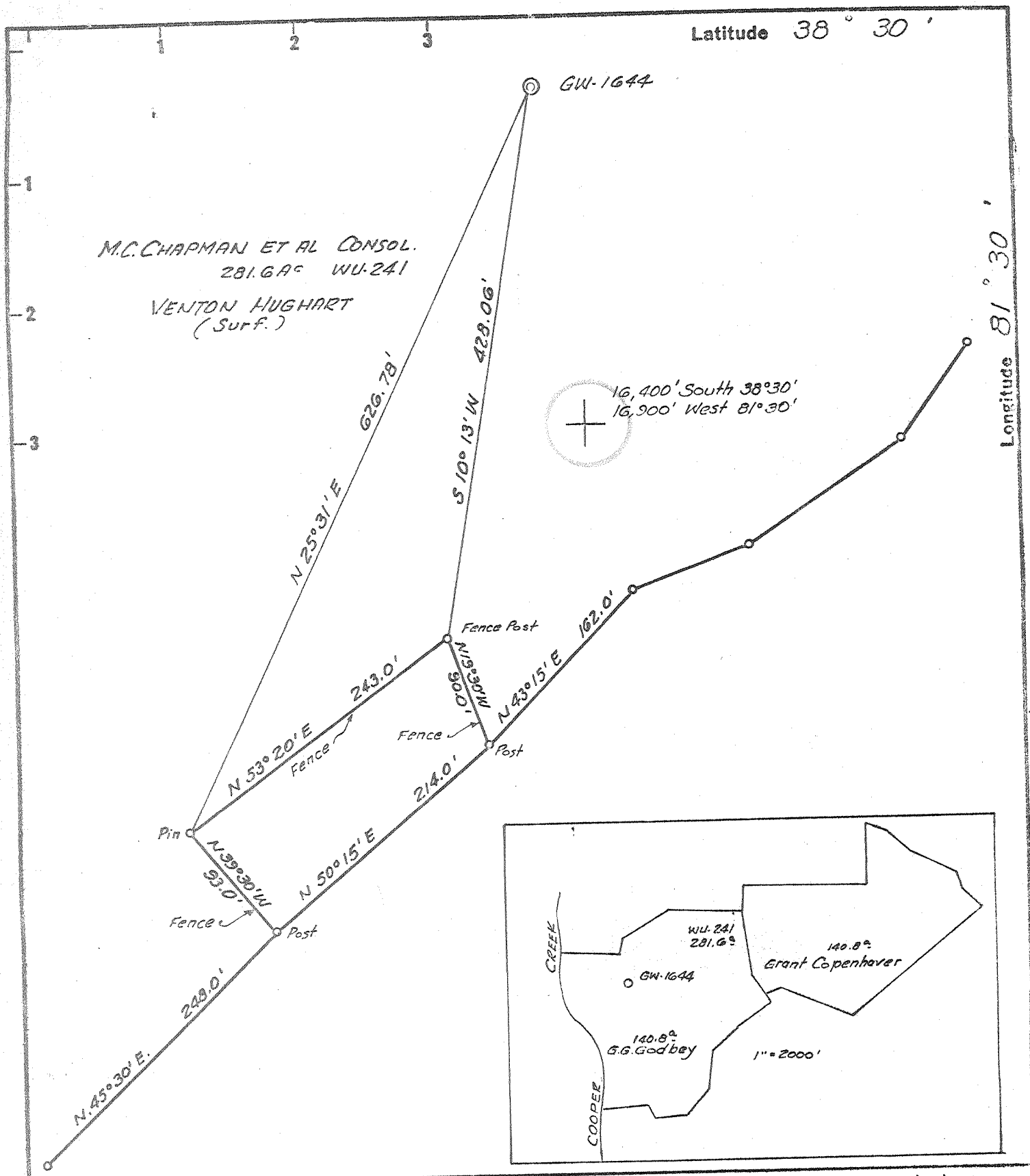
WELL LOCATION MAP  
 FILE NO. Ken-2374-P

~~Mapping Keokuk CANC. Sub 69~~  
 + 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.

47-039

Deep Well



Fracture Before 6/5/27   
 New Location   
 Drill Deeper   
 Redrill   
 Abandonment   
March 4-29-69  
 Canc. 5/13/69

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The accuracy of this survey is within the limits and as prescribed in paragraph 5 by the Oil and Gas Division of the Department of Mines Regulations.

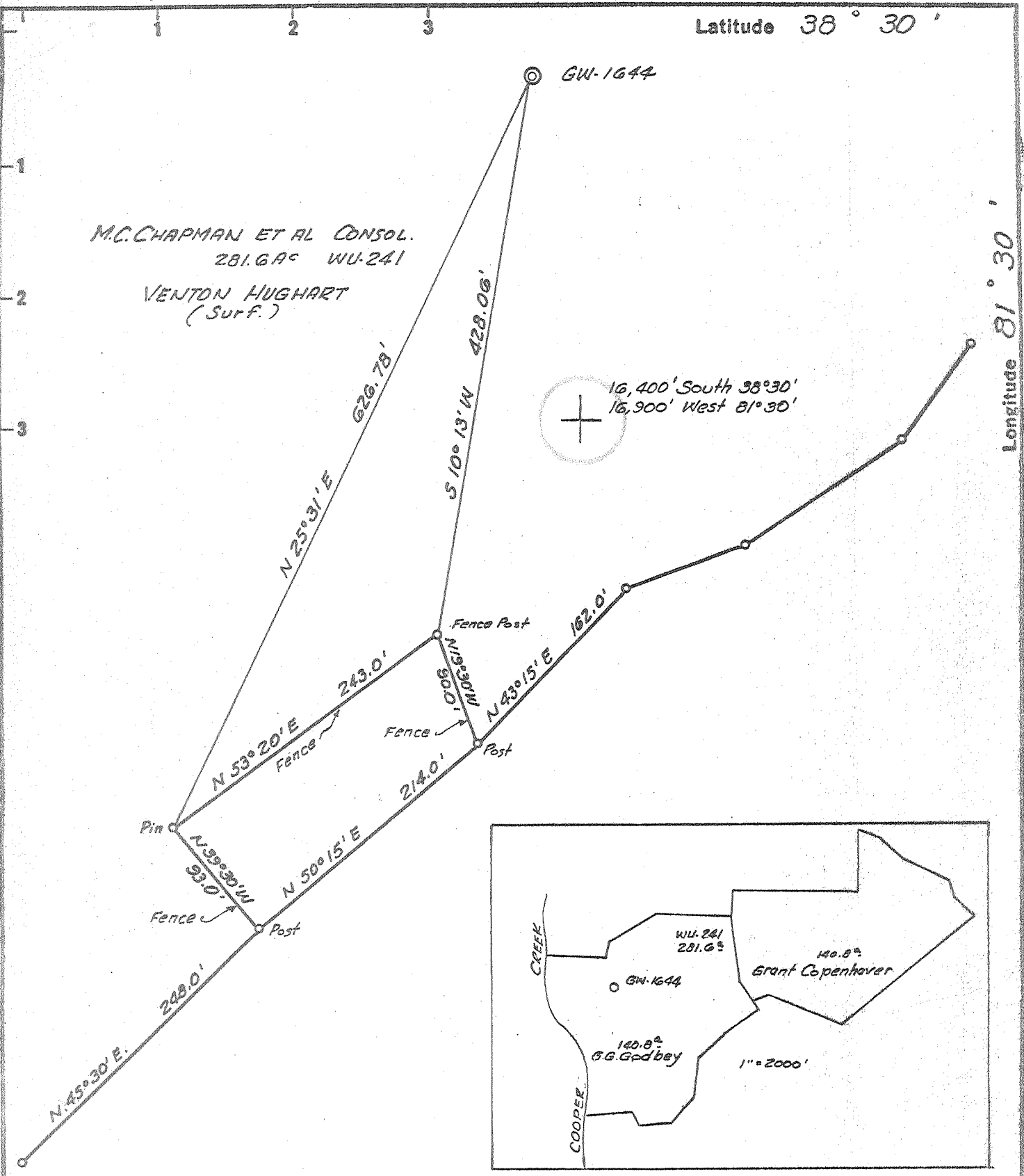
PROVEN ELEVATION U.S.G.S. 661

Company CITIZEN SERVICE OIL COMPANY  
 Address Box 873 CHARLESTON, W.VA.  
 Farm M.C. CHAPMAN et al (CONSOL.)  
 Part of 281.6<sup>ac</sup>  
 Tract \_\_\_\_\_ Acres 55 Lease No. WU-241  
 Well (Farm) No. B-1 Serial No. GW-1644  
 Elevation (Spirit Level) 805.00  
 Quadrangle CHARLESTON NE  
 County KANAWHA District ELK  
 Engineer Wardell S. Moore  
 Engineer's Registration No. 2113  
 File No. \_\_\_\_\_ Drawing No. W-1-69  
 Date 19 MARCH 69 Scale 1" = 100'

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

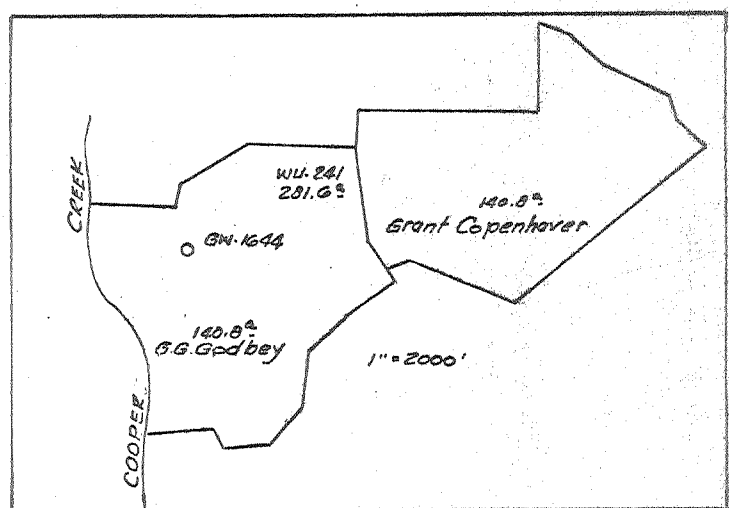
**WELL LOCATION MAP**  
 FILE NO. Ken-2374-P  
Plugging Permit C.A.N.C. 5-13-69  
 + Denotes location of well on United States Topographic Maps, scale 1 to 62,500 latitude and longitude lines being represented by border lines as shown.  
 - Denotes one inch spaces on border line of original tracing.

Latitude 38° 30'



M.C. CHAPMAN ET AL CONSOL.  
281.6 AC WU-241  
VENTON HUGHART  
(Surf.)

16,400' South 38° 30'  
16,900' West 81° 30'



- Fracture Before 6/5/27
  - ~~Map Location~~
  - Drill Deeper
  - Redrill
  - Abandonment
- WU-241 4-29-69

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The accuracy of this survey is within the limits and as prescribed in paragraph 5 by the Oil and Gas Division of the Department of Mines Regulations.  
PROVEN ELEVATION U.S.G.S. 661

Company CITIES SERVICE OIL COMPANY  
 Address BOX 873 CHARLESTON, W.VA.  
 Farm M.C. CHAPMAN et al (CONSOL.)  
 Part of 281.6 AC  
 Tract \_\_\_\_\_ Acres 55 Lease No. WU-241  
 Well (Farm) No. B-1 Serial No. GW-1644  
 Elevation (Spirit Level) 805.00  
 Quadrangle CHARLESTON NE  
 County KANAWHA District ELK  
 Engineer Wendell S. Moore  
 Engineer's Registration No. 2113  
 File No. \_\_\_\_\_ Drawing No. W-1-69  
 Date 19 MARCH 69 Scale 1"=100'

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

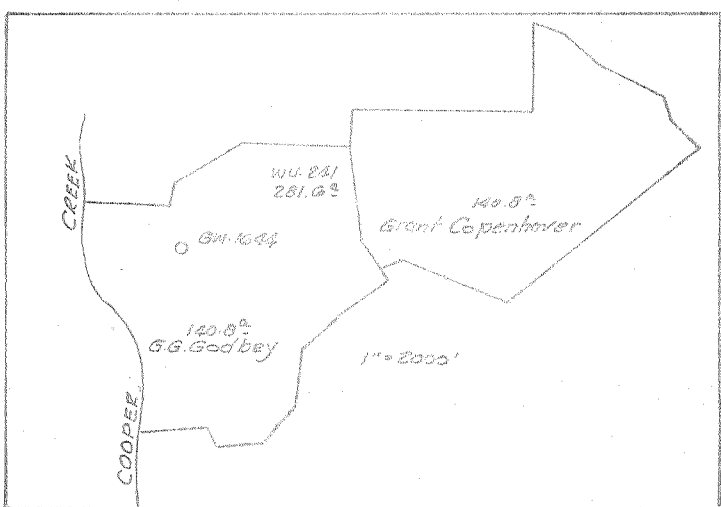
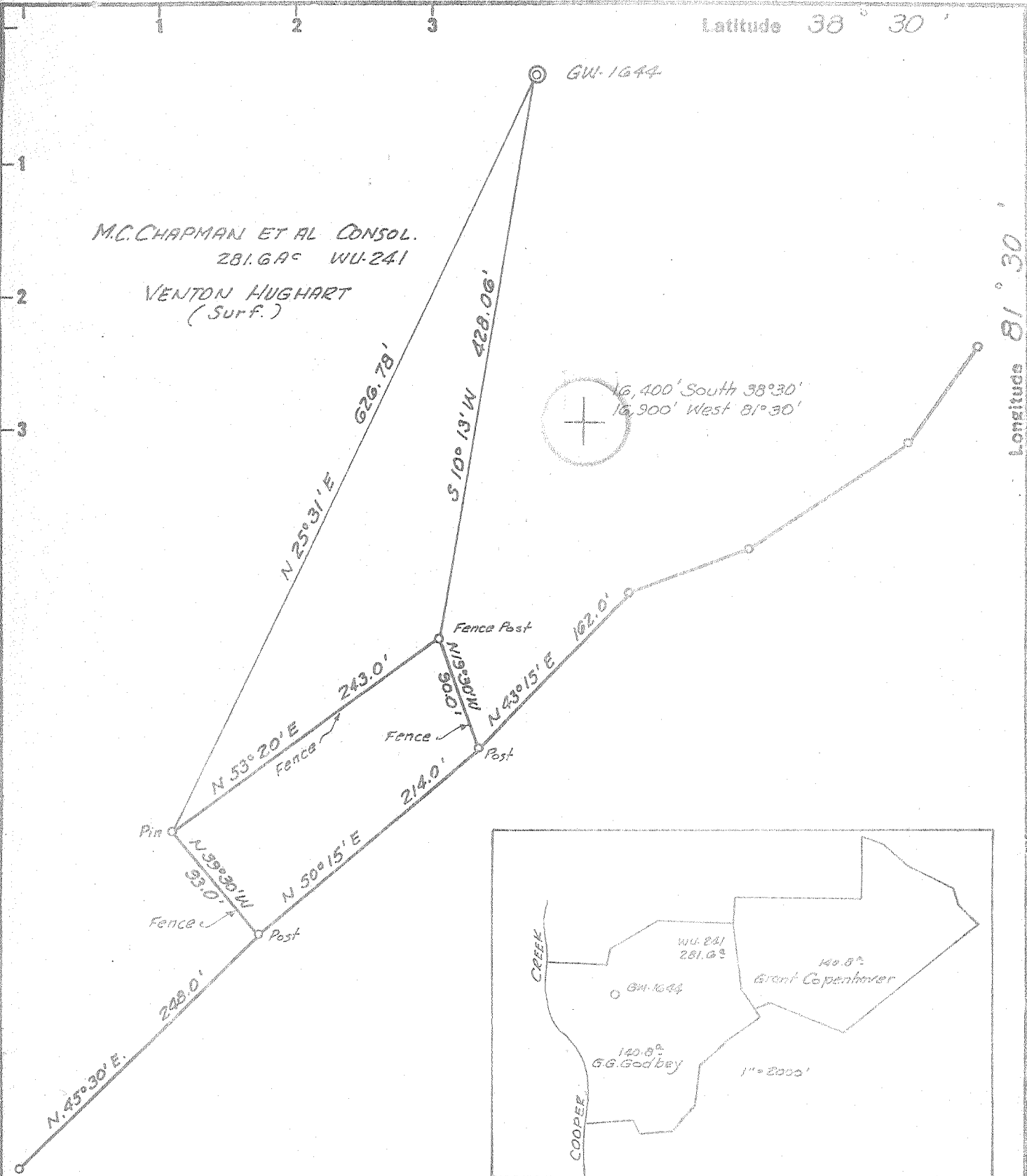
WELL LOCATION MAP  
FILE NO. 100-2374-P

+ 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.

6-6 Cooper Creek 331

Deep Well (Newburg)  
MAY 11 1969

Latitude 38° 30'



- Fracture
- Before 6/5/27
- New Location
- Drill Deeper
- Redrill
- Abandonment

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The accuracy of this survey is within the limits and as prescribed in paragraph 5 by the Oil and Gas Division of the Department of Mines Regulations.

PROVEN ELEVATION U.S.G.S. 661

Company CITIES SERVICE OIL COMPANY

Address Box 873 CHARLESTON, W.VA.

Farm M.C. CHAPMAN et al (CONSOL.)  
*Part of 281.6 AC*

Tract Acres .55 Lease No. WU-241

Well (Farm) No. B-1 Serial No. GW-1644

Elevation (Spirit Level) 805.00

Quadrangle CHARLESTON NE

County KANAWHA District ELK

Engineer Wendell S. Moore

Engineer's Registration No. 2113

File No. \_\_\_\_\_ Drawing No. W-1-69

Date 19 MARCH 69 Scale 1" = 100'

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

**WELL LOCATION MAP**

FILE NO. 1197-2374

+ 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 DIVISION

Rotary   
Spudder   
Cable Tools   
Storage

Quadrangle Charleston

Permit No. KAN-2374

**WELL RECORD**

Oil or Gas Well Gas  
(KIND)

Company Cities Service Oil Company  
Address Box 873, Charleston, W. Va.  
Farm M. C. Chapman, et al Acres. 2861.6  
Location (waters) Coopers Creek  
Well No. "B" #1, GW-1644 Elev. 805'  
District Eik County Kanawha  
The surface of tract is owned in fee by Glenn L. Grimm  
2308 Penna. Avenue Address Charleston, W. Va.  
Mineral rights are owned by M. C. Chapman, et al  
(for further add. contact C. S. Oil Co)  
Address  
Drilling commenced 4-10-69  
Drilling completed 4-17-69  
Date Shot not shot From To  
With

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer.....
13 3/8" 48#	230'	230'	none
10			Size of.....
9-5/8"	1850'	1850'	Depth set.....
6 5/8"			
5 3/16"			
4 1/2"			
3"			Perf. top.....
2"			Perf. bottom.....
Liners Used			Perf. top.....
			Perf. bottom.....

Open Flow /10ths Water in Inch  
/10ths Merc. in Inch

Attach copy of cementing record.  
CASING CEMENTED SIZE No. Ft. Date

Volume Cu. Ft.  
Rock Pressure lbs. hrs.

Amount of cement used (bags)  
Name of Service Co. see reverse side

Oil bbls., 1st 24 hrs.  
WELL ACIDIZED (DETAILS) not acidized

COAL WAS ENCOUNTERED AT NONE FEET INCHES  
FEET INCHES FEET INCHES

WELL FRACTURED (DETAILS) not fractured

FEET INCHES FEET INCHES  
Fractured 5/19/69 w/ 500 gals. mud acid, 21,000 gals. water & 19,000# sand

RESULT AFTER TREATMENT (Initial open Flow or bbls.)  
ROCK PRESSURE AFTER TREATMENT

14,200 McF  
1900# HOURS 18

Fresh Water 360' Feet  
Producing Sand Newburg

Salt Water 1100' Feet  
Depth

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Oil			0	20			
Red Rock & Shale			20	200			
Lime and Shale			200	350			
Shale			350	355			
Sand			355	400			
Sand and Shale			400	930			
Sand			930	1490			
Big Lime			1490	1625			
Big Injun			1625	1665			
Veir Sand			1665	1750			
Shale			1750	4790			
Lime			4790	4900			
Criskany Sand			4900	4945			
Lime			4945	5205			
Lime & Dolomite			5205	5639			
Newburg Sand			5639	5693'			
Total Depth				5693'			

*Cities Service Rpt. 7/15/69  
Kanawha County-Charleston-1-quad.  
Gas est. 40,000 Mcfd, nat. T.D.  
5724.5'. Fraced Newburg 5-9-69.  
117 hr. SIP 2173.5#. Gas test. 15,400  
Mcfd (side-static) A/F with some  
frac fluid in hole. Will run 4 Pt. I.P.  
test.*

*\* Data From United Fuel  
Drly Rpt 5/20/69*

Note This well blew out & flowed gas at the rate of 40,000 MCFPD (est.) from the Newburg. For at least 5 days before the flow was killed & well was finally completed.

MAY 11 1969

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
<u>Casing Record</u>							
4-11-69							Set and cemented 13-3/8" 48# H-40 new casing at 230' with 200 sacks of regular cement with 2% ca. cl. Cement circulated to surface.
4-14-69							Set and cemented 9-5/8" 29.3# H-40 new casing at 1850' with 450 sacks Pozmix followed by 100 sacks regular cement with 2% ca. cl. Pumped 50 bbls. 6% gel ahead of cement. Cement circulated to the surface.
4-16-69							Encountered top Newburg 40' high at 5639' while picking casing point. Well making est. 20 MMCFD natural. Drilled 8-3/4" hole to 5693'. Mixed mud and tried to kill well. After drilling Newburg Sand well making est. 40 MMCFD. Odor of sulphur. Lost circulation.
4-29-69							Killed well - will plug and abandon

Date April 29, 19 69

APPROVED Cities Service Oil Company, Owner

By W. G. Mathews (Title) Dist. Engineer



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

Rotary   
Spudder   
Cable Tools   
Storage

Quadrangle Charleston  
Permit No. KAN-2374

**WELL RECORD**

Oil or Gas Well Gas  
(KIND)

Company Cities Service Oil Company  
Address Box 873, Charleston, W. Va. 25323  
Farm M. C. Chapman, et al Acres 55  
Location (waters) Coopers Creek  
Well No. "B" #1, GW-1644 Elev. 805'  
District EIK County Kanawha  
The surface of tract is owned in fee by Glenn L. Grimm  
2308 Penna. Ave. Address Charleston, W. Va.  
Mineral rights are owned by M. C. Chapman, et al  
(for further add. contact C. S. O. C.)  
Address \_\_\_\_\_

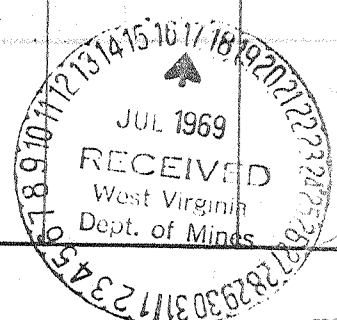
Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
13 3/8" 48#	230'	230'	none
10			Size of
9-5/8"	1850'	1850'	Depth set
6 3/16			
4 1/2" D.P.	5082'	5082'	Perf. top <u>5672</u>
3			Perf. bottom <u>5678</u>
2			Perf. top _____
Liners Used			Perf. bottom _____

Drilling commenced 4-10-69  
Drilling completed 4-17-69  
Date Shot not shot From \_\_\_\_\_ To \_\_\_\_\_  
With \_\_\_\_\_  
Open Flow \_\_\_\_\_ /10ths Water in \_\_\_\_\_ Inch  
\_\_\_\_\_ /10ths Merc. in \_\_\_\_\_ Inch  
Volume \_\_\_\_\_ Cu. Ft.  
Rock Pressure \_\_\_\_\_ lbs. \_\_\_\_\_ hrs.  
Oil \_\_\_\_\_ bbls. 1st 24 hrs.  
WELL ACIDIZED (DETAILS) not acidized  
WELL FRACTURED (DETAILS) see reverse side

Attach copy of cementing record.  
CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_  
Amount of cement used (bags) see reverse side  
Name of Service Co. \_\_\_\_\_  
COAL WAS ENCOUNTERED AT \_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES

RESULT AFTER TREATMENT (Initial open flow or bbls.) 15,600 MCFD (Newburg) 15,600,000  
ROCK PRESSURE AFTER TREATMENT 117 HOURS 2173.5#  
Fresh Water 360' Feet \_\_\_\_\_ Salt Water 965' Feet \_\_\_\_\_  
Producing Sand Newburg Sand Depth 5671-91' per electric logs

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
oil			0	20			
ed Rock and Shale			20	200			
ime and Shale			200	350			
hale			350	355	F. water	360'	
and			355	400			
and and Shale			400	885			
and			885	1490	S. water	965'	hole full
ig Lime			1490	1625			
ig Injun			1625	1665			
eir Sand			1665	1750			
hale			1750	4790			
ondaga Lime			4790	4900			
riskany Sand			4900	4945			
ime			4945	5205			
ime and Dolomite			5205	5671			
ewburg Sand			5671	5691			
otal depth (McCullough's meas.)				5724.5'			
BTD				5697.5'			
lectric Logs show							
ewburg			5671	5691			



Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
<u>Casing record</u>							
4-11-69							Set and cemented 13-3/8" 48# H-40 new casing at 230' with 200 sacks of regular cement with 2% ca. cl. Cement circulated to surface.
4-14-69							Set and cemented 9-5/8" 29.3# H-40 new casing at 1850' with 450 sacks Pozmix followed by 100 sacks regular cement with 2% ca. cl. Pumped 50-bbls. 6% gel ahead of cement. Cement circulated to the surface.
4-16-69							Encountered gas while picking casing point. Well made est. 20 MMCFD natural. Killed well with conditioned mud. Completed killing well 5-2-69.
5-6-69							Ran McCullough Gamma Ray and perforated Newburg Sand 5672' to 5678' with 4 shots/foot. 25 perf. PBTB by McCullough's measurement 5697.5'. Dropped 10 soap sticks and pushed to bottom with sinker bar.
5-7-69							Well did not kick off. Displaced water with Nitrogen. Blew well dry. No show of gas. Spotted 1,000 gallons regular 15% acid and 500 gallons mud acid. Pulled tubing and reperforated Newburg Sand 5672' to 5678' with 4 shots/foot-total of 25 holes. Displaced 500 gallons mud acid and 1,000 gallons regular acid - 15% into the formation. Started flowing back.
5-9-69							Newburg Sand by Gamma Ray 5671' to 5691'. Fractured Newburg Sand. Pumped in 500 gallons mud acid and followed with 19,000# 20-40 sand in 21,500 gallons of gelled water. Maximum treating pressure 4,400#. Average treating pressure 4,324#. Average injection rate 14 bbls/min. Immediate S.I. pressure 3,800#. Used 740 bbls. total fluid during treatment.
5-19-69							117 hour S.I. pressure 2173.5#. Pressure down 46# last 24 hours. Fluid in the hole. Blew well 4 hours. Gas Gauged 15,600 MCF/D. Strong odor of sulphur.

Date July 16, 19 69

APPROVED Cities Service Oil Company, Owner

By L. D. Todd, Region Manager  
(Title)