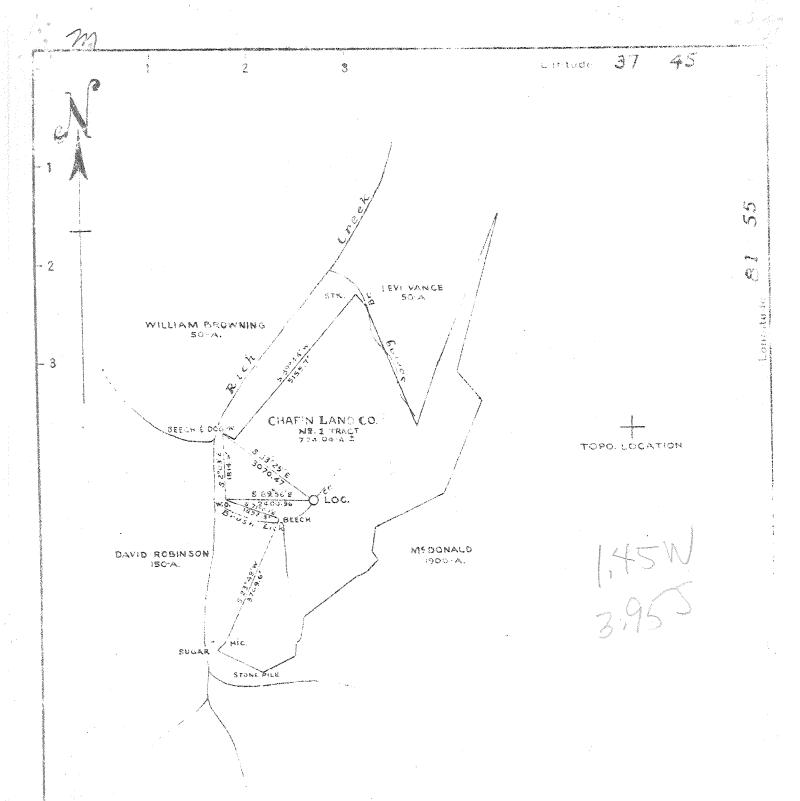


ASSA Magnolia

265



New Location, X Drill Deeper, ... Abandonment

Company Columbian Carbon Co.

Address Box-873 Charleston
Farm Chalin Land Co.

Tract Nº 1 Acres 774.04 Lease No. C-4021

Well (Farm) No. 1 Serial No. GW-1/79

Elevation | Spirit Level | 16/7.45

Quadrangle Gilbert 3-N.W.

County Logan Oistrict Iriadelphia
Engineer College College

Engineer's Registration No. 2074

File No. Drawing No. W 1:52

Date Feb. 11, 1952 Scale 1"= 2640

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

WELL LOCATION MAP

+ Denotes location or well in United States Tepographic Maps, schield to 63,500 at itade and longitude lines being represented by border lines is shown

Temptes our ench ename on troops of original tracipe

## WEST VIRGINIA DEPARTMENT OF MINES OIL & GAS DIVISION WELLRECORD

Permit No. Log 293 Gilbert Quad.	~ 7 14 ~	·			Well & TUBING
Company Address	Columbian C		ompany 1 23, W.Va.	<b>1</b> 6 65#_	9927 9957
Farm	Chafin Land			13 3/8 48# 3	
Location	Rich Creek	. 000 21	1 1 20 4 2	10% 32# 12	
Well No.	1-GW-1179	Elev. I	L617.45°G		084%6 Pld.
District			n County	/	360°3 2860° <b>3</b>
Surface	Chafin Land	. Co. Hur	ntington, W.Va.		
Mineral	Same			Midget B.H.	, Packer
	3-20-52			Size 7"	
Completed Not shot	7-10-52			Depth 2867	SLM
Open flow	41/10ths M	in 7# 25	311	Coal at 71	211
Volume	10,086,000		Pπ	ODAL & F.	υ Δ' <del>Ι</del>
Rock Pressure	775 lbs. 18				~.
Fresh Water			blr. per hr.		
Salt Water	16301, 13 -	10" blr	per hr.		
	1792 H.F.				
Sandstone		22	Lime	2568	2 <b>57</b> 8
Slate	22	37	Sand	2578	2655
Lime	37	60	Slate	2655	2723
Sand	60	71	Red Rock	2723	2740
Coal	71 73	73 106	Lime 2867 SLM		2746
Slate Sand	106	157	Slate 2865 DLM		2852
Slate	157	267	Big Lime 3072 Di 3076 Si		3099
Sand	267	290	Total depth	₩4* <del>*</del>	3099
Slate	290	306	,		
Lime	306	313	Gas Pays:		
Sand	31.3	373	3076 4/10 W 7"		
Slate 382 DLM 385 SIN	409	409 464	3083-89 50/10 M		
Sand Slate & Shells	464	552	3089-979 42/10	vi 7" 23# 10,2	:06 MCF
Sand	552	591	CASING RECORD		
Slate	391	752	4-12-52 13 3/8"	casing, Ran	20 bags
Sard	752	780	aquagol. Pumped		
Slate	780	976	circulation and		
Sand	976	1018	6.0		
Slate Sand	1018 1072	1072 1091	4-17-52 10€" ca		
Slate	1091	1152	aquagel. Pumped	plug to 1100	) Y o
Sand	1152	1205	5-24-52 8 5/8"	manina Dan 9	9 manles
Slate	1205	1246	aquagol. Pumped	-	
Sand 1210 DIM-1224 S		1263	circulation and		<b>6 3</b> 000
Slate	1263	1271			
Sand	1271 1370	1370	6-20-52 7" cas:		
Slate Sand	1402	1402 1440	aquagel. Pumped		· Good
Slate	1440	1451	circulation and Columbian Carbon		
Sand	1451	1690	Oorginatett Ostoni	r combana ore	AA -
Slate & Shells	1690	1.71.2			
Sand	1712	1782			
Slate	1782	1786			
Sand Slate	1786 2039	2039			
Red Rock 2083 SIM	2039 72045	2045 2054			
Slate & Shells 2066 1		21.10			
Red Rock	2110	2113	•		
Sand	2113	2164			
Slate & Shells	2164	2271			
Sand	2271	2286			
Slate Red Rock	2286	2354			
Slate	2354 2375	2375 2391			
Lime	2391	2455			
Red Rock	2455	2466			
Slate & Shells	2466	2568			
τ -	•				



#### STATE OF WEST VIRGINIA DEPARTMENT OF MINES

Quadrangle Callbert 3 NW

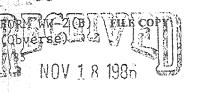
Permit No LOG-293 DD

OIL AND GAS DIVISION Drill Deeper WELL RECORD

Rotary	$\cdot \square$
Spudder	
Cable Tools	K
Storage	

Oil or Gas Well Gas

et/ltteneteronionimentoronimentorionimentorionimentorionimentorionimentorioni					AND SELECTION OF THE PROPERTY		(KIND)	· ·
Company Citie	m Service	Oil Compai	øХ	Cosine and	772	V . C		
Address Box 8	373, Charl	estan, W. Va	a. 25323	Casing and Tubing	Used in Drilling	Left in Well	Packers	
Farm Chafin I	Land Com	pany	Acres 774. 04			:		
Location (waters)				Size				
			_Elev.1617.45	16			Kind of Packer	
District Triade				13			ARTICE OF E SCIECE	
The surface of tra					iditional pi	œ run	Size of	
Chafin Land	Bldg.	AddressHuntin	igton, W. Va.		hen deepen		3126 01	
Mineral rights are						***	Danak and	
				, 0			Depth set	
Drilling commence				5 3/16				
Drilling commence	DD 4-21	-65	***************************************	33/8''	308Z1	pulled	Perf. top	
Drilling completed	ot v		· · · · · · · · · · · · · · · · · · ·	94	when deep	<del>                                     </del>	Perf. bottom	
				Liners Used	VV 25.05 05 05 05 05 05 05 05 05 05 05 05 05 0		Perf. top	
							Perf. bottom	
*			Inch	echt control (Control Control			december the common with the state of the st	Shirtan and Adjustic
			Inch	CASING CEM	ENTED	_SIZE	_No. Ft	_Dat
			Cu. Ft.					
			hrs.		100			
Oil		41 4	bbls., 1st 24 hrs.				_FEETINC	
WELL ACIDIZE	not acr	dized		FEE	TINC	HES	_FEETINC	CHE
WELL FRACTUI	**************************************	_		FEE	TINC	HES	_FEETINC	CHE
RESULT AFTER ROCK PRESSUR			aning out and 17 hours 46	drilling de	eper 174 M	ICF from	Big Lime	
						Fa	•	***************************************
MANAGER TO THE STATE OF THE STA					T		To Commission Williams Commission	
Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks	m102114785577455
Old total de	pth							
Big Lime		r	2852	3099				
distill the flig adminished to the to the			1000 des. des (000)		i-			
Drilled Dee	TO #P							
CONTRACTOR STATE S	Marine de la companya del companya del companya de la companya de					*		
Big Lime			3099	3123	Gas 3110-	18' incr.	to 174 MCF	
Big Injun			3123	31531				
						Provincia di America		
Drilled dee	per total	lepth	Cars was was was was	31531				
, ]								
			MIT ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (				north country and the second	
Before dril	Ling deepe	r and clean	ing out gas g	auged 23 M	CF into the	line - fir	nal open	
			ng deeper 17					
		:						
-	:				-			
					1-1-1		~	
5		4			****	4		
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100								
Legiplatori a				1	\$24252623			
				10		K		
					APO.	4	A.	
					PEC 265	#	**************************************	Skarn
				E	Vest EIVER	7		, some





				- 00	00 5		
	Well No.	Chafin	Land	Co.	A	#1.5W	<b>TT/</b> 3
2)	Operator's	c1	- 1	0	11 A 17	JL1 OTT	1170
1)	Date:l	November	3		, 13.	86	

3) API Well No. 47 O

Permit

### DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

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

DOCATION:   Elevation:   1617-45    Watershed:   Rich Creek of Guyandotte River   Logan	4) WELLTYF						/ Underground	storage	/ Deep	/ Shallow <u>X</u> /)
Dustit: Triadelphika Coupty: Logan Quadrangie: Man 456  WELLOPERATOR (fitias Service on 1000F: 800 7) DeSIGNATEDAGENT Paul D. Phillips Address Charleston. W 25923 Address DILLING CONTRACTOR: Name Linknown. 4f. rhis time Address Rf. 2, Rox 159-Rby. #34 Address Hamlin. W 25523  PROPOSED WELL WORK: Delil Doll deeper X Redfill Stimulate Pleg of old formation Perforance new formation. Other physical change in well (specify). COEOLOGICAL TARGET FORMATION. Davonian Shale. 12 Estimated depth of completed well. 5750 Feet 13 Approximate trais depthir: Fresh. 20, 4618-468 Feet; asit, 1630, 1792 Feet. 14 Approximate coal seam depthis: 71-123 fit coal being mixed in the area? Yes. X No. 50 CASING AND TURING PROGRAM CONSING OR STEURICATIONS STEURIC	EN LOCATION	J. Elea	ation:	1617.4	5 '	169				River
WELLOPERATOR CIFIES Service Oil CODE: 4800 7) DESIGNATED AGRN: Paul D. Phillips Address CBS COPP. P.O. Box 873 Address P.O. Box 873 Charleston, WV 25323 Cha	,	Die	rict.	Triade	lphi	a _	County:			
Old & CAS INSPECTOR TO BE NOTIFIED  Name   Icerty Holcomb   Address   Rt. 2, Rox 159-lbsy, #34   Redrill   Stimulate   Stimulate   Stimulate   Stimulate   Stimulate   Rt. 2, Rox 159-lbsy, #34   Redrill   Stimulate   Rt. 2, Rox 159-lbsy, Rt. 2, Redrill   Stimulate   Rt. 2, Redrill   Stimulate   Rt. 2, Rox 159-lbsy, Rt. 2, Redrill   Stimulate   Rt. 2, Redrill   Rt. 2, Redrill   Stimulate   Rt. 2, Redrill   Rt. 2, Red	6) WELLOPE	ERATOR	Cities	Servi	ce O	ilCOI	DE: <u>9800</u>	7) DESIGNATED	AGENT Paul D	. Phillips
Old & CASINSPECTOR TO BE NOTIFIED  Name   Icerty Holcomb   Address   Rt   2, Box 159-Huy, #34   Address   Hamlin, WV   25523   Address	Address		& Gas	Corp.	P.O.	Box	873 °	Address		
Name		Cha	rlesto	n, WV	253	23			Charle	ston, WV 25323
NameInknown_at_this_time	8) OIL & GAS	SINSPECT	OR TO F	BE NOTIF	FIED			. ,		
Address Rt. 2, Rox 159-lkey, 834	. ,							Name <u>Unk</u> n	own at this t	ime
PROPOSED WELL WORK: Drill   Drill   Drill   Drill   Drill   Stimulate		Rt	. 2. B	ox 159	Hwy	#34	<u> </u>	Address		
Plug off old formation. Perforate new formation. Other physical change in well (specify)  Office physical change in well (specify)  Office physical change in well (specify)  Devonition Shale		На	mlin,	WV 25	523					
Plug off old formation. Perforate new formation.  Ober physical change in well (specify)  Devonian Shale  12) Estimated depth of completed well, 5790 feet  13) Approximate coal scam depths: Fresh, 20, 461-468 feet; salt_1630_1792 feet.  14) Approximate coal scam depths: Presh, 20, 461-468 feet; salt_1630_1792 feet.  14) Approximate coal scam depths: Presh, 20, 461-468 feet; salt_1630_1792 feet.  Set Grade fee	IO PROPOSE	D WELL V	VORK:	Drill		_/ Drill	l deeper X	/ Redrill	/ Stimulate	/
Other physical change in well (specify)  12) Estimated depth of completed well, 5790	10) 1 KO1 052	D ((222						rate new formation	/	
Devonian Shale				-						
12) Estimated depth of completed well, 5.790	II) GEOLOGI	CALTAR	GET FOR	-				De Australia		
13) Approximate trata depths: Fresh, 20, 461-468 feet; salt, 1630,1792 feet.  14) Approximate coal seam depths: 71-73								t		
14) Approximate coal seam depths: 71=73	12) Appro	vimate trat	a denths:	Fresh.	20. 4	61-46	68feet; sa	lt, 1630, 1792	feet.	
CASING AND TUBING PROGRAM  CASING OR  CASING	14) Appro	vimate coa	l seam den	ths: 7	1-73					/ No/
CASING OR TIBLIAND OF SPECIFICATIONS TO THE WATER ALLS OF STREET THAT THE STATE OF STREET THAT THE STREET STREET THAT THAT THE STREET THAT THE STREET THAT THE STREET THAT THAT THAT THE STREET THAT THAT THE STREET THAT THAT THE STREET THAT THAT THE STREET THAT THAT THAT THE STREET THAT THAT THAT THAT THAT THAT THAT T										
TUBING TYPE    Sitz   Grade   perfit   New   Used   For defilling   Left in well   Coale (feet)		II			\$		FOOTAGE	INTERVALS	CEMENT FILL-UP	PACKERS
Condition   16	TUBING TYPE		l	Weight	9	Lined	For delling	Left in well		
remeth water 13 3 /8 48 388'2" 388'2" 20 bags Aquaged remembers 10 3 /4 32 1226' 663'2" 28 bags Aquaged remembers 10 3 /4 32 1226' 663'2" 28 bags Aquaged remembers 10 3 /4 24 2084'6" Pulled 22 bags Aquaged 20 bags Aquaged		#	Grade		New	Useu	H			Kinds
10 3/4   32   1226!   663'2"   28 bags Aque ged	Conductor			<del>                                     </del>	<b> </b>	1	+}		20 hags Agua	
networkinte 8 1/4 24 2084'6" Pulled 22 bags Aquage1  Production 7 23 2860'3" 2860'3" 20 bags Aquage1  Taglication 4 1/2 N 80 11.6 X 5790' 5790' 271 Cu. Ft. X  Perforations:  Top Bottom  Swill be the only new csg & cement that will be put into the well; the rest of the casing already in the well.  OFFICE USE ONLY  DRILLING PERMIT  Permit number 47-045-0293-D November 20 19 86  This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof Notification must be given to the District Oil and Gas Inspector, (Refer to 6. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper listrict oil and gas inspector 24 hours before actual permitted work as commenced.  The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the everse hereof.  November 20, 1988  Tunless well work is commenced prior to that date and prosecuted with due diligence of the proper list of the	Fresh water	11	ł		<del> </del>	+	11			3)
reduction 7 23 2860'3" 2860'3" 20 bags Aqua getable set  **Rong duction**   4 1/2 N 80 11.6 X   5790' 5790' 271 Cu. Ft.   **  **Perforations:  Top Bottom  Set will be the only new csg & cement that will be put into the well; the rest of the casing already in the well.  OFFICE USE ONLY  DRILLING PERMIT  **November 20 19 86*  This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof Notification must be given to the District Oil and Gas Inspector. (Refer to a. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper listrict oil and gas inspector 24 hours before actual permitted work has commenced.)  The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the everse hereof.  November 20, 1988  **unless well work is commenced prior to that date and prosecuted with due diligence and proper listrict oil and Gas Inspector. (Refer to any modifications and conditions specified on the everse hereof.  **Permit expires**  November 20, 1988  **unless well work is commenced prior to that date and prosecuted with due diligence and proper listrict oil and Gas Tile  **Permit expires**  **Director**  Director**  Director*  Director**  Director*  Di	Coal	11	1	T		l	4			
Top Bottom  Service of the contractor of the castration of the conditions contained herein and on the reverse hereof Notification must be given to the District Oil and Gas Inspector. (Refer to all permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the everse hereof.  November 20, 1988  Flat: Casting Fea 2, 1989  Bondy Agent: Plat: Casting Fea 2, 1989  Bondy Agent: Plat: Casting Fea 2, 1980  Director Notification plan, subject to any modifications and conditions specified on the everse hereof.  November 20, 1988  Flat: Casting Fea 2, 1980  Director Notification of Oil and Gas Inspector. Refer to the permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the everse hereof.  November 20, 1988  Flat: Casting Fea 2, 1982  Flat: Casting Fea 3, 1982  Bondy Agent: Plat: Casting Fea 3, 1982  Bondy Agent: Plat: Casting Fea 3, 1983  Flat: Casting Fea 3, 1984  Director Noticion of Oil and Gas File	Intermediate	11		1		<del> </del>				1
Swill be the only new csg & cement that will be put into the well; the rest of the casir already in the well.  OFFICE USE ONLY  DRILLING PERMIT  November 20 19 86  Date  This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof Notification must be given to the District Oil and Gas Inspector. (Refer to o. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper listrict oil and gas inspector 24 hours before actual permitted work has commenced.)  The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the correction of the permitted work is second to the construction of the permitted work is second to the construction of the permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the correction of the permitted work is commenced prior to that date and prosecuted with due diligence and the prior to the prior to the date and prosecuted with due diligence and prior to the prior to the prior to the date and prosecuted with due diligence and prior to the	Production	11 /		1		-	11			1
Top Bettom  Is will be the only new csg & cement that will be put into the well; the rest of the casing already in the well.  OFFICE USE ONLY  DRILLING PERMIT  November 20 19 86  Date  This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof Notification must be given to the District Oil and Gas Inspector. (Refer to only 10 and gas inspector 24 hours before actual permitted work. In addition, the well operator or his contractor shall notify the proper listrict oil and gas inspector 24 hours before actual permitted work has commenced.)  The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the everse hereof.  November 20, 1988  Fee 2 WBCP SEF Other  Director Vivision of Oil and Gas File	CS2.	14 1/2	N 80	177.0	X	<del> </del>	₩ 3/90°	3790	Z/I Gu. IL.	11
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OFFICE USE ONLY  DRILLING PERMIT  A7-045-0293-D  November 20 19 86  Date  This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof Notification must be given to the District Oil and Gas Inspector. (Refer to 8.8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the prope listrict oil and gas inspector 24 hours before actual permitted work has commenced.)  The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the everse hereof.  November 20, 1988  Tunless well work is commenced prior to that date and prosecuted with due diligence of the permitted work has commenced prior to that date and prosecuted with due diligence of the prior to the permit expires of the prior to the permit posted at the drilling location.  Director, Vivision of Oil and Gas  File	3311 b	1 tho 6	n 1 17 no	DET CEG	8, 00	ement	that will	he but into 1	the well; the	rest of the casin
OFFICE USE ONLY  DRILLING PERMIT  November 20 19 86  Date  This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof Notification must be given to the District Oil and Gas Inspector. (Refer to o. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the prope listrict oil and gas inspector 24 hours before actual permitted work has commenced.)  The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the everse hereof.  Permit expires  November 20, 1988  Funds:  Plat: Carsing Fee 3 WBCP Ste Other  Director Vivision of Oil and Gas File				ew Cog	0. 0.	-111-11	CILCLE WALLE	- F	•	
Permit number 47-045-0293-D  Date  This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof Notification must be given to the District Oil and Gas Inspector. (Refer to o. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper listrict oil and gas inspector 24 hours before actual permitted work has commenced.)  The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the everse hereof.  Permit expires  November 20, 1988  Tunless well work is commenced prior to that date and prosecuted with due diligence are properly and the properly of the permit posted at the drilling location.  Director vivision of 0il and Gas  File	aiready.	III LIIE	METT.				OFFICE LICE	ONILV		
Permit number 47-045-0293-D  November 20 19 86  Date  This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof Notification must be given to the District Oil and Gas Inspector. (Refer to 0.8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper listrict oil and gas inspector 24 hours before actual permitted work has commenced.)  The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the everse hereof.  Permit expires  November 20, 1988  Junless well work is commenced prior to that date and prosecuted with due diligence.  Bondy Agent: Plat: Cassing Fea WCP St.F. other  Director Vivision of Oil and Gas File								ELEND EXIT		
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	NOTE :		C+L!=	mls mart = 1	at the	drilling !	location		W. Juny	and Coo
Con the reverse side of the APPLICANT'S COPY for instructions to the well operator.	NOTE: Keep	one copy o	i this peri	mit posted	at the	ummg i	iocation.	virector, Vi	vision of Uil	and Gas File
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WR-35

WELL TYPE: Oil

# FEB 29 1988

State of Mest Hirginia Well No. A-1, GW-1179 DEPARTMENT OF ENERGY

Bil und Cas Pivision

Operator's Farm Chafin Land Co.

\_\_ 0293-DD

Date February 26, 1988

API No. 47 - 045

DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

WELL OPERATOR'S REPORT

OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

Liquid Injection / Waste Disposal /

OCATION: Elevation: 1617.45 Watershed	Rich Creek	of Guyando	tte River	•
District: Triadelphia County Lo	gan	Quadrangl	e' Man	
OMPANY Cities Service Oil and Gas Corporation	Carrier and the second			
DDRESS P. O. Box 873, Charleston, WV 25323	Casing	Used in	<b>left</b>	Cement fill up
ESIGNATED AGENT Paul D. Phillips	Tubing	Drilling	in Well	Cu. ft.
DDRESS P. O. Box 873, Charleston, WV 25323	Size			
URFACE OWNER Chafin Land Co.	16 Cond.	22	22	Re-introduced in the control of the
DDRESS Box 2195, Huntington, WV 25722	13- 3/8"	388	388	20 sx Aquagel
INERAL RIGHTS OWNER Chafin Land Co.	10-3/4"	1226	663	28 sx Aquagel
DDRESS Box 2195, Huntington, WV 25722	8 3/4"	2085	Pulled	22 sx
IL AND GAS INSPECTOR FOR THIS WORK Arthur	7			Aquagel 20 sx
Clair ADDRESS Box 468, Brenton, W	5 1/2	2860	2860	Aquagel.
ERMIT ISSUED 11-20-86				
EPENING COMMENCED 7-21-87	4 1/2 * 3	5730	5730	2750
EEPENING COMPLETED 7-21-87		5.5.40		
F APPLICABLE: PLUGGING OF DRY HOLE ON	* 23/8"	5648	5648	
ONTINUOUS PROGRESSION FROM DRILLING OR	Liners			· ·
EWORKING. VERBAL PERMISSION OBTAINED N	used			
	*NEW TU	BULARS	- TR. 10 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	
EDIOGICAL TARGET FORMATION Devonian Shale/Bere				
Depth of completed well 5750 feet			Tools_	
Water strata depth: Fresh None feet;	Salt_Non	efeet		
Coal seam depths: None	_ Is coal l	being mine	d in the	area? Yes
PEN FLOW DATA				
Producing formation Devonian Shale/Berea/S	Sunbury Pay	zone dept	h 3672-56	57 feet
Gas: Initial open flow Mcf/d				And the second second
Final open flow 150 Mcf/d				
Time of open flow between init				
Static rock pressure 445 psig(surface				
(If applicable due to multiple completion		arc, arcer		ידי שחות כי
		zona dant	·. ኤ	£
Second producing formation				
Final open flow Mcf/d				
Time of open flow between init		1	<b>▲</b> .83 5	a 25

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

Devonian Shale 5657-5464 Frac'd w/ 60,000# 20/40 sd, 1091 MSCF N2, TL&T 144, 45 BPM Foam Devonian Shale 5356-4744 Frac'd w/ 75,000# 20/40 sd, 1047 MSCF N2, TL&T 187, 50 BPM Foam Devonian Shale 3826-4588 Frac'd w/ 75,000# 20/40 sd, 907 MSCF N2, TL&T 144, 70 BPM Foam Berea 3706-14 Frac'd w/ 50,000# 20/40 sd, 392 MSCF N2, TL&T 205, 20 BPM Foam Sumbury Shale 3672-93, Frac'd w/ 25,000# 20/40 sd, 251 MSCF N2, TL&T 154, 20 BPM Foam



#### WELL LOG

DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

			DEPARTMENT OF ENERGY
FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Big Lime Sunbury Shale Berea Devonian Shale Onondaga	2852 3100 3695 3715 5720	3100 3695 3715 5720 5750	
			new TD 5750 Old TD 3153 newffg 1597

(Attach separate sheets as necessary)

Cities Service Oil and Gas	Corporation
Well Operator	
By: Paul O. Phillips	Operations Manager
Date: February 26, 1988	

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 will, encountered in the drilling of a well."