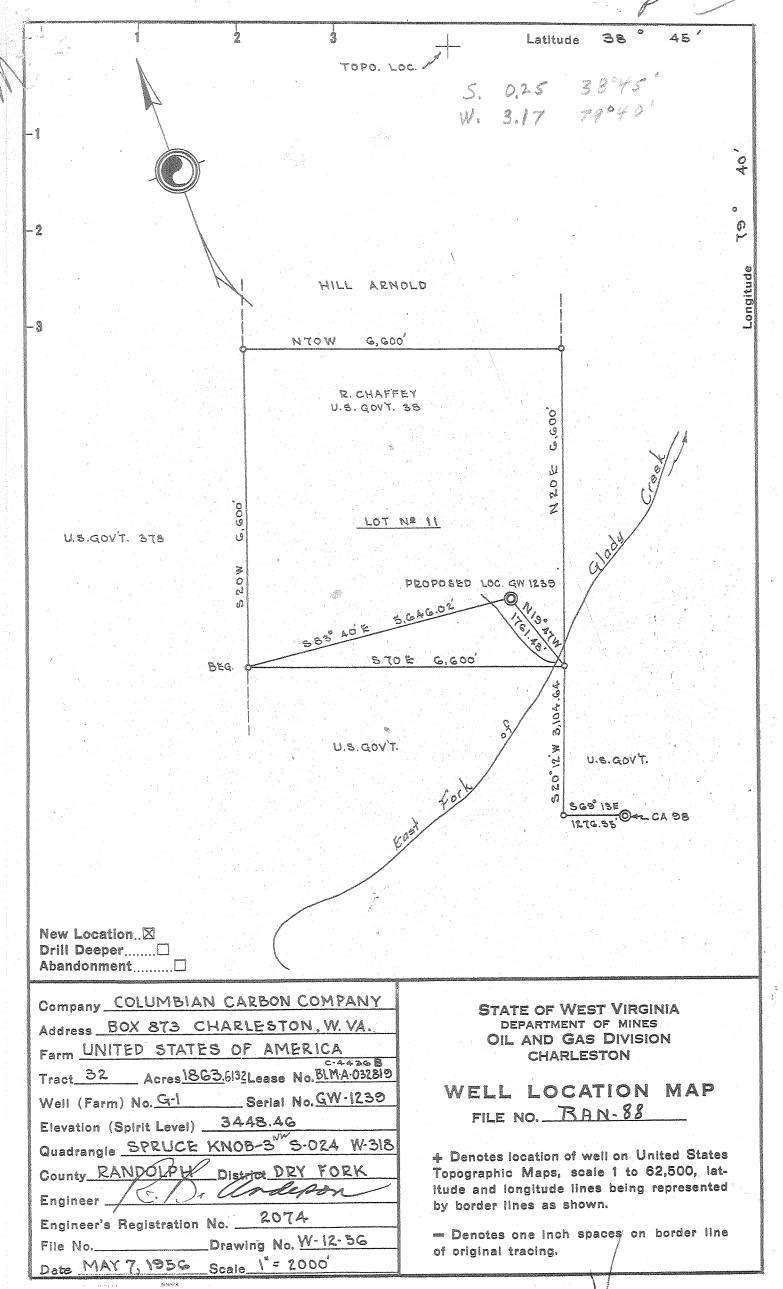


DF. 9. P WFILL



6-6261 DREPWEIL



### STATE OF WEST VIRGINIA

### DEPARTMENT OF MINES

OIL AND GAS DIVISION 9

## Quadrangle Spruce Knob 3 SW

Permit No. 1	Ran-88		Personal Products Property	RECORU	<b>)</b>	Oil or G	as Well	gas	•
CONTRACTOR	na Sookya umaanistan koli kuru keeska tagaaraa agaa qoogaa waxaa kaalaa ka k	nd fart limperature satta konstruktus sesselekki kolonika konstruktura	and proportions of the American Astronomy and the American Astronomy and the Astrono					(KIND)	-
Company Colum	mbian Carl	on Company	y, Oper	Casing and	Used in	Left in			
Address Box 8	373, Charl	eston 23, W	. Va.	Tubing Di	Drilling	Well	Packers		
Farm Unite	ed States of	America	Acres 1863.613					<del></del>	
Location (waters	) East Fo	rk of Glady	Creek	Size	- 4				
Well NoG	-1, GW123	9 ′	Elev3448.461	16 <sup>†</sup> 65#	26'	261	Kind o	f Packer	***************************************
District Dry 1	Fork	_County_Rand	olph	133/8" 48#	1 1	_521911	_none		
The surface of tr	act is owned in	fee bBureau o	f Land Mgmt	.103/4"40#	907'8''	pulled	Size of	Size of	
Inter	ior Bldg.	Address <u>Washi</u>	ngton, D.C.	841 24#	2247'2"	pulled			***************************************
Mineral rights a	-			35% <u>717 23#</u>	5210'11''	_5210'11''	Depth	set	
		Address	·	5 3/16		•			
Drilling commen	ced 8-9	-56		3	<u> </u>		Perf. t	op	
Drilling complete				23/811 4#	5495'3"	5495'3"	Perf. bottom		
Date Shonot shot From To				Liners Used	with cage	ljt.off	Perf. top		-
With see fracturing record on reverse side					ŀ	ottum	Perf. bottom		***************************************
Open Flow	/10ths Water	in	Inch	THE PROPERTY OF THE PROPERTY O		and the second s	-	acontinuis de la continuis de	MANAGEMENT OF THE PARTY OF THE
40	_/10ths Merc.	in 711 23#	Inch	CASING CEMI	ENTED	_SIZE	No. Ft		_Date
					see reve	erse side			
Rock Pressure	2040		hrs.	f	NCOUNTERED				
Oil			_bbls., 1st 24 hrs.						
Fresh water		féet	feet	FEE	rinc	HES	FEET <u></u>	IN	CHES
Salt water	<u> </u>	feet	feet	FEE"	rinc	HES	FEET_	IN	CHES
Formation	Color	Hard or Soft	Тор	Bottom	Oil, Gas or Water	Depth Found		Remark	.8
Clay	The second	-coprome converse manufactions established again falling for injurityle (CO) Allica (Allica (Allica Allica (Al	O	15	CONTRACTOR SANCE AND				
Shale	American de la constant de la consta		15	30					
Sand			30	38		<i>'</i>			
Slate and Li	me		38	66				,	
Sand	The state of the s		66	75					
Lime	No. Accounts		75	82					
Slate and Sh	ells		82	154					
-gr . •	1 1		2 - 4	200			1		

Formation	Color	Hard or Soft	Тор	Bottom	Oil, Gas or Water	Depth Found	Remarks
Clay	rrino tila kina kanaka kan	-salubore excensiva sement assessminaturamin spanistin delevativa silani delevativa semente semente semente se	0	15	and the state of t		Committee in the Committee of the Commit
Shale	- supplement		15	30			
Sand			30	38			de la constanta de la constant
Slate and Li	ne	· ·	38	66			,
Sand		x.	66	75			/
Lime			75	82			
Slate and Sh	ells		82	154			
Lime	The State of the S		154	200			A to David to the
Slate and Sh	:lls		200	498			
Hard Lime			498	620			
Slate and Sh	11s 900'D	LM-899'SL	1 620	1078	1.		
Broken Lim	<b>)</b>		1078	1137			
Slate and Li	me Shells		1137	1275			- Control of the Cont
Brown Lime			1275	1316	The second secon		To the second se
Slate and Li	ne		1316	1680			
Sandy Lime	Distriction		1680	1710			
Broken Lim	and Shel	ls	1710	2236		156	805
Slate & Shell	s 2237'DI	.M-2227'SL	M 2236	2580	The state of the s	130	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Lime			2580	2712		TE TE	1957
Slate and Li	n.e		2712	3235		I Page	1857 [2]
Slate and She	ells, Dark		3235	3350		REGIST VI	Wen a
Slate and Sh	ells, Gre	7	3350	3386		BEPT. OF	61.11 33/
Lime			3386	3630		1000	MIES ON
Broken Lim	e .		3630	3980	Opposite Control of the Control of t	1 Separa	3100
Brown Shale			3980	4271		2000	L. L. Carrier
White Lime			4271	4310	1 .		
Slate and She	:lls		4310	. 4334	:	50000000000000000000000000000000000000	C-management of the control of the c
Black Lime	-		4334	4400		REAL CONTROL OF THE PROPERTY O	Emicrosistem
Black Hard	_ime		4400	4430			Tab
Broken Lime	, Grey		4430	4610		- Company of the Comp	(A)
Brown Shale			4610	4680	:		
Black Shale			4680	5030	Gas	4930'	show

### Secretary Color   Secretary   Secretar	to the second second second second	The same of the sa						
### 1975   5171   5275	Formation	Color		Top 9	Bottom	Oil, Gas or Water		Remarks
Sing record	Acellus Sh	ale 5178'I	LM-5174'S	LM 5030	5132	<ul> <li>Letter for the William State Company and the Comp</li></ul>		and-widtherstand contributes for the feet fo
Signature   Sign	iondaga Ki	nn c		5132				
ale break   5286   5300   5498   5300   5498   5522    #OTAL DEPTH   5322   Cas Cauges   3311-13' 7/10 W. 7" 25# 1,130M to 2,7701   5313-15' inct. fm. 1,130M to 2,7701   5323-37' incr. fm. 2,435M to 3,5721   5420-22' indr. fm. 2,435M to 3,5721   5430' incr. fm. 3,572M to 3,722M   5430' incr. fm. 3,500M to 4,676)    #SING RECORD   4-56 - 10-5/4" casing ran with Midget bottom hole packer at 2001 DLM-899'SLM. 18   5408' incr. fm. 3,800M to 4,676)    ##SING RECORD   5-56 - 10-5/4" casing ran with Midget bottom hole packer at 2227'SLM 28 sacks Aquage! Circulation and returns.   28-56 - 8-5/8" casing ran with Midget bottom hole packer at 2227'SLM 28 sacks Aquage!   20-55-7" casing ran at 5174'SLM - 52 sacks Aquage!   Ran 60 sacks cements    ###################################				1	L.			and the second s
### ### ### ### ### ### ### ### ### ##				(			tilitin naangois	man Programme and Company of the Com
### S498   5522   Gas Gauges   5311-13' 7/10 W. 7" 23# 1,130M   5313-13' incr. fm. 2,435M to 3,631   5420-22' incr. fm. 2,435M to 3,631   5420-22' incr. fm. 2,435M to 3,631   5420-22' incr. fm. 3,520M to 3,572M   5430' incr. fm. 3,522M to 3,722M   5430' incr. fm. 3,722M to 3,722M   5442' incr. fm. 3,722M to 3,959M   5466-69' incr. fm. 3,846M to 4,676'   5442' incr. fm. 3,846M to 4,676'   542' incr. fm. 3,722M to 3,922M to 4,676'   542' incr. fm. 3,846M to 4,676'   542' in		į.		<u> </u>				
### Total DEPTH   5522   Cas Cauges   5311-13' 7/10 W. 7" 25#1,130M to 2,700   5332-37' incr. fm. 1,130M to 2,700   5322-37' incr. fm. 2,45M to 3,572M   5420-22' incr. fm. 2,45M to 3,572M   5430' incr. fm. 3,572M to 3,572M   5430' incr. fm. 3,572M to 3,572M   5430' incr. fm. 3,572M to 3,722M   5435' incr. fm. 3,722M to 3,912M   542' incr. fm. 3,816M to 4,676)   Scales Aquagel. No circulation or returns.   28-56 - 8-5/8" casing ran with Midget bottom hole packer at 2227'SLM   28 sacks Aquagel. Circulation and returns.   28-56 - 7" casing ran at 5174'SLM - 52 sacks Aquagel. Ran 60 sacks cements   ACTURING RECORD   100 bbl. kerbsene. Pumped in 750 Gal. MCA. Loaded tubing with sevesene, Broke down. Used 100 bbl. kerbsene. Pumped in 875#. Pumped at 1500# rest of time. Celled 260 bbl. kerbsene. Pumped in with 12,500# of sand at 16-1/2 bbl. /min. Started ge. at 1800# cropped to 1500# - finished at 1800#. Finished at 1800#. Injection rate of flush 12 bbl./min.   Before fracturing gas gauged 4,225 M CF. (98/10 w. 7" 23#)   Final.open flow after fracturing 40/10 M. 7" 23# dex 9,962,000 cu. ft.   3 24.8	4	ıd		5300	• 5498	C. Company	1.11	
Sing record  531-13' 7' 10 W. 7" 25# 1.130M 5313-15' incr. fm. 2.445M to 3.521 532-37' incr. fm. 2.445M to 3.5721 5430' incr. fm. 2.445M to 3.5721 5430' incr. fm. 3.572M to 3.722M 5430' incr. fm. 3.572M to 3.722M 5432' incr. fm. 3.722M to 3.722M 5436' incr. fm. 3.722M 5436' incr. fm. 3.722M to 3.	me			5498	5522		effective .	- angle angle -
SING RECORD  Silver at 10.3 A" casing ran with Midget bottom hole packer at 2227 SLM 28 sacks Aquaget.  Sing ran with Midget bottom hole packer at 2227 SLM 28 sacks Aquaget.  Circulation and returns.  28-56 - 10-3/4" casing ran with Midget bottom hole packer at 2227 SLM 28 sacks Aquaget. No circulation or returns.  28-56 - 8-5/8" casing ran with Midget bottom hole packer at 2227 SLM 28 sacks Aquaget.  Circulation and returns.  28-56 - 7" casing ran at 5174 SLM - 52 sacks Aquaget. Ran 60 sacks cements.  ACTURING RECORD  18-57 - Pumped in 750 Gal. MCA. Loaded tubing with revocance. Broke down. Used 100 bbl. total. Maximum pressure 1875#. Pumped at 1500% rest of time. Gelled 200 bbl. techsone. Pumped in with 12,500% of sand at 26-1/2 bbl./min. Started get at 1800#. Acroped to 1500% finished at 1840#. Flushed with 150 bbl. kerosene Started at 1800#. Built to 2300% - dropped to 1900#. Flushed at 1500%. Injection rate of flush 12 bbl./min.  Before fracturing gas gauged 4,225 M CF. (98/10 w. 7" 23#)  Final,open flow after fracturing 40/10 M. 7" 23# GWX 9,962,000 cu. ft.	give Mayer			2.				
SSING RECORD  SSING RECORD  6-56 - 10-3/4" casing ran with Midget bottom hole packer at 900" DLM-899 SLM. 18 sacks Aquagel. No circulation or returns.  28-56 - 8-5/8" casing ran with Midget bottom hole packer at 2227 SLM 28 sacks Aquagel. Scrutation and returns.  28-56 - 8-5/8" casing ran at 5174 SLM - 52 sacks Aquagel. Ran 60 sacks coments.  ACCTURING RECORD  18-57 - Pumped in 750 Gel. MCA. Leaded tubing with kerosene, Broke down, Used 100 bbl. test sacks. Maximum pressure 1875#. Pumped at 1500# rest of time. Galled 200 bbl. kerosene. Pumped in with 12,500# of kand at 1600# rest of time. Galled 200 bbl. kerosene. Pumped in with 12,500# of kand at 1612 bbl./min. Started gel at 1800#. Built to 2300# - dropped to 1900#. Finished at 1500#. Injection rate of flush 12 bbl./min.  Before fracturing gas gauged 4,225 M CF. (98/10 w. 7" 23# dex 9,962 000 cu. it.  5132 5300 3448 3448 3449  1864 1854 1854 3436	engli engli	DTAL DEI	ÞТН	Pure to the second	55221		·	Language Control of the Control of t
\$313-15' incr. fm. 2,415M to 2,700  \$332-15' incr. fm. 2,415M to 2,701  \$3420-22' incr. fm. 3,520M to 3,572M  \$432' incr. fm. 3,520M to 3,572M  \$432' incr. fm. 3,522M to 3,952M  \$435' incr. fm. 3,722M to 3,953M  \$442' incr. fm. 3,722M to 3,953M  \$466-69' incr. fm. 3,722M to 3,953M  \$466-69' incr. fm. 3,826M to 4,676  \$510G RECORD  \$510G	ew Cartilla of Time 1.			ł		1.	1 .	
332-37 incr. fm. 2, 455M to 2,631 5420-227 incr. fm. 2, 455M to 2,631 5420-227 incr. fm. 3, 520M to 3,572M 54301 incr. fm. 3,520M to 3,572M 54321 incr. fm. 3,520M to 3,752M 54321 incr. fm. 3,722M to 3,722M 54321 incr. fm. 3,722M to 3,722M 54321 incr. fm. 3,722M to 3,952M 54427 incr. fm. 3,722M to 3,952M 5466-69' incr. fm. 3,866M to 4,676)  SING RECORD  6-56 - 10-3/4" casing ran with Midget bottom hole packer at 900' DLM-899'SLM. 13 sacks Aquagel. No circulation or returns.  28-56 - 8-5/8" casing ran with Midget bottom hole packer at 2227'SLM 28 sacks Aquagel. Circulation and returns -20-56-7" casing ran at 5174'SLM - 52 sacks Aquagel. Ran 60 sacks cement#  ACTURING RECORD  18-57 - Pumped in 750 Gal. MCA. Loaded ubing with kerosene. Eroke down. Used 100 bbl. total. Maximum pressure 1875#. Pumped at 1800# rest of time. Gellud 200 bbl. kerosene, Pumped in with 12,500# of sand at 16-1/2 bbl./min. Started get at 1800#. dropped to 1500#. finished at 1800#. Finished at 1500#. Injection rate of flueh 12 bbl./min.  Before fracturing gas gauged 4,225 M GF. (98/10 w. 7" 23#) Final,open flow after fracturing 40/10 M. 7" 23# d@x 9,962,000 cu. ft.  5 13 2 5 3 00 18 6 4 7 8 6 4 7 8 6 4 7 8 6 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7	. + 1 2	,		I .		1	1 .	and the second s
5332-37 indr. fm. 2,445M to 3,572M 5420-22 indr. fm. 3,520M to 3,572M 5432 indr. fm. 3,522M to 3,572M 5432 indr. fm. 3,572M to 3,572M 5435 indr. fm. 3,722M to 3,939M 5442 indr. fm. 3,612M to 3,939M 5446-69 indr. fm. 3,612M to 3,939M 5466-69 indr. fm. 3,866M to 4,676)  SING RECORD  SING RECORD  SING RECORD  Sacks Aquagel. No circulation or returns.  28-56 - 8-5/8" casing ran with Midget bottom hole packer at 2227'SLM 28 sacks Aquagel, Circulation and returns.  20-56-7" casing ran at 5174'SLM - 52 sacks Aquagel. Ran 60 sacks coments  ACTURING RECORD  18-57 - Pumped in 750 Gal. MCA. Loaded tubing with kerosens, Broke down. Used 100 bbl. total. Maximum pressure 1875#, Pumped at 1500# rest of time. Gelled 200 bbl. kerosens. Pumped in with 12,500# of sand at 16-1/2 bbl./min. Started get at 1800#. Gropped to 1500#. finished at 1800#. Finished with 150 bbl. kerosens Started at 1800#. Built to 2300# - dropped to 1900#. Finished at 1500#. Injection rate of flush 12 bbl./min.  Before fracturing gas gauged 4,225 M CF. (98/10 w. 7" 23#) Final,open flow after fracturing 40/10 M. 7" 23# dax 9,962,000 cu. ft.  5 13 2 5 3 0 0 1 8 4 8 9 962,000 cu. ft.						5313-15' inc	r. fm. 1,13	OM to 2,700N
5420-22' incr. fm. 2,425M to 3,572M 5430' incr. fm. 3,520M to 3,572M 5430' incr. fm. 3,520M to 3,772M 5432' incr. fm. 3,722M to 3,722M 5435' incr. fm. 3,722M to 3,732M 5432' incr. fm. 3,722M to 3,732M 5432' incr. fm. 3,866M to 4,676)  SING RECORD  5-56 - 10-3/4" casing ran with Midget bottom hole packer at 900' DLM-899'SLM. 18 sacks Aquaget. No circulation or returns.  28-56 - 8-5/8" casing ran with Midget bottom hole packer at 2227'SLM 28 sacks Aquaget. Circulation and returns.  -20-56-7" casing ran at 5174'SLM - 52 sacks Aquaget. Ran 50 sacks cements.  ACTURING RECORD  18-57 - Pumped in 750 Cal. MCa. Loaded tubing with kerosene. Broke down. Used 100 bbl. total. Maximum pressure 1875#. Pumped at 1500% rest of time. Celled 200 bbl. kerosene. Pumped in with 12,500% of sand at 16-1/2 bbl./min. Started get at 1800%. Built possible finished at 1800%. Finished at 1500%. Injection rate of flush 12 bbl./min.  Before fracturing gas gauged 4,225 M CF. (98/10 w. 7" 23#)  Final, open flow after fracturing 40/10 M. 7" 23# cdm 9,962,000 cu. ft.						5332-371 inc	r. fm. 2,41	5M to 2,631N
5430' incr. fm. 3,520M to 3,572M 5432' incr. fm. 3,572M to 3,722M 5432' incr. fm. 3,722M to 3,912M 5435' incr. fm. 3,722M to 3,912M 5432' incr. fm. 3,722M to 3,912M 5432' incr. fm. 3,822M to 3,912M 5442' incr. fm. 3,822M to 3,959M 5466-69' incr. fm. 3,826M to 4,676)  SING RECORD  5-56 - 10-3/4" casing ran with Midget bottom hole packer at 2227'SLM 28 sacks Aquagel. No circulation or returns.  28-56 - 8-5/8" casing ran with Midget bottom hole packer at 2227'SLM 28 sacks Aquagel. Circulation and returns.  20-56-7" casing ran at 5174'SLM - 52 sacks Aquagel. Ran 50 sacks cament?  ACTURING RECORD  18-57 - Pumped in 750 Gal. MCA. Loaded tubing with kerosene. Broke down. Used 100 bbl. total. Maximum pressure 1875*. Pumped at 1500* rest of time. Gelled 200 bbl. kerosene. Pumped in with 12,500* of sand at 16-1/2 bbl./min. Stated get at 1800*. Built to 2300* - dropped to 1900*. Finished at 1500*. Injection rate of flush 12 bbl./min.  Before fracturing gas gauged 4,225 M CF. (98/10 w. 7" 23*)  Final,open flow after fracturing 40/10 M. 7" 23* dex 9,962,000 cu. ft.  5132 5300  18 64 1864  18 67  18 67  18 67  18 67  18 67  18 67				***				
5432' incr. fm. 3,572M to 3,722M 5435' incr. fm. 3,722M to 3,912M 5435' incr. fm. 3,722M to 3,912M 5442' incr. fm. 3,812M to 3,959M 5466-69' incr. fm. 3,812M to 3,959M 5466-69' incr. fm. 3,812M to 3,959M 5466-69' incr. fm. 3,866M to 4,676)  5-56 - 10-3/4" casing ran with Midget bottom hole packer at 900' DLM-899'SLM. 18 sacks Aquagel. No circulation or returns.  28-56 - 8-5/8" casing ran with Midget bottom hole packer at 2227'SLM 28 sacks Aquagel. Circulation and returns.  20-56-7" casing ran at 5174'SLM - 52 sacks Aquagel. Ran 50 sacks cements  ACTURING RECORD  18-57 - Pumped in 750 Gal. MCA. Loaded subing with kerosene. Proke down. Used 100 bbl. total. Maximum pressure 1375. Pumped at 1500' rest of time. Gelled 200 bbl. kerosene. Pumped in with 12,5094 of sand at 16-1/2 bbl./min. Started 200 bbl. kerosene. Finished at 1800#. Flushed with 150 bbl. kerosene Started at 1800#. Built to 2300# - dropped to 1900#. Flushed with 150 bbl. kerosene rate of flush 12 bbl./min.  Before fracturing gas gauged 4,225 M CF. (98/10 w. 7" 23#)  Final, open flow after fracturing 40/10 M. 7" 22# dex 9,962,000 cu. ft.	કાર્ય જેવા છું કુલ				1 .			
5435' incr. im. 3,722M to 3,912M 5442' incr. im. 3,912M to 3,959M 5466-69' incr. fm. 3,866M to 4,676)  556-10-3/4" casing ran with Midget bottom hole packer at 200° DLM-899'SLM. 18 sacks Aquagel. No circulation or returns.  23-56-8-5/8" casing ran with Midget bottom hole packer at 2227'SLM 28 sacks Aquagel. Circulation and returns.  20-56-7" casing ran at 5174'SLM-52 sacks Aquagel. Ran 60 sacks cements  ACTURING RECORD  18-57-Pumped in 750 Gal. MCA. Loaded fubing with kerosene. Broke down. Used 100 bbl. total. Maximum pressure 1875#. Pumped at 1500# rest of time. Gelled 200 bbl. kerosene. Pumped in with 12,500# of sand at 16-1/2 bbl./min. Started gel at 1800#. dropped to 1500#. finished at 1800#. Finished with 150 bbl. kerosene Started at 1800#. Built to 2300# - dropped to 1900#. Finished at 1500#. Injection rate of flush 12 bbl./rain.  Before fracturing gas gauged 4,225 M CF. (98/10 w. 7" 23#)  Final,open flow after fracturing 40/10 M. 7" 23# dax 9,962,000 cu. ft.  5 1 3 2				- 1,00	A contract of the contract of			
5422 incr. îm. 3,912M to 3,959M 5466-69' incr. îm. 3,812M to 3,959M 5466-69' incr. îm. 3,812M to 3,959M 5466-69' incr. îm. 3,812M to 4,676]  556 - 10-3/4" casing ran with Midget bottom hole packer at 900' DLM-899'SLM. 18 sacks Aquagel. No circulation or returns.  28-56 - 8-5/8" casing ran with Midget bottom hole packer at 2227'SLM 28 sacks Aquagel. Circulation and returns.  20-56 - 7" casing ran at 5174'SLM - 52 sacks Aquagel. Ran 50 sacks cements  ACTURING RECORD  8-57 - Pumped in 750 Gal. MCA. Loaded subing with kerosene. Proke down. Used 100 bbl. total. Maximum pressure 1875#. Pumped at 1500# rest of time. Gelled 200 bbl. kerosene. Pumped in with 12,500# of sand at 1501# rest of time. Gelled gel at 1800# - dropped to 1500# - finished at 1800#. Flushed with 150 bbl. kerosene Started at 1800#. Built to 2300# - dropped to 1900#. Finished at 1500#. Injection rate of flush 12 bbl./min.  Before fracturing gas gauged 4,225 M CF. (98/10 w. 7" 23#) Final,open flow after fracturing 40/10 M. 7" 23# daw 9,962,000 cu. ft.  5 1 3 2 5 3 0 0 18 6 4 18 6 4 18 6 4 18 5 7  3 2 6 7 18 6 4 18 6 7 18 5 7	eda Gertado	T T Equipe	r in easing and					
SING RECORD  5-56 - 10-3/4" casing ran with Midget bottom hole packer at 900 DLM-899 SLM. 18  sacks Aquagel. No circulation or returns.  6-56 - 8-5/8" casing ran with Midget bottom hole packer at 2227 SLM 28 sacks Aquagel.  Circulation and returns.  20-56 - 7" casing ran at 5174 SLM - 52 sacks Aquagel. Ran 60 sacks cements.  ACTURING RECORD  8-57 - Pumped in 750 Gal. MCA. Loaded tubing with kerosene. Broke down. Used 100 bbl. total. Maximum pressure 1875#. Pumped at 1500# rest of time. Golled 200 bbl. kerosene. Pumped in with 12,500# of sand at 16-1/2 bbl./min. Started get at 1800# - dropped to 1500# - finished at 1800#. Flushed with 150 bbl. kerosene Started at 1800#. Built to 2300# - dropped to 1900# . Finished at 1500#. Injection rate of flush 12 bbl./min.  Before fracturing gas gauged 4,225 M CF. (98/10 w. 7" 23#)  Final.open flow after fracturing 40/10 M. 7" 23# dec 9,962,000 cu. ft.	. e. Suerout e est			į.		1	1	
SING RECORD  5-56 - 10-3/4" casing ran with Midget bottom hole packer at 900" DLM-899"SLM. 18  sacks Aquagel. No circulation or returns.  28-56 - 8-5/8" casing ran with Midget bottom hole packer at 2227"SLM 28 sacks Aquagel. Circulation and returns.  20-56-7" casing ran at 5174"SLM - 52 sacks Aquagel. Ran 60 sacks cements.  ACTURING RECORD  8-57 - Pumped in 750 Gal. MCA. Loaded subing with kerosene. Broke down. Used 100 bbl. total. Maximum pressure 1875#. Pumped at 1500# rest of time. Gelled 200 bbl. kerosene. Pumped in with 12,500# of sand at 16-1/2 bbl./mim. Started gel at 1800#. dropped to 1500# - firished at 1800#. Flushed with 150 bbl. kerosene Started at 1800#. Built to 2300# - dropped to 1900#. Finished at 1500#. Injection rate of flush 12 bbl./mim.  Before fracturing gas gauged 4,225 M CF. (98/10 w. 7" 23#)  Final, open flow after fracturing 40/10 M. 7" 23# dax 9,962,000 cu. ft.								
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Feb. 6 Date\_\_\_\_

APPROVED Columbian Carbon Co., Oper.

By O. W. Van Petten, V.P.

(Title)

Page\_l\_of\_\_

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

1)	Well Operator:	COLUMBIA (	GAS TRANS	SMISSION CORE	PORATION (	0450	369 ——
	Operator's Well Number						-
.)	Well type: (a) Oil/	or		Gas_X_/	Show	ud oilz	3/97
	(b) If Ga	s: Production/ Deep _X	Underground		Expu	nos oil 23 le	79 Da
)	Proposed Target Formatio	n (s):	Or	riskany 475		Environno	
	Proposed Total Depth:	5522		_ feet		Office of Oil & Ga	arprotection
/)	Approximate fresh water	er strata depths:	none record	ied		Offic Permin	1996
8)	Approximate salt water	strata depths:	none	recorded		Of Oilly	
9)	Approximate coal seam	depths :		NONE		9 <sub>6</sub>	<b>`</b>
	Does land contain co				/ No X /		
	Proposed Well Work:					d with cased and open h	nole logs. The
Í	well will be hydra-jetted with co						
12)	<u>C</u>	ASING AND TUE	SING PROC	<u>GRAM</u>			
	TYPE SF	ECIFICATIONS		FOOTA	GE INTERVAL	LS CE	EMENT
		Size	Grade	Weight	For drilling	Left in well	Fill - up (cu. ft.)
		16" 13-3/8"	H-40	65# 48#	26' 52'9"	26' 52'9'	no records
	conductor		<u>H-40</u>			/	
	Fresh Water	10-3/4"	H-40	40# %	907'8"	Pulled	18 sks gel
	Coal	8-1/4"	J-55	24#	2,247'2"	Pulled	28 sks gel
	Intermediate	7"	J-55	23#	5,210'11"	5,210'11"	53 sks gel 60 sks reg. 652 cu ft litepoz
	Production	4-1/2"	J-55	11.6#	5,320'	5,320'	141.6 cu ft cealmen
	Tubing					17	h 1/2
	Liners			-	<u> </u>	Kus III	RILLYWS
РА	CKERS : Kind None	<u></u>	***************************************	•	Cili	DY Sh WW	
	Sizes				Ut	- Aw	
/P <sub>O</sub>	Depths set				II O !		***************************************
K	fee (s) paid.	Well Work Pern	nit Rec	of Oil and Glamation Fund	as Use Unly	WPCP	
P	Plat WY-9	₩ - 2E	Bor	nd <u>ASA</u>	(Type)	Agent	

Page 1 of\_\_ Form WW2 - A (6/94) File Copy

DEC 27 1996	
1996	

1) Date: 10/24/96

2) Operator's well number GLADY WELL 7446

3) API Well No: 47 - <u>083</u> - <u>00088</u> State - County - Permit

State - Office of Oil AND GAS

#### NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner (s) to be served:	5) (a) Coal Operator:
a) Name <u>United States Forest Service</u>	Name
Address Monongahela National Forest	Address
P. O. Box 1548, Elkins, WV 26241	
b) Name	(b) Coal Owner (s) with Declaration
Address	Name <u>United States Dept. Of Interior, Bureau Of Land Mgt.</u>
	Address P.O. Box 631
c) Name	Milwaukee, WI 53201-0631 Attn: Tim Abing
Address	Name
	Address
6) Inspector Phillip Tracy	(c) Coal Lessee with Declaration
A .1.1	A 1
Montrose, WV 26283	Address
Telephone (304) - 636-8798	
TO THE PERSON(S) NAMED ABOVE TA	KE NOTICE THAT:
Included is the lease or leases or other	
contracts by which I hold the right to ext	
X Included is the information required by	Chapter 22, Article 6, Section
8 (d) of the Code of West Virginia (see pa	
I certify that as required under Chapt	er 22 of the <u>West Virginia Code</u>
I have served copies of this notice and a	pplication, a location plat, and
accompanying documents pages 1 through	on the above named parties, by:
Personal Service (Affidavit atttached	
X Certified Mail (Postmarked postal	
Publication (Notice of Publication	
I have read and understand Chapter 22-6	and 38 CSR 11-18, and I agree
to the terms and conditions of any permi	
I certify under penalty of law that I ha	ve personally examined and am
familiar with the information submitted on the	
attachments, and that based on my inquir	v of those individuals immediately
responsible for obtaining the information, I be	
is true, accurate, and complete.	
I am aware that there are significant	penalties for submitting false
≈hofocontings-changesibility of fine	and imprisonment
OFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIRGINIA PATRICIA A. TURKETT  OFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIRGINIA PATRICIA A. TURKETT  Its: Senior Sto	A COLUMBIA GAS TRANSMISSION CORP
NOTARY PUBLIC RY	ADA
STATE OF WEST VIRGINIA Ite: Senior Sto	rage Engineer / Well Services
P.O. SOX 1273 Address Ro	oute 3, Box 216
CHARLESTON, WEST VIRGINIA 25325-1273	kins, WV 26241
My Commission Expires August 12, 1997  Telephone	1/226-8129
Subscribed and sworn before me this	day of Meulewhen, 19 76
Tatiena Ga Tur	kelt Notary Public
My commision expires	10,177/



23-Jan-97 API # 47- 083-00088-W

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Reviewed

Section of Oil and Gas

Well Operator's Report of Well Work

Operator Well No.: GLADY 7446 U. S. FOREST SERVICE Farm name: 3,410.00 Quadrangle: GLADY LOCATION: Elevation: County: RANDOLPH District: DRY FORK Feet South of 38 Deg. 42 Min. Feet West of 79 Deg. 42 Min. 30 Sec. 1850 Latitude: Sec. Longitude: 4850 Compay: COLUMBIA GAS TRANSMISSION Used in Left Cement Casing P.O. BOX 1273 Fill CHARLESTON, WV 25325-1273 Up Agent: RICHARD L. COTY Drilling Tubing in Well Cu. Ft. Inspector: PHILLIP TRACY Size 01/23/97 Permit Issued: 
 Well work
 Commenced:
 06/17/97

 Well work
 Completed:
 07/21/97
 Verbal Plugging Permission granted on:\_ Rotary\_\_\_\_\_ Cable\_ 5,522 Total Depth (feet) \_ Fresh water depths (ft) See Original Records STIMULATION; SEE BACK FOR DETAILS Salt water depths (ft) See Previous Is coal being mined in area (Y/N)? Coal Depths (ft):\_\_\_\_ See Previous OPEN FLOW DATA Producing formation ORISKANY Pay zone depth (ft) 5,300′ - 5,498′

Gas: Initial open flow 6895 MCF/d Oil: Initial open flow Bbl/d Final open flow 5541 MCF/d Final open flow Bbl/d Time of open flow between initial and final tests 476 Days Hours Static rock Pressure 2004 psig (surface pressure) after 4 Hours 476 Days Hours \_\_Pay zone depth (ft)\_ Second producing formation\_\_\_ producing formation\_\_\_\_\_\_Pay zone depth (ft)\_\_\_\_\_\_

Gas : Initial open flow\_\_\_\_\_\_MCF/d Oil : Initial open flow\_\_\_\_\_\_

Final open flow \_\_\_\_\_MCF/d Final open flow \_\_\_\_\_

Time of open flow between initial and final tests\_\_\_\_\_ \_\_Bbl/d Hours Static rock Pressure\_ \_\_\_\_psig (surface pressure) after 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.

COLUMBIA GAS TRANSMISSION, CORP.

For:

RAN DOSS V

23-Jan-97 API # 47- 083-00088-W

# State of West Virginia Division of Environmental Protection Section of Oil and Gas

Well Operator's Report of Well Work

### STIMULATION

- Acidized on 07-07-97
- Halliburton Foamed Acid Job.
- Treated with 5,000 gals equivalent 15% Halliburton 60 Quality FE Foamed Acid followed by 5,000 gals equivalent 10% Halliburton 60 Quality FE Foamed Acid. Flushed with 1,260 gals equivalent 60 quality foam and 3,528 gals H2O.
- Total acid 1,500 gallons 28% Halliburton FE acid (uncut).
- Total nitrogen 189,000 scf.
- Additives: 15 gals FE-1A; 8 gals-HAI-81; 4 gals-SCA-130; 3 gals-FE5A; 17 gals-HC2; 8 gals PENN-88.