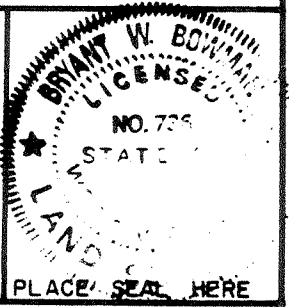


NOTE: DISTANCES AND BEARINGS TO WELL ARE FROM 1959 PLAT, ENGINEER ROY BOOTEN NO. 3204

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 500 FT.
 MINIMUM DEGREE OF ACCURACY 1" IN 200
 PROVEN SOURCE OF ELEVATION TOP OF POINT, 1095 S.E. OF LOCATION

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.
 (SIGNED) Bryant W. Bowman
 R.P.E. _____ L.L.S. 736



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6
 (8-78)

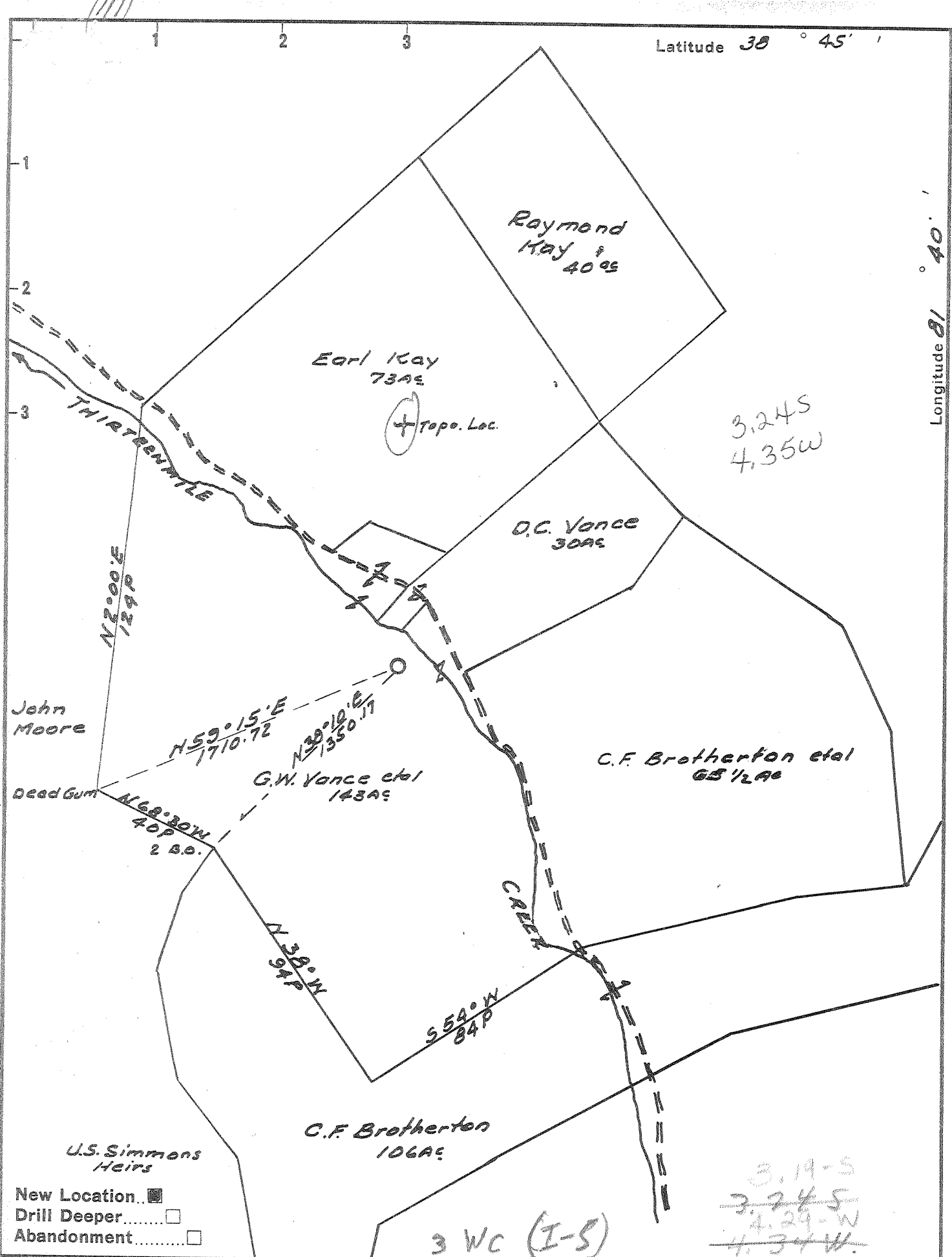


Department of Mines
 Oil & Gas Division

DATE MAY 6, 1982
 OPERATOR'S WELL NO. G.W. VANCE NO. 1
 API WELL NO. _____
47 - 035 - 1006 - Frac.
 STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS", PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___)
 LOCATION: ELEVATION 851.85' WATER SHED ___ THIRTEENMILE CREEK
 DISTRICT RIPLEY COUNTY JACKSON
 QUADRANGLE KENNA (7 1/2') DW
 SURFACE OWNER RUSSELL & JEANNIE BROTHERTON ACREAGE 142.8
 OIL & GAS ROYALTY OWNER BROTHERTON ET AL LEASE ACREAGE 143
 LEASE NO. 3-1101
 PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
 PLUG AND ABANDON ___ CLEAN OUT AND REPLUG _____
 TARGET FORMATION Devonian + Oriskany ESTIMATED DEPTH 5013 (actual)
 WELL OPERATOR CABOT OIL AND GAS CORP. DESIGNATED AGENT JIM CRAMBLETT
 ADDRESS P.O. BOX 628, CHARLESTON, W. Va. ADDRESS P.O. BOX 628, CHARLESTON, W. Va.

JUN 14 1982



- New Location
- Drill Deeper
- Abandonment

Company Godfrey L. Cabot Inc
 Address Box 1473 Charleston W.Va.
 Farm G.W. Vance et al (Unit Nr. 86)
 Tract _____ Acres 143 Lease No. 3-1101
 Well (Farm) No. 1 Serial No. 1507
 Elevation (Spirit Level) 851.85
 Quadrangle Kenna - NW
 County Jackson District Ripley
 Engineer Ray Burton
 Engineer's Registration No. 3204
 File No. _____ Drawing No. _____
 Date 12-23-59 Scale 1" = 660'

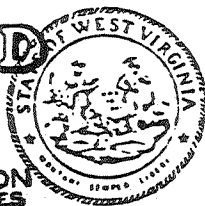
STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. JAC-1006

+ 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.

No samples 66 ~~77~~ -192- Deep Well

RECEIVED



OCT 6 - 1982

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

IV-35
(Rev 8-81)

Date October 5, 1982

Operator's

Well No. 1

Farm G. W. Vance

API No. 47 - 035 - 1006-FRAC

State of West Virginia

Department of Mines

Oil and Gas Division

WELL OPERATOR'S REPORT

OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___ / Gas XX / Liquid Injection ___ / Waste Disposal ___ /
(If "Gas," Production ___ / Underground Storage ___ / Deep ___ / Shallow XX)

LOCATION: Elevation: 851.85' Watershed Thirteen Mile Creek

District: Ripley County Jackson Quadrangle Kenna 7-1/2

COMPANY Cabot Oil and Gas Corporation

ADDRESS Box 628, Charleston, WV 25322

DESIGNATED AGENT H. Baird Whitehead

ADDRESS Box 628, Charleston, WV 25322

SURFACE OWNER Russell & Jeanne Brotherton

ADDRESS Rt. 1, Box 900, Given, WV 25245

MINERAL RIGHTS OWNER See Attached List

ADDRESS _____

OIL AND GAS INSPECTOR FOR THIS WORK Richard

Morris ADDRESS Box 372, Grantsville, WV

26147

PERMIT ISSUED June 9, 1982

DRILLING COMMENCED September 11, 1982

DRILLING COMPLETED October 2, 1982

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

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cord.			Model D Packer @ 4938'
13 3/8	194	194	
10 3/4	1259	1259	
8 5/8	2215	2215	
7	4962	4962	
Shale 1 1/2	4222.36	4222.36	
Oriskany 2-3/8	5006.16	5006.16	
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale and Oriskany Depth 5013 feet

Depth of completed well 5013 feet Rotary ___ / Cable Tools XX

Water strata depth: Fresh 57 feet; Salt 1328, 1695 feet

Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 4172-4212 feet

Gas: Initial open flow TSTM Mcf/d Oil: Initial open flow --- Bbl/d

Final open flow .287 Mcf/d Final open flow --- Bbl/d

Time of open flow between initial and final tests --- hours

Static rock pressure 635 psig (surface measurement) after 72 hours shut in

(If applicable due to multiple completion--)

Second producing formation Oriskany Pay zone depth 4993-5013 feet

Gas: Initial open flow TSTM Mcf/d Oil: Initial open flow --- Bbl/d

Final open flow TSTM Mcf/d Oil: Final open flow --- Bbl/d

Time of open flow between initial and final tests --- hours

Static rock pressure --- psig (surface measurement) after 72 hours shut in

OCT 18 1982

(Continue on reverse side)

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

Ran Model D Packer, set @ 4938'. Perforated @ 4360' (1 ft - 4 holes). Ran 65 sacks 50/50 Poz, 10% salt, 3/4 of 1% CRF-2. Displaced 5 bbls cement thru perfs. Press'd to 1500 PSI. Perforated from 4172'-4178' (7 holes), 4206'-4212' (7 holes). Pumped 500 gals 15% HCL. B/D Shale w/N₂ & HCL @ 2400 PSI. Pumped into formation for 2 min. Bottom hole tubing pressure 1800 PSI. Treated w/60,000# 20/40. Max concentration 8#/gal thru blender, 2#/gal down hole. AIR 4 BPM thru blender, 16 BPM down hole. ATP 2396#. Max 2800#. Total fluid 292 bbls (sand laden - 257 bbls). 504,000 SCF N₂ @ 8040 - 9000 SCF/min. ISIP 1700#; 15 min - 1300#. Had total of 159 joints 2-3/8" tubing (4971.79') plus 28.37' pup joints and 6' seal assembly. Total of 5006.16'. Ran 125 joints 1-1/2" tubing w/seating nipple and perforated joint (4222.36') set @ 4216.36'.

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	17	
Slate & Shell			17	62	Water 57 l blr./hr.
Red Rock			62	94	
Sand			94	110	
Red Rock			110	145	
Slate			145	250	
Red Rock			250	275	
Lime			275	312	
Red Rock			312	320	
Slate & Shell			320	328	
Sand			328	345	
Red Rock			345	376	
Slate & Shell			376	418	
Red Rock			418	504	
Slate			504	530	
Red Rock			530	753	
Slate & Shells			753	789	
Sand			789	809	
Red Rock			809	835	
Sand			835	860	
Slate & Shell			860	870	
Red Rock			870	895	
Slate & Shell			895	910	
Red Rock			910	950	
Slate & Shell			950	980	
Sand			980	1014	
Slate			1014	1096	
Sand			1096	1155	
Slate			1155	1185	
Sand			1185	1192	
Slate & Shell			1192	1233	
Sand			1233	1257	
Shale			1257	1265	
Sand			1265	1295	
Slate			1295	1303	
Sand			1303	1385	Water 1328-38

(Attach separate sheets as necessary)

CABOT OIL AND GAS CORPORATION

Well Operator

By: *A. Bond*

District Production Superintendent

Date: October 5, 1982

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."

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

G. W. VANCE #1 (continued)
47-035-1006-FRAC

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Slate & Sand Shell			1385	1445	
Shale			1445	1674	
Salt Sand			1674	1861	Water 1695 Hole full.
Big Lime			1861	2067	
Big Injun			2067	2196	Gas 2071 Show.
Lime			2196	2234	Gas 2100-07 Show.
Slate & Shell			2234	2498	
Brown Shale			2498	2526	Gas 2540 Would not test.
Lime			2526	2597	Gas 2593 Would not test.
Slate & Shells			2597	2685	
Lime			2685	2706	
Slate & Shell			2706	3698	
Lime			3698	3724	
Slate & Shell			3724	3755	
Lime			3755	4031	
Brown Shale			4031	4284	Gas 4164 94 M decreased to 41 Mcf
Slate			4284	4415	
Brown Shale			4415	4450	
Slate			4450	4693	
Brown Shale			4693	4910	
Corniferous			4910	4993	
Oriskany			4993		Gas 5002-05; 377 M decreased to 179 M. Total gas increased to 395 and decreased to 353 Mcf
Total Depth				<u>5013</u>	

(Attach separate sheets as necessary)

CABOT OIL AND GAS CORPORATION

Well Operator

By: A. B. [Signature]

District Production Superintendent

Date: October 5, 1982

OCT 18 1982

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."

RECEIVED

OIL AND GAS ROYALTY OWNERS

OCT 6 - 1982

G. W. VANCE #1

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

John D. Dillon
Executor of Estate of Lida Dillon
1505 West Virginia Avenue
Dunbar, WV 25064

Marguerite Casto Young
322 22nd Street
Dunbar, WV 25064

Mary Kay
c/o James E. Kay, Sr.
1210 Lightner Avenue
Dunbar, WV 25064

Russell and Jeanne Brotherton
Route 1, Box 900
Given, WV 25245

John J. Dillon
1505 West Virginia Avenue
Dunbar, WV 25064

Ida Dillon
538 17th Street
Dunbar, WV 25064

Acel E. Nuckles
306 3rd Avenue
Ripley, WV 25271

Owen E. Dolin, Agent
5225 Sun Valley Drive
Charleston, WV 25312



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION 5

Quadrangle KENNA

Permit No. JAC-1006

WELL RECORD

Oil or Gas Well GAS
(KIND)

Company Godfrey L. Cabot, Inc.
Address Charleston, W. Va.
Farm G. W. Vance et al * Acres 143

Location (waters) _____
Well No. 1, Serial 1507 Elev. 852
District Ripley County Jackson

The surface of tract is owned in fee by _____
Address _____

Mineral rights are owned by G. W. Vance
Address Given, W. Va.

Drilling commenced January 14, 1960

Drilling completed May 18, 1960

Date Shot _____ From _____ To _____

With _____

Open Flow /10ths Water in 353 M before fracture Inch

_____ /10ths Merc. in _____ Inch

Volume 353 Mcf before fracture Cu. Ft.

Rock Pressure 1680 lbs. 24 hrs.

Oil _____ bbls., 1st 24 hrs.

WELL ACIDIZED _____

WELL FRACTURED May 20, 1960 with 15,000 gallons gelled water and 20,000# sand.

RESULT AFTER TREATMENT 1,420 Mcf

ROCK PRESSURE AFTER TREATMENT 1680# in 24 hours.

Fresh Water 57', 1328, 1695 Feet Salt Water 1328, 1695 Feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			Bottom Hole
18	194	194	Size of
10	1259	1259	8"
8 1/4	2215	2215	Depth set
6 5/8	4962	4962	
5 3/16			
3			Perf. top
2 (siphon)	5011	5011	Perf. bottom
Liners Used			Perf. top
			Perf. bottom

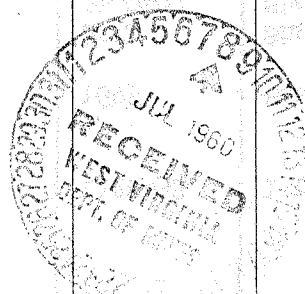
CASING CEMENTED SIZE 7" No. Ft. unknown Date _____

COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Surface			0	17			
Slate & Shell			17	62	Water	57	1 blr./hr.
Red Rock			62	94			
Sand			94	110			
Red Rock			110	145			
Slate			145	250			
Red Rock			250	275			
Lime			275	312			
Red Rock			312	320			
Slate & Shell			320	328			
Sand			328	345			
Red Rock			345	376			
Slate & Shell			376	418			
Red Rock			418	504			
Slate			504	530			
Red Rock			530	753			
Slate & Shells			753	789			
Sand			789	809			
Red Rock			809	835			
Sand			835	860			
Slate & Shell			860	870			
Red Rock			870	895			
Slate & Shell			895	910			
Red Rock			910	950			
Slate & Shell			950	980			
Sand			980	1014			
Slate			1014	1096			
Sand			1096	1155			
Slate			1155	1185			
Sand			1185	1192			



(over)

* W.V. Operating Unit #06

Formation	Color	Hard or Soft	Top 5	Bottom	Oil, Gas or Water	Depth Found	Remarks
Slate & Shell			1192	1233			
Sand			1233	1257			
Shale			1257	1265			
Sand			1265	1295			
Slate			1295	1303			
Sand			1303	1385	Water	1328-38	1 blr./hr.
Slate & Sand Shell			1385	1445			
Shale			1445	1674			
SALT SAND			1674	1861	Water	1695	Hole full.
BIG LIME			1861	2067			
BIG INJUN			2067	2196	Gas	2071	Show
					Gas	2100-07	Show
Line			2196	2234			
Slate & Shell			2234	2498			
Brown Shale			2498	2526	Gas	2540	Would not test.
Line			2526	2597	Gas	2593	Would not test.
Slate & Shell			2597	2685			
Line			2685	2706			
Slate & Shell			2706	3698			
Line			3698	3724			
Slate & Shell			3724	3755			
Line			3755	4031			
Brown Shale			4031	4284	Gas	4164	94 Mcf. decrease to 41 Mcf
Slate	White		4284	4415			
Brown Shale			4415	4450			
Slate	White		4450	4693			
Brown Shale			4693	4910			
CORNIFEROUS	-463		4910	4993	Gas	5002-05	377 M decreased to 179 Mcf.
ORISKANY			4993		Gas	5011	Total 395 Mcf decreased to 353 Mcf.
TOTAL DEPTH				5013			

475

4910 4993
 852 852
 4058 4141

Date 7-6-60, 19__

APPROVED GODFREY L. CABOT, INC., Owner

By [Signature]
 Gen. Supt. (Title)





Well No. #1
Farm G. W. Vance
API #47 - 035 - 1006-FRAC.
Date May 25, 1982

STATE OF WEST VIRGINIA
OFFICE OF OIL AND GAS - DEPARTMENT OF MINES

OIL AND GAS WELL PERMIT APPLICATION

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

LOCATION: Elevation: 851.85' Watershed: Thirteen Mile Creek
District: Ripley County: Jackson Quadrangle: Kenna 7-1/2

WELL OPERATOR Cabot Oil & Gas Corporation
Address P. O. Box 628
Charleston, WV 25322

DESIGNATED AGENT H. Baird Whitehead
Address P. O. Box 628
Charleston, WV 25322

OIL AND GAS
ROYALTY OWNER See Attached List
Address _____

COAL OPERATOR Not Operated
Address _____

Acreage 143

COAL OWNER(S) WITH DECLARATION ON RECORD:
NAME Russell & Jeanne Brotherton
Address Rt. 1, Box 900
Given, WV 25245

SURFACE OWNER Russell & Jeanne Brotherton
Address Rt. 1, Box 900
Given, WV 25245
Acreage 142.8

NAME _____
Address _____

FIELD SALE (IF MADE) TO:
NAME _____
Address _____

COAL LESSEE WITH DECLARATION ON RECORD:
NAME _____
Address _____

OIL AND GAS INSPECTOR TO BE NOTIFIED:
NAME Richard Morris
Address P. O. Box 372
Grantsville, WV 26147
Telephone 354-7259

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed ___ / lease XX / other contract ___ / dated May 20, 1958, to the undersigned well operator from G. W. Vance, et ux.

(If said deed, lease, or other contract has been recorded:)

Recorded on June 21, 1958, in the office of the Clerk of County Commission of Jackson County, West Virginia, in 89 Book at page 485. A permit is requested as follows:

PROPOSED WORK: Drill ___ / Drill Deeper ___ / Redrill ___ / Fracture or stimulate XX / Plug off old formation ___ / Perforate new formation XX / 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 receipt of this Application by the Dept. 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 lessees on or before the day of the mailing or delivery of this 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
1613 WASHINGTON ST., E.
CHARLESTON, WV 25311
Telephone - 304/348-3092

CABOT OIL AND GAS CORPORATION
Well Operator

By: H. Baird Whitehead
Its: District Production Superintendent

(Revised 3-81)

PROPOSED WORK ORDER

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

DRILLING CONTRACTOR (IF KNOWN) Unknown

Address _____

GEOLOGICAL TARGET FORMATION Devonian Shale & Oriskany

Estimated depth of completed well 5013 Actual feet. Rotary ___ / Cable tools XX /
Approximate water strata depths: Fresh, 57 feet; salt, 1328, 1695 feet.
Approximate coal seam depths: None
Is coal being mined in this area: Yes ___ / No XX /

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL UP OR SACKS Cubic ft.	PACKERS
	Size	Grade	Weight per ft	New	Used	For Drill-ling		
Conductor								Kinds
Fresh water	13-3/8	H-40	48		XX		194	(Present)
Coal	10-3/4	J-55	40.5		XX		1259	(Present) Sizes
Intermed.	8-5/8	J-55	24		XX		2215	(Present)
Production	7	J-55	23		XX		4962	(Present) Depths set
Tubing	1.9	J-55	2.75	XX			4200	Will squeeze
Liners								w/100 sks. 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 filed in connection therewith.

THIS PERMIT MUST BE POSTED AT THE WELL SITE.

ALL PROVISIONS BEING IN ACCORDANCE WITH CHAPTER 22,

ARTICLE 4 OF THE W. VA. CODE, THE LOCATION IS HEREBY

APPROVED FOR fracturing .THIS PERMIT SHALL EXPIRE

IF OPERATIONS HAVE NOT COMMENCED BY 2-9-83

BY [Signature]

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 regularions.

Date: _____, 19____.

By: _____

Its: _____

OIL AND GAS ROYALTY OWNERS

G. W. VANCE #1

John D. Dillon
Executor of Estate of Lida Dillon
1505 West Virginia Avenue
Dunbar, WV 25064

Marguerite Casto Young
322 22nd Street
Dunbar, WV 25064

Mary Kay
c/o James E. Kay, Sr.
1210 Lightner Avenue
Dunbar, WV 25064

Russell and Jeanne Brotherton
Route 1, Box 900
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Dunbar, WV 25064

Ida Dillon
538 17th Street
Dunbar, WV 25064

Acel E. Nuckles
306 3rd Avenue
Ripley, WV 25271

Owen E. Dolin, Agent
5225 Sun Valley Drive
Charleston, WV 25312