

west virginia department of environmental protection

Office of Oil and Gas 601 57th Street SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary www.dep.wv.gov

May 19, 2015

WELL WORK PERMIT

Re-Work

This permit, API Well Number: 47-7700007, issued to COLUMBIA GAS TRANSMISSION, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin

Chief

Operator's Well No: 7387

Farm Name: FREELAND, DAVID A.

API Well Number: 47-7700007

Permit Type: Re-Work Date Issued: 05/19/2015

PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

- 1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
- 2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
- 3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
- 4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
- 5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
- 6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours
- 7. Well work activities shall not constitute a hazard to the safety of persons.
- 8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

WW - 2B (Rev. 8/10)

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL WORK PERMIT APPLICATION

1) Well Operato	r: Colum	nbia Gas	Transmission, LL0	307032	Preston	Portland	Terra Alta		
				Operator ID	County	District	Quadrangle		
2) Operator's Well Number: Terra Alta 7387 (existing well) 3) Elevation: 1928									
4) Well Type: (a) Oil or Gas _X									
(b) If Gas: Production / Underground Storage _X									
	Deep_X/ Shallow								
5) Proposed Target Formation(s): Oriskany Proposed Target Depth: 5418 - 5443 6) Proposed Total Depth: 6465 (existing) Feet Formation at Proposed Total Depth: Oriskany 7) Approximate fresh water strata depths: 45′, 340′ (as reported by driller in 1948) 8) Approximate salt water depths: none reported by driller in 1948									
9) Approximate	coal sea	m depths	s: none reported b	y driller in 1948					
10) Approximate	e void de	pths,(coa	al, Karst, other):	none reported b	by driller in 1948				
11) Does land c	ontain co	al seam	s tributary to acti	ve mine? _n	0				
· · ·	·		nd fracturing methor I wellhead. Re-per				eded)		
Casing and tuhing	listed held	w are evi	etina						
Casing and tubing listed below are existing. 13) CASING AND TUBING PROGRAM DIC 3 13 2 0 15									
13) TYPE SI	PECIFIC		ASING AND TUB	FOOTAGE	INTERVALS	1.4			
	<u>Size</u>	<u>Grade</u>	Weight per ft	For Drilling	Left in Well	Fill -up (Cu	. Ft.)		
Conductor	16	??	??	20	20	no record of	cement		
Fresh Water	11.75	??	??	331	331	likely cemented bu	ıt no record		
Intermediate	9.625	J-55	??	1588	1250 - 1588	likely cemented bu	it no record		
Intermediate	7	J-55	23	4799	4799	300 s	sx		
Production	4.5	J-55	12.6	5470	5470	Stage 1: 100 sx / S	tage 2: 5 sx		
Tubing							1		
Liners						Rec Office of	oli & Gas		
	Packers: Kind: Sizes:								
Dept	ths Set						05/22/2015		

FORM 216 AA 1 CSD



OFFICE MEMORANDUM

10

MR. ROBERT C. WEIDNER

DATE OCTOBER 5, 1982

FROM

MARK A. NEWMAN

SUBJECT

TERRA ALTA NORTH - WELL 7387

Well 7387 was reconditioned for storage in 1960. During drilling, cable tools or junk iron was encountered at 4799'. The 7" casing was then set from 4799' to surface and cemented to 3750'. At this point, the hole was diverted to the side of the cable tools or junk iron and drilled to its new total depth at 5470'. Next, 4-1/2", J-55, 12.6 #/ft tubing was set from total depth to surface and cemented by a two-stage cement job consisting of 110 sacks of latex cement. The Oriskany was perforated from 5421' - 5461'. The Chert was not perforated. The attached casing program and well record should help to illustrate the method of completion.

Terra Alta North's Well 7387 should be considered for reconditioning. Anticipating the need for more deliverability in 1985 and beyond, Well 7387 should be redrilled from 4799' - 5470', new 4-1/2" casing set and cemented to surface and the Chert and Oriskany zones should be perforated and acidized. I would recommend reconditioning to occur in 1985. At the time of reconditioning, the wellhead can be modified.

Mark A. Navman

MARK A. NEWMAN STORAGE ENGINEER

MAN/ss

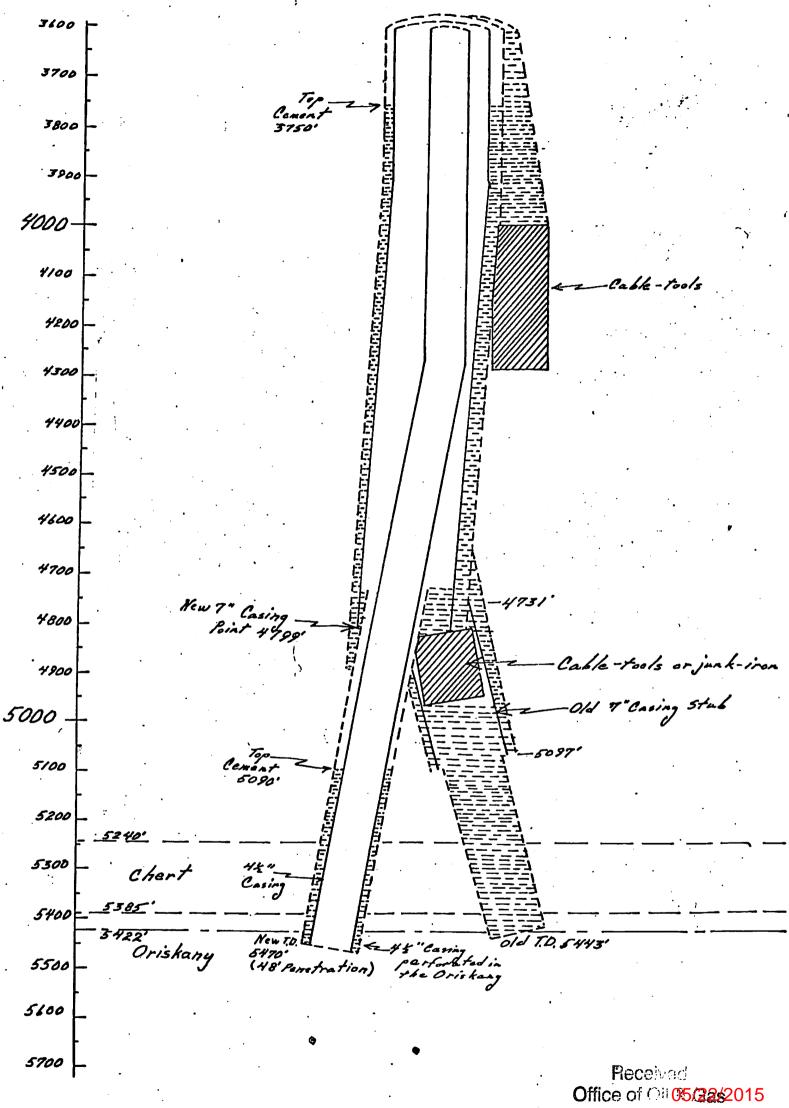


STATE OF WEST VIRGINIA DEPARTMENT OF MINES OIL AND GAS DIVISION

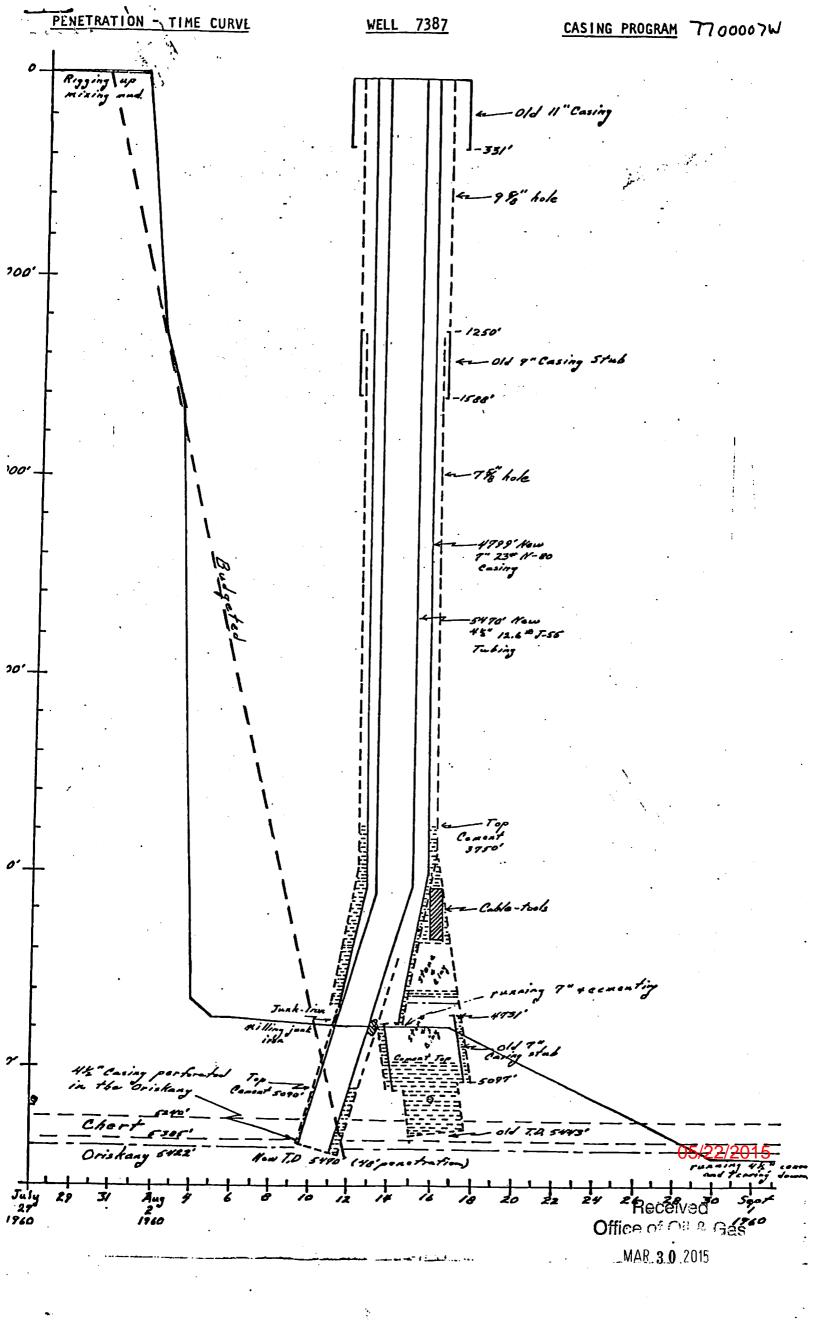
WELL RECORD

Oil or Gas Well Cas-Redrill

Company	Atlantic	Scaboard Com	poration			T	(KIND)
Address	P.O. Pox	1273 Charles	ston, W. Va.	Casing and		Left in	
Farm	J. Paul M.	artin	_Acres	Tubing	Drilling	Well	Packers
Location (wat	ers)	Lick Consider	Acres		1	·	
Well No	X-76-738	7	Elev				
DistrictPo	ortland	County Pr	eston	16	+		Kind of Packer
The surface of	tract is owned	lin fee hy J D	aul Martin	_ 13	 		
		Address	aur rarun		 	-	Size of
Mineral rights	are owned by	T. Paul	Martin	_ 8¼	1		
		Address	Matril		1,7991	47991	Depth set
Orilling comme	enced	7 27 60		5 3/16	·	-4	
Orilling comple	eted	9- 1-60		- 12.6	#_54721	51:721	Perf. top
)ate Shot	Fr	om	То	2	 		Perf. bottom
Vith			10	 Liners Used 			Perf. top
			Incl	- <u></u>	 		Perf. bottom
	_/10ths Merc	. in	Incl				
olume	5.635		M_Cu. Ft	CASING CEM	ENTED	SIZE	No. FtDate
ock Pressure_	570	lbs.	hrs	•	A Committee of the Comm		
il			bbls., 1st 24 hrs	. COAL WAS F			FEETINCHES
ELL ACIDIZ	EDS	no bel or	obis., 1st 24 hrs				
					INC	nes	FEETINCHES
ELL FRACTI	URED			FEE	TINC	HES	FEETINCHES
							
ESIILT AFTE	D TDEATMEN	N/M			 .		
OCK PRESSI	DE VEGEN A	NT See t	elow				
rock Water	RE AFTER T	REATMENT	See below				
Tesh Water		Feet		Salt Water		Fee	
Formation	Color	Hard or			Oil, Gas		
	-	Soft	Тор	Bottom	or Water	Depth	Remarks
Chert	1		5031.	7 000			
Shale	1		52341	54021			
Oriskany			5402° 5418°	54651	Gas		
-		}	* .				İ
Well ASC	X- 76 - 7387	(formerly Ho	pe 9208) was	drilled out	with rotary	using mu	d to original.
		(l I	1			4
rotar deb	un and was	completed a	s a storage	as injection	and withdr	awal well.	• The 7" 23#
		21 M 300 Sa	exa or the ger	cement. In	is string o	f casing t	vas run to control
a caving	and loss c	irculation c	ondition.	j			
rollowing	redrillin	g to the ori	ginal total d	epth the 42	, 12.6# cas	ing was r	n and cemented
1			•	•		ł	i.
	sarve of T	cement.	The 42 casi	ng was perfo	rated with	capsule je	ets from
5421 - 5	162' with	shots/ft.	Following and	eforation -	howa	her -	s. Following
1		. 02007101	romowing pa	rioraung,	nere was a	erior or g	rollowing
acidizatio	on with 50	gallons mu	l cleanout ac	id. the open	flow was 2	BL MCF. I	following 4000
6a I	1		i	ſ		ł .	
gallons H	IL acid, of	en flow was	2,250 MCF.	Following fi	nal acid jo	of 8,000	gallons of
1	1	was 5,635 M				_	
Avilly	obou 1108	الم ورنور ده=	· · · ·				05/22/2015
48 Hour re	ock pressur	e following	final shut-u	was 570 me	1.		-
	-]	8		באן פול בביי	▼	\cap	Received
İ		İ		1			ffice of Oil 2 Gas
1						•	MAR 30 2015
1	1	. }	}	- 1			ο ο ο κυίς
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MAR 30 2015





TERRA ALTA 7387

Well 9208 J. Paul Martin

Record of Abandonment

Commenced Abandoning Oct. 16, 1953 Completed Abandoning Nov. 12, 1952.

Total Depth 5443'. Filled with cement from 5443 to 4940. Ripped 7" casing @ 4631'. Pulled 4631' and left 454' in hole.

Bridged with clay and stone from 4685' to 4665'. Installed 4-Bgs. Gement 4665 to 4655'. Installed Bridge and 5-Bgs. cement from 1625' to 1615'. Ripped 9" casing at 1250'. Pulled 1250' of 9" casing and left 338' in hole. Installed bridge and filled with clay mud from 1250 to 1175'. Run 10-Bgs. cement 1175 to 1125'. Installed Bridge and cemented from 350 to 330' with 13-Bgs. cement. Filled with Clay mud 330 to 50'. Installed 10-Bgs. cement from 50 to 30'. Filled with clay to surface. 331' of 11" 0.D. Casing and 19' 6" of 16" 0.D. Pipe left in well.

Abandoning done by Acme Drilling Company

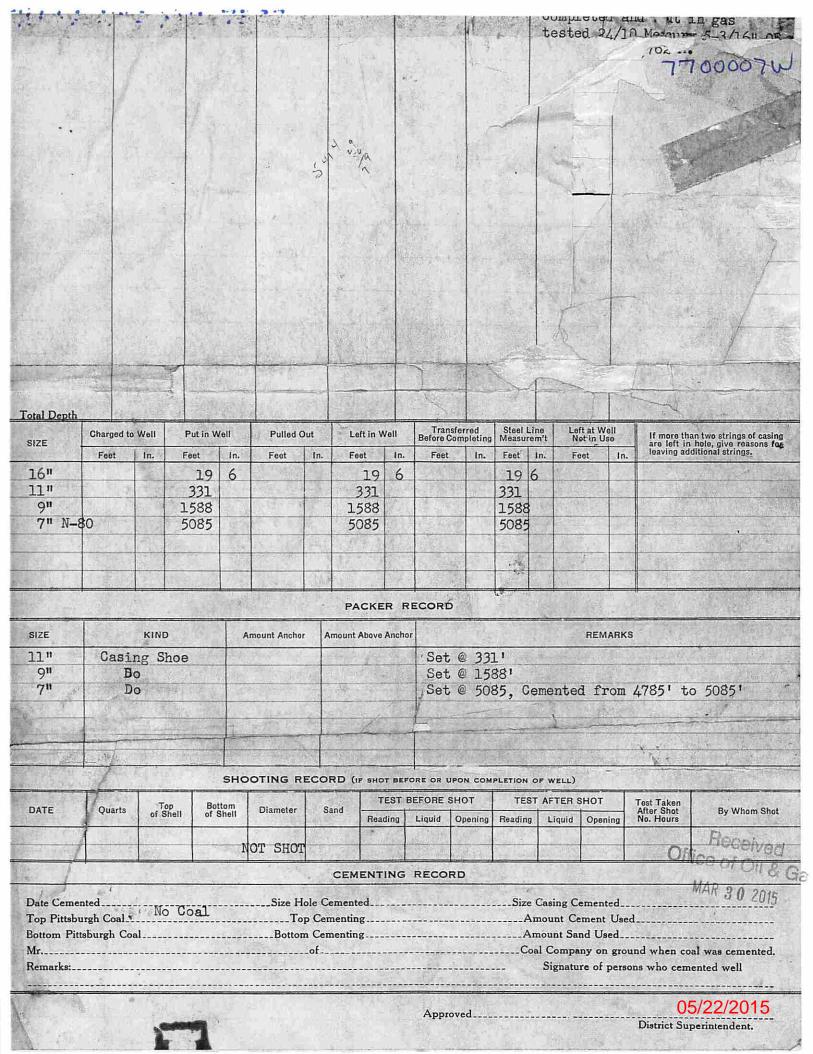
Driller J.H.Toothman T.Dresser H. J. Lamp

Left in Hole - Pipe Tally Measure

19' 6" 16" Pipe
333' 3" 11" Pipe
341' 7" 9" 0.D. Casing
442' 0" 7" 0.D. Casing
1 11-3/4" Steel Casing Shoe
1 9" Do
1 7" Do

Office of Oil & Gas
MAR 3 0 2015

Well No. 9208 District.	R Lease N ortland	ord of Hor o.53822	Name J.	Paul Mar	tin		District	E. W. Acres 121 ridgeport West Va.
Location Made Rig Commenced Drilling Commence Rig Contractor Drillers Orea	ed Mar Guy L. Nutter, J	. 27, 194 Warner	.8	eckard	Rig Completed Drilling Compl Sprilling Cont If H. N. G. Co. T Tool Dressers	eted Sept ractor } ools. String No. } WILLIS	Guy L. Ogden, B	8 Warner .IDavisson
FORMATION	Open or Close Hard or Soft	ТОР	воттом	Steel Line Measurement	Water Found Depth	Oil Found Depth	Gas Found Depth	REMARKS
Gravel Lime Slate Lime Slate Lime Lime		0 22 237 275 300 305	22 237 275 300 305 540		45 38° 340 35°	Clay coment		Hole full Hole full 331 11 answer Bailers per Hr.
Shale Lime Shale Lime BENSON SAND Lime Shale Lime Shale Lime Slate Lime Shale Slate & Shell Lime Slate & Shell Lime Slate & Shell Lime Dark Shale TULLY LIME Shale Slate Shale	s	540 965 1040 1155 1209 1238 1472 1585 1604 1840 1850 2300 2400 2700 3425 3590 3620 3850 3900 3930 4224 4232 4350	1040 1155 1209 1238 1472 1585 1604 1840 1860 2300 2400 2700 3425 3590 3620 3850 3900 3930 4224 4232 4350 4365	1565	16 175 1250 615 1625	Vold Bridge & CLAY Vold Bridge & To	* 1250 9" * 341'7"-9 * 7588 Bo	casing impred committeell Aom 9 casing
Shale Lime Shale Shale Shale Shell Shale Lime Brown Shale CORNIFEROUS L CHERT CORNIFEROUS I	Gray	4365 4498 4505 4580 4987 4990 5180 5183 5190 5212	4498 4505 4580 4987 4990 5180 5183 5190 5212 5264			Cement Ciny - Stone Void Void NAR 30 20	5245 5247 5252–58 5264 5413 5414–29	25/10 W. 3/4" F.M. 57/10 W. 3/4" F.M. 57/10 W. 3/4" F.M. 6/10 W. 2" 0.F. 8/10 W. 2" 0.F. 100/10 M. 1" F.M. 25/10 M. 6-5/8" 0.F.
Total Depth			5443	*/	5443			05/22/2015



Operator's Well Number Terra Alta 7387

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6, Section 8(d) IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
J. Paul Martin, et ux	Columbia Gas Transmission 11 C	Storage Lease 90335	338 / 537

Acknowledgement of Possible Permitting/Approval In Addition to the Office of Oil and Gas

The permit applicant for the proposed well work addressed in this application he reby a cknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be ac quired from the appropriate authority before the affected activity is initiated.

Well Operator: By:Its:

Columbia Gas Transmission, LLC
James E. Amos

Senior Well Services Engineer

MAP 3 0 7015

H & Gas

WW-2A (Rev. 6-07)

depprivacyofficer@wv.gov

i). Date: _	3/3/15		=
2.) Operator's	Well Number	Terra Alta	7387
	State	County	Permit
3) API Well No	47-	077	- 00007

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE AND APPLICATION FOR A WELL WORK PERMIT

3.) API Well No.:

4) Surface Ow	ner(s) to be served:		5) (a) Coal Ope	erator		
(a) Name	David A. & Angela J. Freela	nd 🦯	Name	not operated		
Address	8461 Saltlick Rd		Address			"
	Terra Alta, WV 26764	•				
(b) Name			(b) Coal Ov	wner(s) with De	eclaration	
Address			 Name	not operated		
			 Address	7. 		
			 :			
(c) Name			Name	(
Address			Address	`		
71441000				(-		
6) Inspector	Gayne Knitowski		(c) Coal Le	ssee with Decl	laration	<u> </u>
Address	PO Box 108		Name	SSCC WITH DCC	aration	
Address	Gormania, WV 26720		Address	<i>></i>		-
Tolonhono	Section con recoursed to		_ Address	·		
Telephone	304-546-8171	EDOONO NA		VE NOTICE		
teretreare arresta			MED ABOVE TA			
	he lease or leases or o	other continuing	contract or contra	icts by which I h	old the right t	o extract oil and gas
OR V Included is the	he information required	d by Chapter 22	Article & Section	9/d) of the Cor	to of Most Mi	rainia (soo nago 2)
	that as required unde					
	ation plat, and accomp					
application, a loc	Personal Servic			ign on the a	bove named	parties by.
· · · · · · · · · · · · · · · · · · ·			tal receipt attached	4)		
	Publication (Not			=./		
I have re				agree to the te	erms and co	nditions of any permit
issued under this		aptor LL o arre	200 0011 1, 0110 1	agree to the t	J	nament of any permit
	under penalty of law t	hat I have pers	onally examined a	and am familiar	with the info	rmation submitted on
	orm and all attachme				duals immed	liately responsible for
	ormation, I believe that					
	are that there are sign	ificant penalties	for submitting fal	se information, i	ncluding the	possibility of fine and
imprisonment.		\A\ . \O +			- /	γ
		Well Operator	Columbia Gas Transmi	ssion, LLC	9/	
		By:	James E. Amos	Jan	nc o	
		Its: Address	Senior Well Services Er 1700 MacCorkle Ave. S	7 /		
		Address	Charleston, WV 25325			
		Telephone	304-483-0073	-12/3		
Subscribed and	sworn before me this	//the day of			2015	S
Oubscribed and .	Sworn before the this	1111 day of	merca	-	2015	
Marin	Jasei Clark	سيب		Notary	Rublic	OFFICIAL SEAL NOTARY PUBLIC
My Commission	Expires 3/22/2	015		5/8	RY IL AL	STATE OF WEST VIRGINIA
Oil and Gas Privacy	· Copinal of	*** ** **) [3]	L 1010 10 1011 by 1-10 101	UMBIA GAS TRANSMISSION CORPORATION
			9) /:		SANDYVILLE, WV 25275
The Office of Oil and Your personal information	d Gas processes your per mation may be disclosed	sonal information, to other State age	, such as name, addre	ess and phone num in the normal cour	se of business	of our shegulatory adultés 2015

with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at 3 0 2015



WW-9 Rev. 5/10

	Page		of	
API Number 4	17 - 077		00007	
Operator's We	Il No. Terra A	lta 738	7	

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

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name Columbia Gas Transmission, LLC	OP Code 307032
Watershed Saltlick Creek C	uadrangle Terra Alta
Elevation 2002 County Preston	District Portland
Description of anticipated Pit Waste: no earthen pit to be utilized	
Do you anticipate using more than 5,000 bbls of water to complete t	ne proposed well work? Yes No X
Will a synthetic liner be used in the pit? N/A . If so,	what mil.?
Proposed Disposal Method For Treated Pit Wastes: Land Application Underground Injection (UIC Permit Nur	ANY WELL REFLUENT MUST RE CONTAINED IN TANS. 9Wh nber 34-009-03761, 34-121-20459, 47-093-00103, 34-167-23862)
Reuse (at API Number	
Off Site Disposal (Supply form WW-9 for X Other (Explain Pinegrove Landfill - Amanda,	
Drilling medium anticipated for this well? Air, freshwater, oil based -If oil based, what type? Synthetic, petroleum, etc	
Additives to be used? biocide, surfactant Will closed loop system be used? yes	
Drill cuttings disposal method? Leave in pit, landfill, removed offsi	te, etc. not anticipated
-If left in pit and plan to solidify what medium will be used -Landfill or offsite name/permit number? IF NEEDED: Pinegr	? Cement, lime, sawdust
on August 1, 2005, by the Office of Oil and Gas of the West Virgini provisions of the permit are enforceable by law. Violations of any law or regulation can lead to enforcement action.	term or condition of the general permit and/or other applicable mined and am familiar with the information submitted on this my inquiry of those individuals immediately responsible for accurate, and complete. I am aware that there are significant
Company Official (Typed Name) James E. Amos	Office of Oil &
Company Official Title Senior Well Services Engineer	MAR 3 0 2015
Subscribed and sworn before me this // the day of Many Marie Clendence My commission expires 3/22/2015	OFFICIAL SEAL NOTARY PUBLIC DATARY PUBLIC STATE OF WEST VIRGINIA MARY MARIE CLENDENIN COLUMBIA GAS TRANSMISSION CORPORATION RR 2 BOX 138 SANDYVILLE, WV 25275 MV commission stables Mario 22 2015 05/22/2015



T1000007 W

	LEGEND	
Property Boundary	Diversion (12/1/11/11/11	111111111111111111111111111111111111111
Road <u> </u>	Spring O	
Existing Fence — X — X — X —	Wei Spoi &	
Planned Fence / / /	Drain Pipe with size in inches	— ⁽³⁾
Stream	Waterway C	\Leftrightarrow \Leftrightarrow \Leftrightarrow
Open Ditch	Cross Drain 77777	
Rock 688888	Artificial Filter Strip	XXXXXXXXXXXXXXXX
North N	Pit: cut walls	
Buildings	Pit: compacted fill walls	July Commercial Commer
Water wells	Area for Land Application of F	Pit Waste
Drill site	(==	
_		
Proposed Revegetation Treatment: Acres Disturbed < 0.5	Prevegetation pl	₄ 6
Lime 2 Tons/acre or to correct to pH		
500	* <u></u> -	
Fertilizer (10-20-20 or equivalent)lbs	s/acre (500 lbs minimum)	
Mulch 2	acre	
See	ed Mixtures	
Area I		ea II
Seed Type lbs/acre	Seed Type	lbs/acre
Orchard Grass 20	Orchard Grass	20
Ledino Clover 10	Ledino Clover	10
Annual Rye 20	Annual Rye	20
Attach: Drawing(s) of road, location,pit and proposed area for land app	olication.	
Photocopied section of involved 7.5' topographic sheet.		
Plan Approved by: Lamp lutho		
Comments:		
-		
		m and and
Title: INSpector	Date: 3 13 Wit	Received Office of Oil & Gas
Field Reviewed? (Yes () No	MAR 3 0 7015

