

FILE #: \_\_\_\_\_  
DRAWING #: Hardy 4 ww6  
SCALE: 1" = 1000'  
MINIMUM DEGREE OF ACCURACY: 1 : 12,729  
PROVEN SOURCE OF ELEVATION: Global Positioning System (GPS)

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 ENVIRONMENTAL PROTECTION.

Signed: Don K. Cunningham  
R.P.E.: \_\_\_\_\_ L.L.S.: 701



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25304



DATE: March 3, 2011  
OPERATOR'S WELL #: Hardy 4  
API WELL #: 47 079 00454P  
STATE COUNTY PERMIT

Well Type:  Oil  Waste Disposal  Production  Deep  
 Gas  Liquid Injection  Storage  Shallow

WATERSHED: Unnamed Tributary of Heizer Creek ELEVATION: 827.16'

COUNTY/DISTRICT: Putnam / Pocatalico QUADRANGLE: Bancroft

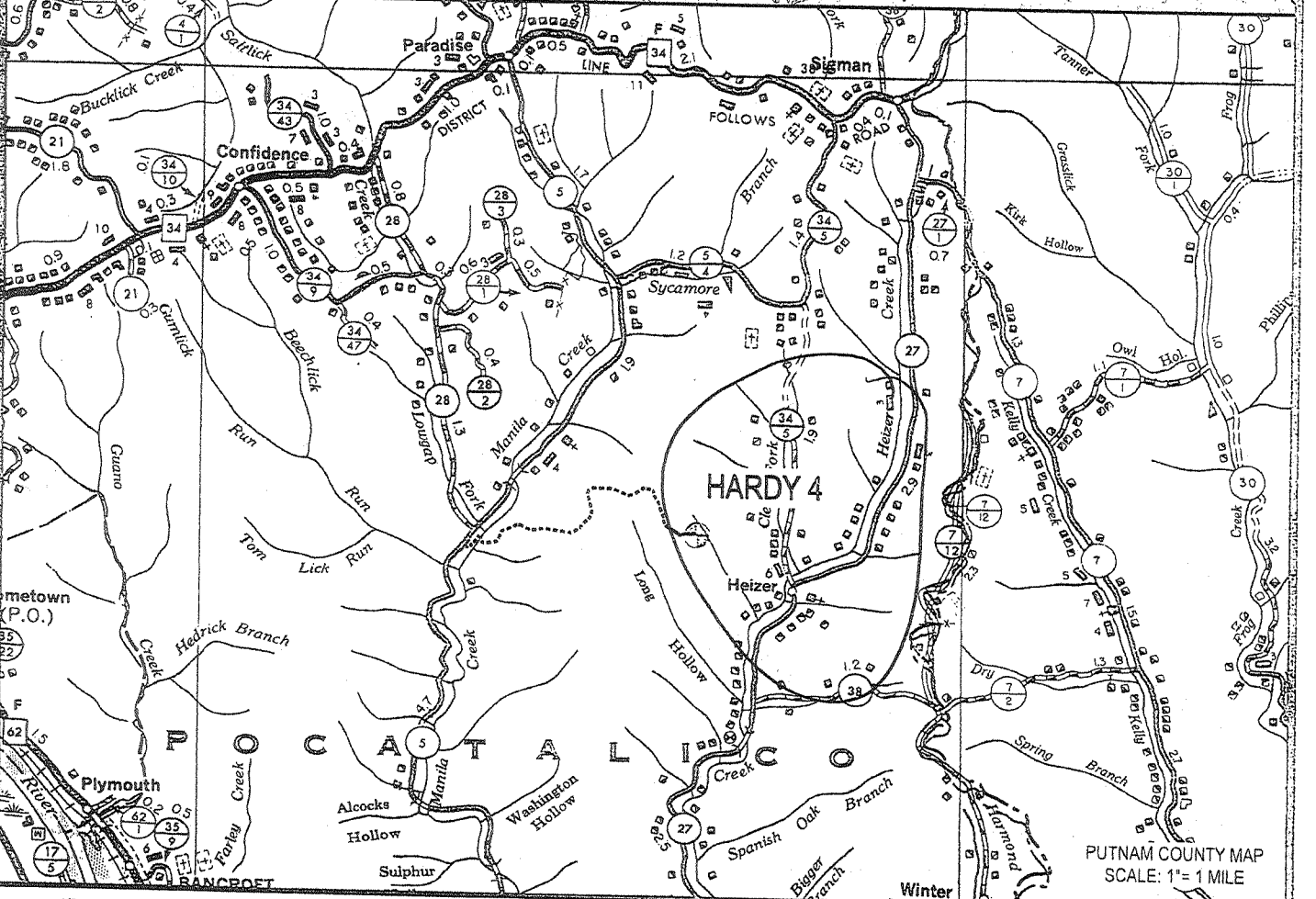
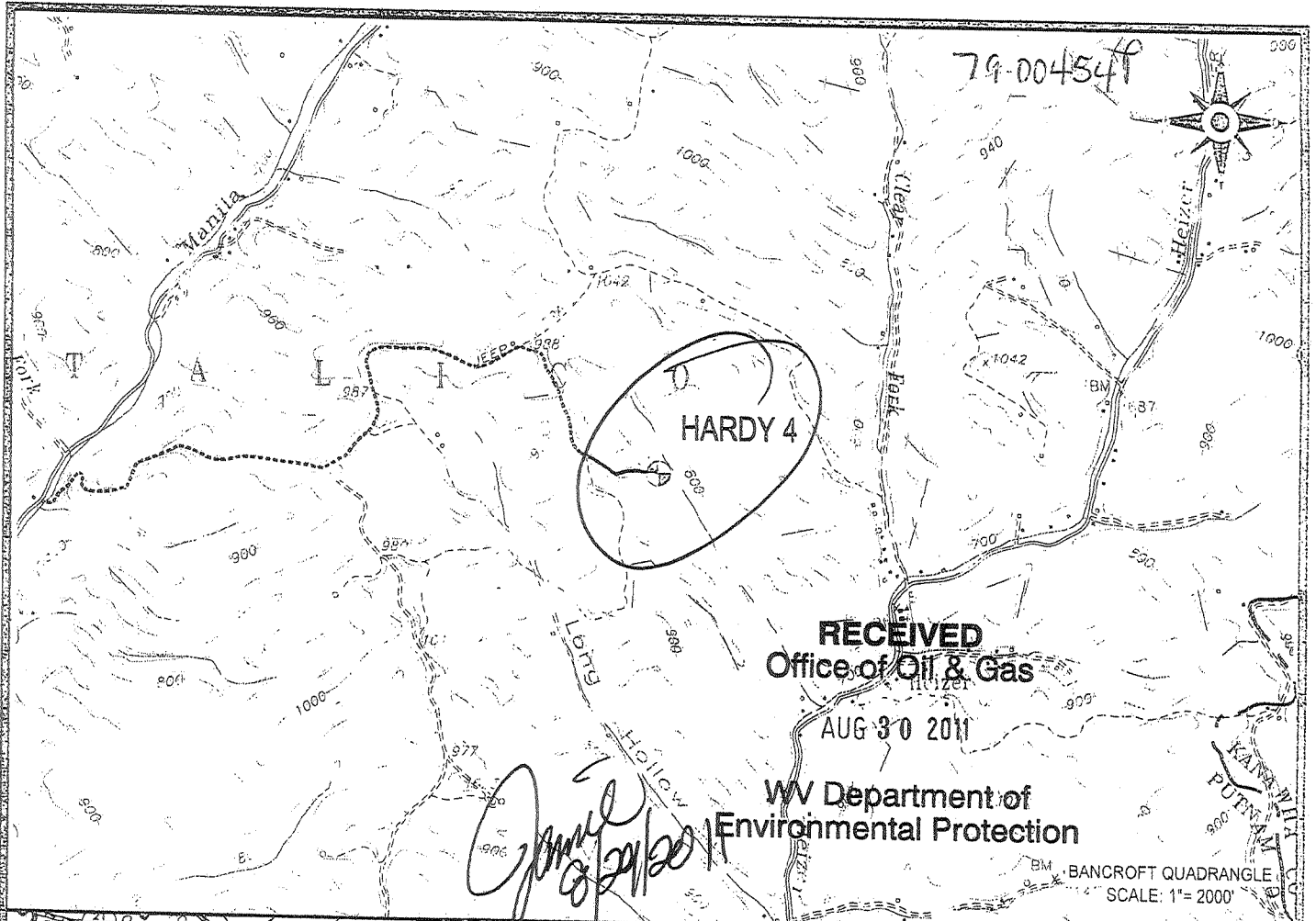
SURFACE OWNER: Virgil T. Pomeroy ACREAGE: 326.56

OIL & GAS ROYALTY OWNER: Hardy Oil & Gas ACREAGE: 730.25

LEASE #: 47-0057 DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG & ABANDON   
CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY): \_\_\_\_\_


TARGET FORMATION: \_\_\_\_\_ ESTIMATED DEPTH: \_\_\_\_\_

WELL OPERATOR Cabot Oil & Gas Corp. DESIGNATED AGENT Brian Hall  
Address Five Penn Center West, Suite 401 Address P.O. Box 260  
City Pittsburgh State PA Zip Code 15276 City Danville State WV Zip Code 25053



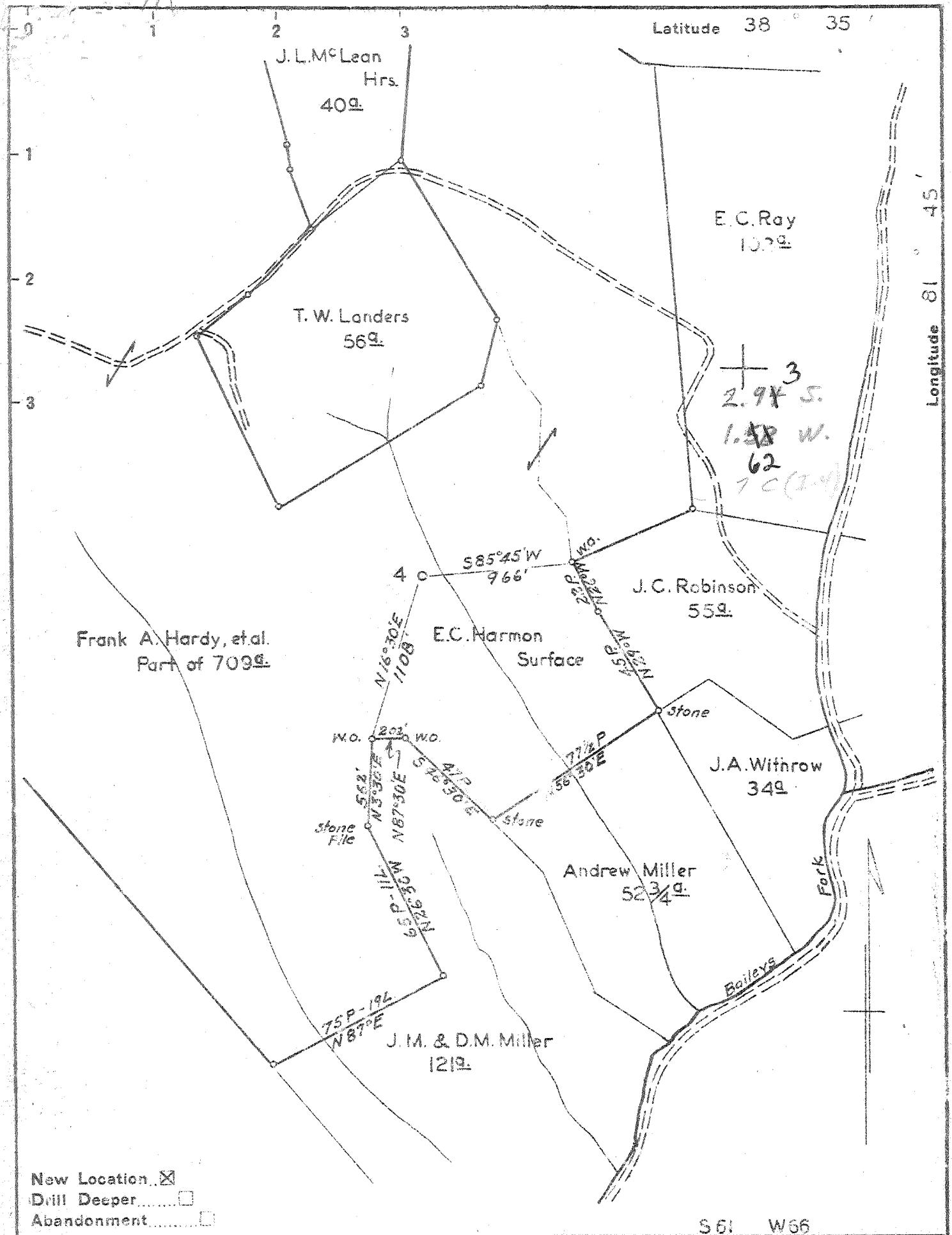
 Cabot Oil & Gas Corporation

**HARDY 4**  
LOCATION MAP

 **CUNNINGHAM**  
LAND SURVEYING & MAPPING SERVICES, LLC  
• 5213 STEPHEN WAY •  
• CROSS LANES, WEST VIRGINIA 25313 •  
• VOICE (304) 561-4129 • FAX (304) 776-0703 •  
• E-MAIL ADDRESS • DKCUNNINGHAM@SUDDENLINK.NET •

LOCATED ON THE WATERS OF AN UNNAMED TRIBUTARY  
OF HEIZER CREEK  
POCATALICO DISTRICT, PUTNAM COUNTY, W.VA  
BANCROFT QUADRANGLE

PROJECT NO. CABOT	DWG. NO. HARDY 4 LOC.DWG
DATE: 03-03-11	SCALE: AS NOTED
CHK'D BY: D.K.C.	FILE: C:\PROJECT FOLDER\CABOT



New Location    
 Drill Deeper    
 Abandonment

Company South Penn Oil Company  
 Address Parkersburg, West Virginia  
 Farm Frank A. Hardy et al  
 Tract Acres 3360.5 Lease No. AB-WF-150  
 Well (Farm) No. 4 Serial No. \_\_\_\_\_  
 Elevation (Spirit Level) 322.97  
 Quadrangle Winfield - SE  
 County Putnam District Poca  
 Engineer Wm. S. Hayes  
 Engineer's Registration No. 1429  
 File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 Date Nov. 9, 1950 Scale 1" = 800'

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

**WELL LOCATION MAP**  
 FILE NO. PUT-454-D

+ 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.

312 Deep Well 312

WEST VIRGINIA DEPARTMENT OF MINES  
OIL & GAS DIVISION  
W E L L R E C O R D

Permit No. PUT-454  
Winfield Quad.

Gas

Company	South Penn Oil Co.	CASING & TUBING	
Address	Union Trust Bldg., Parkersburg, W. Va.		
Farm	Frank A. Hardy Acres 3,360.5	16	20
Well No.	4 Elev. 822.97	13 3/8	367
District	Pocatalico County - Putnam	10 3/4	995
Surface	Mr. F. C. Harman, 1516 Wash. St. E. Charleston, W. Va.	8 5/8	319
Mineral	Allen C. Kinnaman, Agt. Box 831 Charleston, W. Va.	8 5/8	1638
Commenced	January 4, 1951	7	128
Completed	April 9, 1951	7	926
Date Shot	4/10/51 from 4906 to 4918	2	4937
Volume	5,179 Mcf. 1 hr. after shot		
R.P.	1170# 38 Hrs.		

Coal at 300'

Clay & Gravel	0	5	Berea Grit	2448	2469
Sand	5	38	Slate	2469	2479
Slate & Shells	38	60	Lime	2479	2490
Red Rock	60	68	Slate & Shells	2490	2600
Sand	68	75	Lime	2600	2621
Slate & Lime Shells	75	164	Lime shells	2621	2651
Sand	164	174	Slate	2651	2673
Slate & Shells	174	215	Slate & Shells	2673	3400
Lime shells	215	300	Lime	3400	3468
Coal	300	307	Slate & Shells	3468	3600
Slate & Shells	307	340	Lime	3600	3629
Red Rock	340	368	Slate & Shells	3629	3679
Slate & Shells	368	390	Brown Shale	3679	3805
Red Rock	390	400	Brown Shale & Shells	3805	3969
Sand	400	408	Shale & Shells	3969	4019
Slate	408	420	Slate & Shells	4019	4050
Red Rock	420	455	Brown Shale	4050	4060
Gritty Lime	455	480	Shale & Shells	4060	4102
Red Rock	480	515	Brown Shale	4102	4166
Lime	515	525	Slate	4166	4265
Red Rock	525	580	Slate & Shells	4265	4379
Slate	580	615	Slate	4379	4536
Lime	615	625	Brown Shale	4536	4737
Slate	625	643	Black Shale	4737	4820
Red Rock	643	660	Corniferous Lime	4820	4902
Lime	660	670	Oriskany Sand	4902	S.L.M.
Slate & Shells	670	700	TOTAL DEPTH		4926
Sand	700	835	Did not drill thru Oriskany Sand		
Slate	835	880			
Sand	880	940	Water	795	1/2 BPH
Slate	940	954	Salt Water	1550	Filled to 200'
Sand	954	1117	Gas Show	4002	Not enough to test
Slate	1117	1172			
Sand	1172	1202	Gas Show	4909	" " "
Slate & Shells	1202	1390	Gas Pay	4910-4918	
Gritty Lime	1390	1490			
Salt Sand	1490	1716			
Slate	1716	1718			
Gritty Lime	1718	1725			
Little Lime	1725	1759			
Pencil Cave	1759	1776			
Big Lime	1776	1984			
Big Injun	1984	2033			
Lime, slate, shells & sd.	2033	2059			
Lime	2059	2118			
Gritty Lime	2118	2185			
Shells	2185	2195			
Gritty Lime	2195	2236			
Slate & Shells	2236	2275			
Shale	2275	2289			
Slate & Shells	2289	2420			
Coffee Shale	2420	2448			

4965 4902 4820  
 823 823 823  


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 4142 4079 3997



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

*Quad. Winfield*

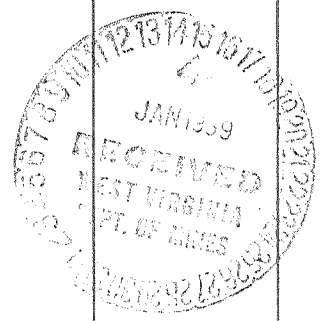
WELL RECORD

Permit No. PUT-454-D

Oil or Gas Well Gas  
(KIND)

Company <u>SOUTH PENN OIL COMPANY</u>	Casing and Tubing	Casing Used in Drilling Pulled	Depth in Feet	Packers
Address <u>P. O. Box 1280, Parkersburg, West Virginia</u>	Size			Kind of Packer
Farm <u>Frank A. Hardy</u> Acres <u>3360.5</u>	16			
Location (waters) <u>Baileys Fork</u>	18			
Well No. <u>4</u> Elev. <u>822.97</u>	10			Size of
District <u>Poca</u> County <u>Putnam</u>	8 1/4			Depth set
The surface of tract is owned in fee by <u>E. C. Harman</u>	6%			Perf. top
<u>1516 Washington St., East</u> Address <u>Charleston, W. Va.</u>	5 3/16			Perf. bottom
Mineral rights are owned by <u>Kanawha Valley Bank, Agent</u>	3			Perf. top
for <u>Frank A. Hardy, et al.</u>	<u>2 3/8"</u>	<u>4906'</u>		Perf. bottom
Address <u>Charleston, W. Va.</u>	Liners Used			
Deeper Drilling commenced <u>Sept. 18, 1958</u>				
Deeper Drilling completed <u>Nov. 17, 1958</u>				
Date Shot <u>-</u> From <u>-</u> To <u>-</u>				
With <u>-</u>				
Open Flow <u>/10ths</u> Water in <u>-</u> Inch				
<u>/10ths</u> Merc. in <u>-</u> Inch				
Volume <u>1,419</u> MCF - Blew Down to <u>243</u> MCF Cu. Ft.	CASING CEMENTED	SIZE	No. Ft.	Date
Rock Pressure <u>275</u> lbs. hrs.				
Oil <u>-</u> bbls., 1st 24 hrs.	COAL WAS ENCOUNTERED AT <u>-</u> FEET INCHES			
Fresh water <u>-</u> feet	<u>-</u> FEET INCHES			
Saline water <u>5230-5240</u> feet	<u>-</u> FEET INCHES			

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
COMMENCED DRILLING AT				4926			
Oriskany			4926	4965			
Dk. Gritty Lime			4965	5029			
White Sand			5029	5031			
Dk. Gritty Lime			5031	5546			
Dk. Liny Sand			5546	5567	Water	5230-5240	Exhausted
Broken Sand			5567	5581	Gas	5463-5466	Exhausted
Black Lime			5581	5584			
Dk. Liny Sand			5584	5605			
Dk. Gritty Lime			5605	5642			
Sand ( <i>Williamsport ?</i> )			5642	5665	Gas	5642-5645	1,419 MCF-Blew Down to 243 MCF
Lime & Shells			5665	5742			
TOTAL DEPTH				5742			



FORMATION	COLOR	TOP	BOTTOM	STEEL LINE MEASUREMENTS	HARD OR SOFT	OIL, GAS OR WATER	DEPTH FOUND	REMARKS
SALT SAND		1490	1716			S.W.	1550	Filled up to 200'
Slate		1716	1718					
Gritty Lime		1718	1725					
Little Lime		1725	1759					
Pencil Cave		1759	1776					
BIG LIME		1776	1984					
BIG INJUN		1984	2033					
Lime, Sl. & Shells, Sand		2033	2059	2059				
Lime		2059	2118					
Gritty Lime		2118	2185					
Shells		2185	2195					
Gritty Lime		2195	2236					
Slate & Shells		2236	2275					
Shale		2275	2289					
Slate & Shells		2289	2420					
Coffee Shale		2420	2448					
BERRA GRIT		2448	2469					
Slate		2469	2479					
Lime		2479	2490					
Slate & Shells		2490	2600					
Lime		2600	2621					
Misc Shells		2621	2651					
Slate		2651	2673					
Slate & Shells		2673	3100					
Lime		3100	3168					
Slate & Shells		3168	3600					
Lime		3600	3629					
Slate & Shells		3629	3679					
Brown Shale		3679	3805					
Br. Shale & Shells		3805	3969					
Shale & Shells		3969	4019					
Slate & Shells		4019	4050			Gas	show	4002; insufficient to test
Brown Shale		4050	4060					
Shale & Shells		4060	4102					
Brown Shale		4102	4166					
Slate		4166	4265					
Slate & Shells		4265	4379					
Slate		4379	4536					
LBrown Shale		4536	4737					
Black Shale		4737	4820					
CONIFEROUS		4820	4902			Gas		show 4909-10; insufficient to test
ORISKANY		4902				Gas		4910-4918; 3923 N blew down to 3,310M
TOTAL DEPTH			4926					
DRILLED DEEPER - SEPTEMBER 18 - November 17, 1958 C. F. Engel, Contractor								
ORISKANY			4965					
Black Gritty Lime		4965	5029					
White Sand		5029	5031			Gas		5163-66; 30 Mcf exhausted
Drk. Gritty Lime		5031	5516			Water		5230-40 - 10 gal 4 hrs exhausted
Dr. Limy Sand		5516	5567					
Broken Sand		5567	5581					
Black Lime		5581	5584					
Dr. Limy Sand		5584	5605					
Dr. Gritty Lime		5605	5612					
Sand (-4819)		5612	5665			Gas		5642-5645; 243 Mcf - initial test
Lime & Shells		5665	5742					1,419 Mcf blew down to 243. R.P. 2758
TOTAL DEPTH			5742					
GAS FROM ORISKANY TESTED 82,390 cu. ft. before drilling deeper.								
TOTAL DEPTH								

DATE \_\_\_\_\_

APPROVED \_\_\_\_\_ FOREMAN

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE IN TRIPLICATE, one copy mailed to the Department, one copy to be retained by the Well Operator and the third copy (and extra copies if required) should be mailed to each coal operator at their respective addresses.

Farm Name: Pomeroy, Virgil T. & John T. Operator Well No.: Hardy #4

Location: Elevation: 827.16' Quadrangle Bancroft  
District: Putnam County Putnam  
Latitude \_\_\_\_\_ Feet South of \_\_\_\_\_ Deg. \_\_\_\_\_ Min. \_\_\_\_\_ Sec.  
Longitude \_\_\_\_\_ Feet West of \_\_\_\_\_ Deg. \_\_\_\_\_ Min. \_\_\_\_\_ Sec.

Well Type: Oil \_\_\_\_\_ Gas XX

Company: Cabot Oil & Gas Corporation Coal Operator or Amherst Industries, Inc.  
Five Penn Center West, Ste. 401 Owner: C/O Drema Woods  
Pittsburgh, PA 15276 #2 Part Amherst Dr.

Agent: Brian Hall Coal Operator or Charleston, WV 25306  
Owner: RECEIVED  
Office of Oil & Gas

Permit Issued Date: 09-26-2011

JAN 30 2012

AFFIDAVIT

State of West Virginia, County of Putnam ss:

WV Department of  
Environmental Protection

Terry Huffman and Bobby Hively being first duly sworn according to law plugging and filling oil and gas wells and were employed by the above named well operator, and participated in the work of plugging and filling the above well say that said work was commenced on the 29<sup>th</sup> day of December 2011 and the well was plugged and filled in the following manner:

TYPE	FROM	TO	PIPE REMOVED	LEFT
Cement-Latex	5707	4800'	1 1/2" Tbg. 2222	3485'
Cement	2222	2085'	7" Csg. 762'	4115'
Cement	1941	1804	2 5/8" Csg. 200'	1865'
Cement	1550	1413	13 3/8" NONE	359'
Cement	825	681	16" NONE	12'
Cement	296	SURFACE		

Note 6% Gel between All Cement Plugs

Description of monument: 7" Csg. with 3 Above ground and that the work of plugging and filling said well was completed on the 19<sup>th</sup> day of JANUARY 2012.

And further deponents saith not Terry Huffman  
Bobby Hively

Sworn and subscribe before me this 25 day of January 2012  
My commission expires: September 27, 2020

Notary Public Shonda H. Goff

Affidavit reviewed by the  
Office of Oil and Gas: Janis Stevens 1/30/2012

Title: Inspector

