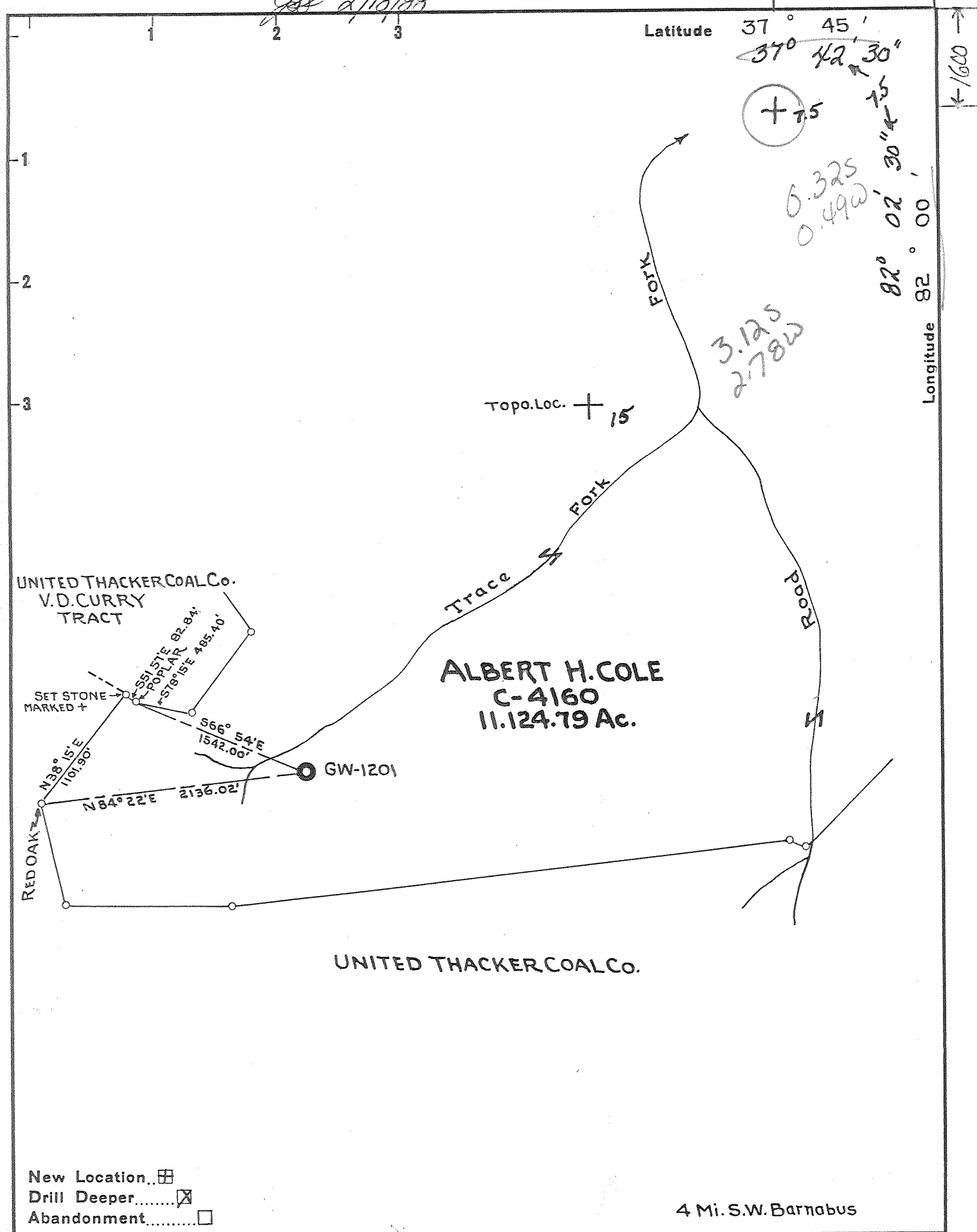


all 2/18/88

← 2600 →



New Location
 Drill Deeper
 Abandonment

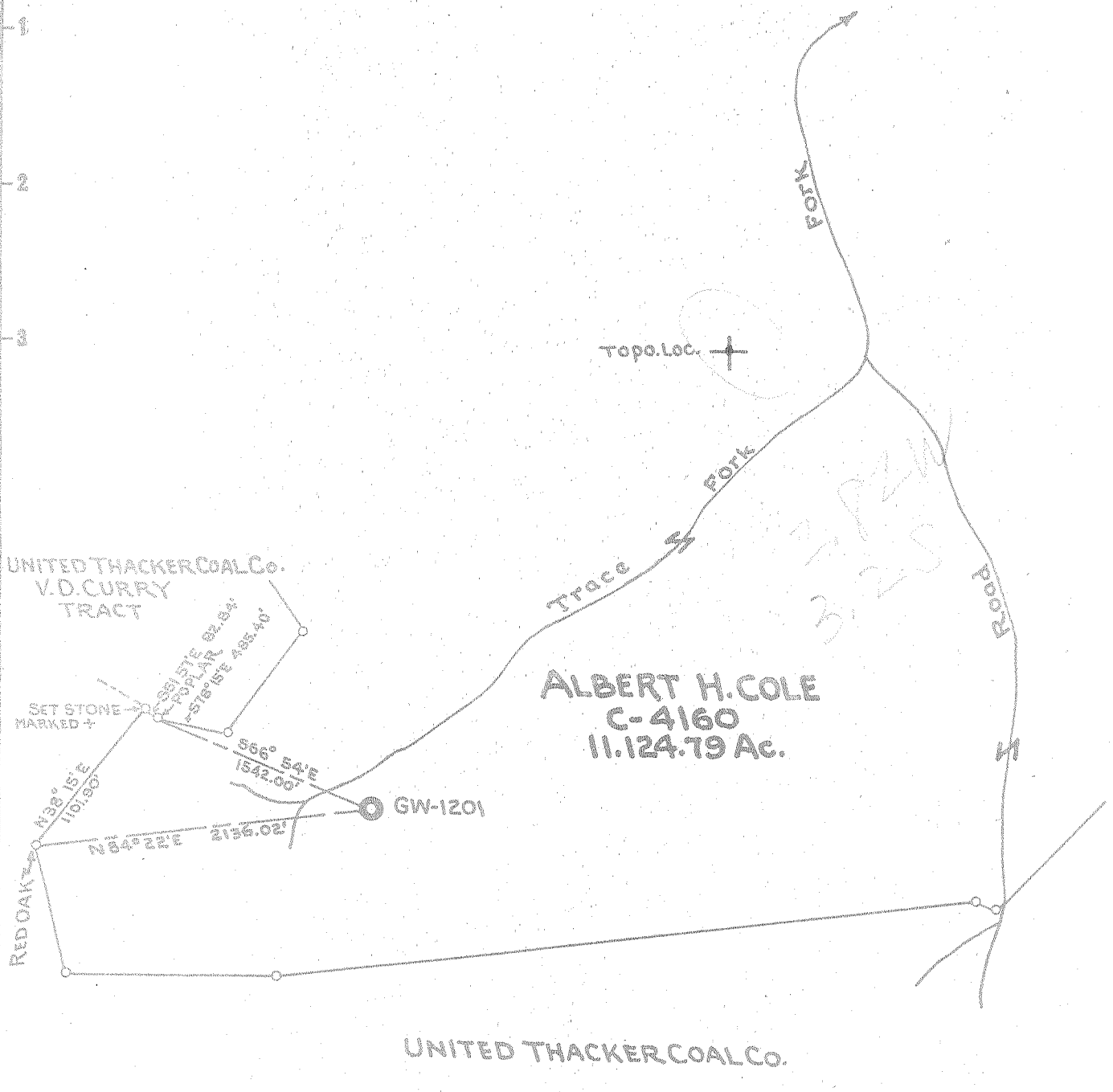
4 Mi. S.W. Barnabus

Cities Service Oil & Gas Co.
 Company COLUMBIAN CARBON COMPANY
 Address BOX 873 CHARLESTON W.VA.
 Farm ALBERT H. COLE
 "PART OF 13.292.15 Ac."
 Tract No. 3 Acres 11.124.79 Lease No. C-4160
 Well (Farm) No. 1 Serial No. GW-1201
 Elevation (Spirit Level) 1638.01 *Barnabus 7.5*
 Quadrangle MATEWAN 1 *S-220 W-286*
 County LOGAN District LOGAN 2
 Engineer K. D. Anderson
 Engineer's Registration No. 2074
 File No. _____ Drawing No. W-3-54
 Date APRIL 15 1954 Scale 1" = 1000'

169
 STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON
WELL LOCATION MAP
 FILE NO. LOG-402-DD
 + 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.
 FEB 29 1988
 47-045

Latitude 37° 45'

Longitude 82° 00'



UNITED THACKER COAL Co.

- New Location
- Drill Deeper
- Abandonment

4 Mi. S.W. Barnabus

Company	COLUMBIAN CARBON COMPANY
Address	BOX 873 CHARLESTON W.VA.
Farm	ALBERT H. COLE
	"PART OF 13,292.15 Ac."
Tract No.	3 Acres 11,124.79 Lease No. C-4160
Well (Farm) No.	1 Serial No. GW-1201
Elevation (Spirit Level)	1638.91
Quadrangle	MATEWAN 1 S-220 W-286
County	LOGAN District LOGAN
Engineer	R. D. Anderson
Engineer's Registration No.	2074
File No.	Drawing No. W-3-54
Date	APRIL 15 1954 Scale 1" = 1000'

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

WELL LOCATION MAP
 FILE NO. LOG-402

- + 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.

6-6 265



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION 2

Quadrangle Matewan 1 SW

WELL RECORD

Permit No. LOG-402

Oil or Gas Well gas
(KIND)

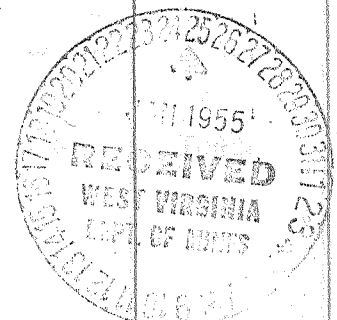
Company Columbian Carbon Company
Address Box 873, Charleston 23, W. Va.
Farm Albert H. Cole, et al Acres 13,292.15
Location (waters) Trace Fork
Well No. 1 - GV-1201 Elev. 1638.01' G
District Logan County Logan
The surface of tract is owned in fee by Albert H. Cole, et al
Address Peru, Ind.
Mineral rights are owned by Albert H. Cole, et al
(For further addresses contact C.C.C.)
Address _____
Drilling commenced 8-11-54
Drilling completed 1-8-55
Date Shot _____ From _____ To _____
With see reverse side for acid. record
Open Flow 14 /10ths Water in _____ Inch
14 /10ths Merc. in _____ Merc. 7" 23# Inch
Volume 5,892,000 Cu. Ft.
Rock Pressure 790 lbs. 32 hrs.
Oil _____ bbls., 1st 24 hrs.
Fresh water 85' 680' feet _____ feet
Salt water 1985' 2109' feet _____ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer <u>Bottom</u>
13 3/8" 48#	22'11"	22'11"	Hole packer
10 3/4" 40#	1025'1"	1025'1"	Size of <u>6-5/8"x2x3"</u>
8 1/2" 21#	2207'5"	pulled	
6 3/4" 21#	2295'10"	2295'10"	Depth set <u>3,000'</u>
5 3/16			
3			Perf. top _____
2 3/8" 14#	3079'5"	3079'5"	Perf. bottom _____
Liners Used w/	2" cage & packer		Perf. top _____
3 1/2"	74'1"	74'1"	Perf. bottom _____

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____
see reverse side

COAL WAS ENCOUNTERED AT 295 FEET 24 INCHES
455 FEET 36 INCHES 718 FEET 24 INCHES
FEET INCHES FEET INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Soil			0	10			
Sand			10	38			
Slate			38	55			
Sand			55	120	F. water	85'	1 b1r/hr.
Slate			120	205			
Sand			205	235			
Slate			235	245			
Sand			245	295			
Coal			295	297			
Sand			297	359			
Slate			359	385			
Sand			385	455			
Coal			455	458			
Sand			458	488			
Lime Rock			488	514			
Slate			514	572			
Sand			572	590			
Slate & Shells			590	634			
Sand			634	650			
Slate			650	718	F. water	680'	hole full
Coal			718	720			
Sand			720	792			
Slate			792	827			
Sandy Lime			827	905			
Slate			905	931			
Sand			931	936			
Slate			936	1010			
Sand			1010	1100			
Slate			1100	1138			
Sand			1138	1156			
Slate			1156	1220			
Sand			1220	1280			
Slate			1280	1290			
Sand			1290	1365			
Slate			1365	1415			
Sand			1415	1636			
Slate			1636	1662			
Sand			1662	1692			
Slate			1692	1719			



Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Lime			1719	1740			
Sand			1740	1880			
Slate			1880	1920	S. water	1985'	1/2 blr/hr.
Sand			1920	2015			
Slate			2015	2025			
Sand			2025	2221	S. water	2109'	hole full
Lime			2221	2245			
Slate			2245	2250			
Lime	2252'DLM-2252'SLM		2250	2278			
Sand			2278	2300			
Lime			2300	2406			
Red Rock			2406	2468			
Lime			2468	2565			
Sand			2565	2643			
Slate & Shells			2643	2760			
Sand			2760	2810			
Big Lime	2931'SLM-2930'DLM		2810	3069			
Big Injun Sand			3069	3074	Gas Pay: 3055'	47/10 M. 2"	1,067 MCF
TOTAL DEPTH - - - -				3074'			
<u>CASING RECORD</u>							
9-1-54	10-3/4" casing ran with Midget bottom hole packer - ran 18 bags Aquagel. Circulation and returns.						
10-22-54	8-5/8" casing ran with shoe - ran 26 bags Aquagel - good circulation and returns.						
12-29-54	6-5/8" casing ran with shoe - ran 21 bags Aquagel - good circulation and returns.						
<u>ACIDIZING RECORD</u>							
1-15-55	Acidized by Dowell with 2 barrels oil, 2500 gallons acid. Flushed with 14 bbls. water with Tergitol. Ran swab 5 times - well started to clean itself.						
	Before acidizing gas gauged 47/10 M. 2" 1,067,000 cubic feet - 18 hour pressure 775# - 32 hour 790#.						
	Final, open flow 14/10 M. 7" 23# 5,892,000 cubic feet.						

Date January 21, 1955

APPROVED _____ Columbian Carbon Company, Owner

By O. W. Van Petten, Vice Pres.
(Title)

Issue 2/23/88
Expires 2/23/90 0454020

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS
WELL WORK PERMIT APPLICATION

- 1) Well Operator: 169 Cities Service Oil & Gas Corporation 9800, 5, #5232
- 2) Operator's Well Number: Cole B #1 (GW-1201) 3) Elevation: 1638.01 GL
- 4) Well type: (a) Oil / or Gas /
(b) If Gas: Production / Underground Storage /
Deep / Shallow /
- 5) Proposed Target Formation(s): Devonian Shale 441
- 6) Proposed Total Depth: 5500 feet
- 7) Approximate fresh water strata depths: 85' & 680'
- 8) Approximate salt water depths: 1985' & 2109'
- 9) Approximate coal seam depths: 295', 455' & 718'
- 10) Does land contain coal seams tributary to active mine? Yes / No /
- 11) Proposed Well Work: Deepen existing well through Devonian Shale.

RECEIVED
FEB 16 1988

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

12) * New tubulars
** Tubing to be pulled.

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	13-3/8"		48#	22'	22'	
Fresh Water	10-3/4"		40#	1018'	1018'	18sx Aquagel
Coal	8-5/8"		24#	2252'		26sx Aquagel
Intermediate	6-5/8"		24#	2931'	2931'	21sx Aquagel
Production *	4-1/2"	K-55	11.6#	5500'	5500'	245 cu. ft.
Tubing *	2-3/8"	J-55	4.7#		5450'	
Tubing **	2-3/8"		4#		3079'	

PACKERS : Kind _____
Sizes _____
Depths set _____

For Division of Oil and Gas Use Only

22100
5 | Fee(s) paid: | 2 | Well Work Permit | 2 | Reclamation Fund | 2 | WPCP
Plat | 2 | WW-9 | 2 | WW-2B | 1 | Bond 50 Blanket | 2 | Agent
(Type)

RECEIVED
FEB 16 1988

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

- 1) Date: February 10, 1988
- 2) Operator's well number
Cole B-1, GW-1201
- 3) API Well No: 47 - 045 - 00402 -DD
State - County - Permit

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

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served:
 - (a) Name Cole & Crane RET
Address 215 Frederick Bldg.
Huntington, WV 25701
 - (b) Name Attn: Bill Stark
Address _____
 - (c) Name _____
Address _____
- 5) (a) Coal Operator:
 - Name W. P. Coal Co., Attn: John Clark, Chief
Address P. O. Box 570 Engr
Omars, WV 25638
 - (b) Coal Owner(s) with Declaration
Name _____
Address _____
 - (c) Coal Lessee with Declaration
Name _____
Address _____
- 6) Inspector Arthur St. Clair
Address P. O. Box 468
Brenton, WV 24818
Telephone (304)-732-6227

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

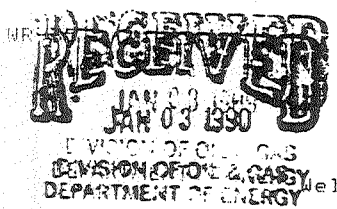
_____ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR
 X Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)
 I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through 3 on the above named parties, by:
 X Personal Service (Affidavit attached)
 Certified Mail (Postmarked postal receipt attached)
 Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.
 I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.
 I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Cities Service Oil and Gas Corporation
 By: Paul D. Phillips *[Signature]*
 Its: Operations Manager
 Address P. O. Box 873
Charleston, WV 25323
 Telephone (304) 344-8383

Subscribed and sworn before me this 4th day of February, 1988

Charles D. Stensbury *[Signature]* Commissioner Notary Public
 My commission expires April 9, 1989



23-Feb-88
API # 47- 45-00402 D

State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas

Well Operator's Report of Well Work

Farm name: COLE, A. H. Operator Well No.: 1-1201

LOCATION: Elevation: 1638.01 Quadrangle: BARNABUS

District: TRIADELPHIA County: LOGAN
Latitude: 1600 Feet South of 37 Deg. 42Min. 30 Sec.
Longitude 2600 Feet West of 82 Deg. 2 Min. 30 Sec.

Company: CITIES SERVICE OIL & GAS CORP.

P. O. BOX 873
CHARLESTON, WV

Agent: PAUL D. PHILLIPS

Inspector: ARTHUR ST. CLAIR
Permit Issued: 02/23/88
Well work Commenced: 5-19-88
Well work Completed: 6-19-88
Verbal Plugging granted on:
Permission granted on:
Rotary Cable Rig
Total Depth (feet) 5550
Fresh water depths (ft) NA

Size	Casings & Tubings	Used in Drillings	Left in Well	Cement Fill Up Cu. Ft.
13-3/8"		22	22	
10-3/4"		1018	1018	18 sxs Aquagel
8-5/8"		2252	0	26 sxs Aquagel
6-5/8"		2931	2931	21 sxs Aquagel
4-1/2"		5531	5531	TOC @ 2680'

Salt water depths (ft) NA

Is coal seams mined in area (Y/N)? N
Coal depths (ft):

OPEN FLOW DATA:

Producing formation: DEVONIAN SHALE Pay zone depth (ft) 3828-5445'

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
 Final open flow 70 MCF/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests _____ Hours
 Static rock Pressure 520 psis (surface pressure) after 48 Hours

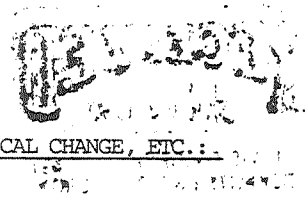
Second producing formation _____ Pay zone depth (ft) _____

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 _____ psis (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Delbert G. Oliver, Appalachian Project Manager
For: CITIES SERVICE OIL & GAS CORP. (OXY USA INC.)
By: *Delbert G. Oliver*
Date: 27 DEC 89

JAN 05 1990



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

FORMATION

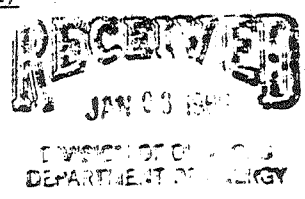
MINESTREET-JAVA SHALE PERFORATED 5282-5445' (67 HOLES). FRAC'D WITH 50,000# OF SAND,
109 BLW, 595 MCF N2.

LOWER HURON SHALE PERFORATED 5003-4680' (66 HOLES). FRAC'D WITH 50,000# OF SAND,
98 BLW, 542 MCF N2.

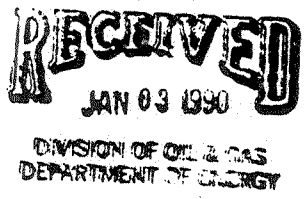
UPPER DEVONIAN SHALE PERFORATED 4086-3828 (69 HOLES). FRAC'D WITH 47,800# OF SAND,
96 BLW, 330 MCF N2.

WELL LOG:

<u>FORMATION</u>	<u>TOP (FT)</u>	<u>BOTTOM (FT)</u>
BIG LIME	2786	3076
SHALE	3076	3699
BEREA	3699	3714
DEVONIAN SHALE	3714	5530
ONONDAGA LIME	5530	5550



new TO 5550
old TD 3074
new Htg. 1476



UD 800 3714
H 250 4514
J 100 4764
A 150 4864
Rh 100 5014
5114 500?

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