

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

October 31, 2012

WELL WORK PERMIT Horizontal 6A Well

This permit, API Well Number: 47-8509998, issued to ANTERO RESOURCES APPALACHIAN CORPORATION, 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 of completion of drilling, 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.

ames Martin

Chief

Operator's Well No: VILLERS UNIT 2H

Farm Name: CAMPBELL, JOHN A. AND LINDA

API Well Number: 47-8509998

Permit Type: Horizontal 6A Well

Date Issued: 10/31/2012

Promoting a healthy environment.



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

PERMIT MODIFICATION APPROVAL

January 30, 2013

ANTERO RESOURCES APPALACHIAN CORPORATION 1625 17TH STREET, SUITE 300 DENVER, CO 80202

Re: Permit Modification Approval for API Number 8509998 , Well #: VILLERS UNIT 2H MODIFIED TOP HOLE LOCATION

Oil and Gas Operator:

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

Gene Smith

Regulatory/Compliance Manager

Office of Oil and Gas

Promoting a healthy environment.

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) 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 § 22-6A-5a (12), 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. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the fill material shall be within plus or minus 2% of the optimum moisture content as determined by the standard proctor density test. Each lift must meet 95 % compaction of the optimum density based on results from the standard proctor density test of the actual soils used in specific engineered fill sites. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
- 3. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
- 4. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
- 5. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS W.VA. CODE §22-6A - WELL WORK PERMIT APPLICATION

					85	04	562
1) Well Operator:	Antero Resou	rces Appalachia	n Corporation	494488557	085- Ritchie	Union	Pullman 7.5'
,				Operator ID	County	District	Quadrangle
2) Operator's Well	Number:	Villers Unit 2	lH		Well Pad Nan	ne: John Campbell	North Pad
3 Elevation, currer	nt ground:	~1012'	Ele	evation, proposed	post-construc	ction:	1014'
	Other If Gas:	Shallow Horizontal	Oil	Deep		×	
5) Existing Pad? Y	es or No:	No					
6) Proposed Target Marcellus Shale: 6,800			• • •		d Associated	Pressure(s):	
7) Proposed Total 8) Formation at To 9) Proposed Total 10) Approximate F 11) Method to Det 12) Approximate S 13) Approximate C 14) Approximate I 15) Does land cont 16) Describe proposed	tal Vertica Measured I Fresh Water ermine Fre Saltwater D Coal Seam Depth to Potain coal se	I Depth: Depth: r Strata Desh Water Depths: Depths: Depths: Ssible Voiceans tributa	Depth: 0 1850' None available d (coal mine, ary or adjaces	0', 72', 79', 120', 165', 170', Iffset well records e karst, other):	None anticipat	ed	
	lickwater into the	Marcellus Shale	formation in order to	: o ready the well for productio in the attached "List of Antici			
18) Total area to b	e disturbed	, including	roads, stock	pile area, pits, etc,	(acres):	9.98 acres	
19) Area to be dist	turbed for v	vell pad on	ly, less acces	ss road (acres):	2.65 acres	guay grant.	CEIVED of Oil & Gas

SEP 0 6 2012

20)

CASING AND TUBING PROGRAM

ТУРЕ	Size	New or Used	Grade	Weight per ft.	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill -up (Cu. Ft.)
Conductor	20"	New	H-40	94#	40'	40'	CTS
Fresh Water	13-3/8"	New	J-55	54.5#	400'	400'	CTS, 556 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2560'	2560'	CTS,1042Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	20#	16000'	16000'	3983 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#		7200'	
Liners							

ТҮРЕ	Size	Wellbore Diameter	<u>Wall</u> <u>Thickness</u>	Burst Pressure	Cement Type	Cement Yield
Conductor	20"	24"	0.438"	1530	Class A	1.18
Fresh Water	13-3/8"	17-1/2"	0.38"/0.33"	2730/1730	Class A	1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	Class A	1.18
Intermediate						
Production	5-1/2"	8-3/4" & 8-1/2"	0.361"	12630	Lead-H/POZ & Tail - H	H/POZ-1.44 & H-1.8
Tubing	2-3/8"	4.778"	0.19"	11200		
Liners						

PACKERS

Kind:	
Sizes:	CENTEL
Depths Set:	SELVE WING THE

July 10-18-12

21) Describe centralizer placement for each casing string.

Conductor: no centralizers

Surface Casing: one centralizer 10' above the float shoe, one on the insert float collar and one every 4th joint spaced up the hole to surface.

Intermediate Casing: one centralizer above float joint, one centralizer 5' above float collar and one every 4th collar to surface.

Production Casing: one centralizer at shoe joint and one every 3 joints to top of cement in intermediate casing.

22) Describe all cement additives associated with each cement type.

Conductor: no additives, grout cement.

Surface: Class A cement with 2% calcium and 1/4 lb flake, 5 gallons of clay treat

Intermediate: Class A cement with 1/4 lb of flake, 5 gallons of clay treat

Production: Lead cement- 50/50 Class H/Poz + 1.5% salt + 1% C-45 + 0.5% C-16a + 0.2% C-12 + 0.45% C-20 + 0.05% C-51

Production: Tail cement- Class H + 45 PPS Calcium Carbonate + 1.0% FL-160 + 0.2% ACGB-47 + 0.05% ACSA-51 + 0.2% ACR-20

23) Proposed borehole conditioning procedures.

Conductor: blowhole clean with air, run casing, 10 bbls fresh water.

Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer. Intermediate: blowhole clean with air, trip to surface casing shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate 40 bbls bottom water followed by 10 bbls fresh water and 25 bbls bentonite mud, pump 10 bbls fresh water. Production: circulate with 14 lb/gal NaCl mud, trip to middle of lateral, circulate, pump hlgh viscosity sweep, trip to base of curve, pump hlgh viscosity sweep, trip to top of curve, trip to bottom, circulate, pump hlgh viscosity sweep, trip out, run casing, circulate 10 bbls fresh water, pump 48 bbls barite pill, pump 10 bbls fresh water followed by 48 bbls mud flush and 10 bbls water.

*Note: Attach additional sheets as needed.

OUT 23 Z. IZ

Towns and a marriage of the second

API No. 47 - 085 - 09999 Operator's Well No. Villers Unit 2H

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

$\frac{\textbf{CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM}{\textbf{GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE}}$

Operator Name_Antero Resources Appalach	ian Corporation	OP Code	494488557	
Watershed Right Fork of Slab Creek	Qua	drangle Pullman 7.5'		
Elevation 1014	County_Ritchie	Distric	t Union	
Description of anticipated Pit Waste:	illing and Flowback Fluids and Cutt	ings		
Do you anticipate using more than 5,000			Yes X	No
Will a synthetic liner be used in the pit?	Yes If so, w	hat mil.? 60 mil		
Proposed Disposal Method For Treated Land Applica Underground		er	API# will be provid	led on Form WR-34
Coff Site Disn	osal (Meadowfill Landfill Permit	#SWF-1032-98)	Al III WIII DE PIOVIE	CO OIL OILL WILLOW
Other (Expla				
Drilling medium anticipated for this we -If oil based, what type? Synth Additives to be used? Please See Attach Will closed loop system be used? Yes Drill cuttings disposal method? Leave if -If left in pit and plan to solidit -Landfill or offsite name/perm	netic, petroleum, etc. N/A ment n pit, landfill, removed offsite y what medium will be used?	etc. Removed offsite an	d taken to landfill	Production - Water Based Mud
I certify that I understand and on August 1, 2005, by the Office of Oi provisions of the permit are enforceable or regulation can lead to enforcement at I certify under penalty of law application form and all attachments the information, I believe that the information false information, including Company Official Signature Company Official (Typed Name) Company Official Title Environmental 8	and Gas of the West Virginia by law. Violations of any terestion. w that I have personally example ereto and that, based on my information is true, accurate, and the possibility of fine or impriduded G. Alberts	Department of Environm or condition of the gamined and am familian quiry of those individual complete. I am away	onmental Protect general permit a r with the information in the information in the contract of	tion. I understand that the nd/or other applicable law mation submitted on this responsible for obtaining
Subscribed and sworn before me this_	30 day of Ave		, 20 <u>/7</u>	RECEIVED
My commission expires	Notary Public State of Colorado			Office of Oil & Gas

My Commission Expires:_

WV Department of Environmental Protection

SEP 0 6 2012

Property	Boundary 🛦	-		Diversion			
Road	=	====	====	Spring		O-+	
Existing (Fence —		××	Wet Spot		******	
Planned i	Fence		//	Drain Pipe			
Stream		~->~->		w/ size in inches			-
Open Ditto	ch			Waterway	-	€ €	
Rock	<	్య క్రాస్టర్లీన్ల		Cross Drain	144111111	A	7771
		†		Artificial Filter St	de Etteration	******	0.0 0 0.E
North		T N		Pit: Cut Wells		en The	
Buildings				Pit: Compacted	Fill Walls	Sharper of	
Water Wi	-	₩		Area for Land Ap		Ministering	
Drill Sites New Ped (2.65)		Pi 1 (2)		of Pit Weste	•		
)2) + Waste & Spoil			
Proposed Revegetati	on Treatme	nt: Acres Disturb	ed 8.90	Pı	evegetation pl	H	
Lime 4		_ Tons/acre or to	correct to pH 6	.5			
Fertilizer (1	0-20-20 or	equivalent) 500	lbs/ac	re (500 lbs minimu	m)		
Mulch 2-3				Hay or straw or Wo		e used where need	ad).
				Mixtures		Where need	<u>ent</u> 1
			need 1	ATTYTUTES			
Seed Type	Area I	(Temporary) Ibs/acre		Seed	Are I Tyne	ea II (Permanent	
Seed Type	Area I	lbs/acre			Are l Type	lbs/acre	
Tall Fescue	Area I	7-8-30-8-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		Seed Tall Fescue	Are l Type		
	Area I	lbs/acre			l Type	lbs/acre	
Tall Fescue	Area I	lbs/acre 45		Tall Fescue	l Type	lbs/acre	
Tall Fescue	Area I	lbs/acre 45		Tall Fescue	l Type	lbs/acre	
Tall Fescue Perennial Rye Grass	Area I	lbs/acre 45		Tall Fescue	l Type	lbs/acre	
Tall Fescue Perennial Rye Grass Attach:		lbs/acre 45 20	for land applica	Tall Fescue Perennial Rye Gras	l Type	lbs/acre	
Tall Fescue Perennial Rye Grass Attach: Drawing(s) of road, I	ocation,pit a	lbs/acre 45 20 and proposed area		Tall Fescue Perennial Rye Gras	l Type	lbs/acre	
Tall Fescue Perennial Rye Grass Attach:	ocation,pit a	lbs/acre 45 20 and proposed area		Tall Fescue Perennial Rye Gras	l Type	lbs/acre	
Tall Fescue Perennial Rye Grass Attach: Drawing(s) of road, I	ocation,pit a	lbs/acre 45 20 and proposed area		Tall Fescue Perennial Rye Gras	l Type	lbs/acre	
Tall Fescue Perennial Rye Grass Attach: Drawing(s) of road, I	ocation,pit a	lbs/acre 45 20 and proposed area		Tall Fescue Perennial Rye Gras	l Type	lbs/acre	
Perennial Rye Grass Attach: Drawing(s) of road, I	ocation,pit a	lbs/acre 45 20 and proposed area	heet.	Tall Fescue Perennial Rye Gras	l Type	lbs/acre	
Perennial Rye Grass Attach: Drawing(s) of road, I Photocopied section of	ocation,pit a	lbs/acre 45 20 and proposed area	heet.	Tall Fescue Perennial Rye Gras	l Type	lbs/acre	
Perennial Rye Grass Attach: Drawing(s) of road, I Photocopied section of	ocation,pit a	lbs/acre 45 20 and proposed area	heet.	Tall Fescue Perennial Rye Gras	l Type	lbs/acre	
Perennial Rye Grass Attach: Drawing(s) of road, I Photocopied section of	ocation,pit a	lbs/acre 45 20 and proposed area	heet.	Tall Fescue Perennial Rye Grastition.	l Type	lbs/acre	
Perennial Rye Grass Attach: Drawing(s) of road, I Photocopied section of the comments: Down	ocation,pit a	lbs/acre 45 20 and proposed area	heet.	Tall Fescue Perennial Rye Gras	l Type	lbs/acre	

Enveronmental - chachon



Well Site Safety Plan 10-18-12 Antero Pr

Well Name: Villers Unit 1H, Villers Unit 2H, Kuhn Unit 1H, Campbell Unit 1H, Campbell Unit 2H, Pullman Unit 1H, Pullman Unit 2H & Snodgrass Unit 2H

Pad Location: JOHN CAMPBELL NORTH PAD

Ritchie County/ Union District

GPS Coordinates: Lat 39°10′51.46″/Long 80°55′47.81″

Driving Directions:

FROM EAST: From the intersection of I-79 and Hwy 50 near Bridgeport WV, head west on Hwy 50 for ~39.6 miles. Turn LEFT onto W Virginia 74 S, and follow for ~7.4 miles. Turn RIGHT onto Co Rd 9 (Main St) and continue for ~0.1 miles. Turn LEFT onto Co Rd 7/9 (Slab Creek Road) and continue for ~0.7 miles. Continue onto Co Rd 9/7/Left Fork Turtle Run for ~0.7 miles. Look for rig signs and location on the right. Drill site is right off the road.

FROM WEST: From the Intersection of I-77 and Hwy 50 near Parkersburg WV, head east on Hwy 50 for ~ 32.3 miles. Turn RIGHT onto W Virginia 74 S, and follow for ~7.4 miles. Turn LEFT onto Co Rd 7/9 (Slab Creek Road) and continue for ~0.7 miles. Continue onto Co Rd 9/7/Left Fork Turtle Run for ~0.7 miles. Look for rig signs and location on the right. Drill site is right off the road.

SSP - Page 1

NORTH D NORTH

WV N GRID

8576

FORM WW-6

SURFACE OWNER JOHN A. & LINDA J. CAMPBELL
OIL & GAS ROYALTY OWNER REGION CHAPTERS, MARCIA BLOPALOSETAL: 17 ACRES ± 54 ACRES ± 65 ACRES ± 50.25 ACRES ± 59 AN ACRES ±
RILL FRACTURE OR STIMULATE X RALPH PRUNTY ET AL; B.C. PRUNTY ET AL; EMMA SNODGRASS; OTTIS R. SNODGRASS ET AL; ROBERT M. KEITH, JR PROPOSED WORK: DRILL X CONVERT PLUG OFF OLD FORMATION ___ PERFOR DRILL DEEPER REDRILL PERFORATE NEW FORMATION X OTHER PH
PLUG & ABANDON
CELLUS ESTIMATED DEPTH OTHER PHYSICAL CHANGE IN WELL CLEAN OUT & REPLUG (SPECIFY) PERMI MARCELLUS 6,800' TVD 16,000' MD TARGET FORMATION DIANNA STAMPER CT CORPORATION SYSTEM WELL OPERATOR ANTERO RESOURCES APPALACHIAN CORP. DESIGNATED AGENT ADDRESS 1625 17TH STREET ADDRESS_ 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

DENVER, CO 80202

Operator's Well Number

Villers Unit 2H

85-09998

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6A, Section 5(a)(5) 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
Freeman Campbell Lease			
Freeman Campbell, et ux	Key Oil Company	1/8	LB 0227/0243
Key Oil Company	Antero Resources Appalachian Corp.	*Partial Assignment of Oil and gas Leases	LB 0253/0747
G.M. Harris Lease			
G. M. Harris	Coffman Oil & Gas Co.	1/8	LB 0085/0338
Key Oil Company acquired rights under the or lessee, Coffman Oil & Gas Co.	iginal lease by mesne and sundry conveyances, merge	ers, and/or assignments from	the original
Key Oil Company	Antero Resources Appalachian Corp.	*Partial Assignment of Oil and gas Leases	LB 0253/0747
James A. Eliopulos et al Lease			
James A. Eliopulos	Key Oil Company	1/8	LB 0226/0474
Franklin Butler	Key Oil Company	1/8	LB 0228/0194
Commercial Bank & Trust in Fact for Emma J. Prunty	Key Oil Company	1/8	LB 0227/0742
Ruth Villers	Key Oil Company	1/8	LB 0226/0488
Naomi Federkiel	Key Oil Company	1/8	LB 0226/0477
Ruth Villers	Key Oil Company	1/8	LB 0226/0488
Key Oil Company	Key Oil Company	1/8	LB 0228/0201
Helen G. Wilson	Key Oil Company	1/8	LB 0226/0490
Key Oil Company	Antero Resources Appalachian Corp.	*Partial Assignment of Oil and gas Leases	LB 0253/0747
Ralph Prunty et al Lease			
Ralph Prunty, et al	D. D. Roberts	1/8	LB 0095/0481
DC Petroleum, Inc. & Chase Petroleum, and/or assignments from the original less	Inc. acquired rights under the original lease by m see, D. D. Roberts	esne and sundry conveya	nces, mergers,
DC Petroleum, Inc. & Chase Petroleum, Inc.	Antero Resources Appalachian Corp.	*Partial Assignment of Oil and gas Leases	LB 0254/0133

*Partial Assignments to A to Extend the Marcellus and any other formations completed with this well.

OCT 3 1 2012

Environmental Protection

CONTINUED ON NEXT PAGE

05/31/2024

Operator's Well Number

Villers Unit 2H

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6A, Section 5(a)(5) 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
B.C. Prunty et al Lease			
B. C. Prunty & Emma Jane Prunty, h/w	Southwestern Development Company	1/8	LB 0092/0377
Janie Prunty, et al	Southwestern Development Company	1/8	LB 0098/0504
C. C. Davis, et al	Southwestern Development Company	1/8	LB 0095/0356
B. C. Prunty and Emma Jane Prunty, h/w	Southwestern Development Company	1/8	LB 0092/0375
Reserve Resources, Inc. acquired rights und from the original lessee, Southwestern Deve	er the original lease by mesne and sundry cor lopment Company	nveyances, mergers, and	or assignments
Reserve Resources, Inc.	Antero Resources Appalachian Corp.	*Partial Assignment of Oil and gas Leases	LB 0256/1006
Emma Snodgrass Lease			
Emma Snodgrass	W. R. Campbell	1/8	LB 0072/0115
Key Oil Company acquired rights under the of the original lessee, W.R. Campbell	original lease by mesne and sundry conveyand	ces, mergers, and/or assi	gnments from
Key Oil Company	Antero Resources Appalachian Corp.	*Partial Assignment of Oil and gas Leases	LB 0253/0747
Otis R. Snodgrass et al Lease			
Ottis R. Snodgrass, et al	W. H. Mossor	1/8	LB 0093/0025
Heirs of V. C. Snodgrass	W. H. Mossor	1/8	LB 0093/0129
Key Oil Company acquired rights under the of the original lessee, W.H. Mossor	original lease by mesne and sundry conveyand	ces, mergers, and/or assi	gnments from
Key Oil Company	Antero Resources Appalachian Corp.	*Partial Assignment of Oil and gas Leases	LB 0253/0747

RECEIVED
*Partial Assign Action of the properties of the partial Assign Action of the properties of the partial Assign Action of the partial of

OCT 3 1 2012

WV Department of Environmental Protection

CONTINUED ON NEXT PAGE

Operator's	Well No.	Villers Unit 2H

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6A, Section 5(a)(5) 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
Robert M. Keith Jr. Lease Robert M. Keith, Jr. Marilyn Garfield Marion Rollins Terrence M. Snodgrass & Deborah J. Snodgrass, h/w	Antero Resources Appalachian Corp. Antero Resources Appalachian Corp. Antero Resources Appalachian Corp. Antero Resources Appalachian Corp.	15.00% 15.00% 15.00% 15.00%	LB 0255/0015 LB 0256/0179 LB 0254/1082 LB 0255/0060

*Partial Assignments to Antero Resources Appalachian Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.

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 hereby acknowledges 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 acquired from the appropriate authority before the affected activity is initiated.

Well Operator: Antero Resources Appalachian Corporation

By: Randy Kloberdanz

Its: Director of Regulatory and Environmental Affairs

RECEIVED
Office of Oil and Gas

OCT 3 1 2012



August 30, 2012

Antero Resources 1625 17th Street Denver, Colorado 80202 Office 303.357.7310 Fax 303.357.7315

West Virginia Department of Environmental Protection Chief, Office of Oil and Gas Attn: Mr. James Martin 601 57th Street SE Charleston, WV 25304

RE:

Villers Unit 2H

Quadrangle: Pullman 7.5'

Ritchie County/Union District, West Virginia

Mr. Martin:

Antero Resources Appalachian Corporation (Antero) is submitting the following application for a new well work permit for the Villers Unit 2H horizontal shallow well. As an authorized representative, I certify that Antero has the right to extract, produce or market the oil or gas for all leases through which the Villers Unit 2H horizontal lateral will drill through including any and all roads crossed under as identified on the attached survey plat.

Sincerely,

Sloane Ford Landman

RECEIVED
Office of Oil & Gas

SEP 0 6 2012

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE CERTIFICATION

Date of Notice Certification: 08/30/2012			API No. 47- 085			
		0	perator's	Well No. 👊	ers Unit 2H	
		V	Vell Pad N	ame: John	Campbell North Pad	
Notice has b						
	e provisions in West Virginia Code § 2	22-6A, the Operator has provide	ded the req	uired parties	with the Notice Forms listed	
	tract of land as follows:	_			/	
State:	West Virginia		Easting:	506,054m	/	
County:	Ritchie	N	Northing:	4,336,866m		
District:	Union	Public Road Acces		CR 9/7		
Quadrangle:	Pullman 7.5'	Generally used farm	m name:	Campbell, Joh	n A. & Linda J.	
Watershed:	Right Fork of Slab Creek					
it has provide information re of giving the requirements Virginia Code	the secretary, shall be verified and shall the owners of the surface describe equired by subsections (b) and (c), sect surface owner notice of entry to survof subsection (b), section sixteen of e § 22-6A-11(b), the applicant shall ten have been completed by the applicant.	d in subdivisions (1), (2) and ion sixteen of this article; (ii) vey pursuant to subsection (a) this article were waived in value proof of and certify to the	d (4), subs that the red), section to vriting by	ection (b), so quirement when of this at the surface	ection ten of this article, the as deemed satisfied as a result rticle six-a; or (iii) the notice owner; and Pursuant to West	
that the Ope	West Virginia Code § 22-6A, the Operator has properly served the required ECK ALL THAT APPLY		is Notice C	ertification	OOG OFFICE USE ONLY	
☐ 1. NO		NOTICE NOT REQUIRI SEISMIC ACTIVITY WAS			☐ RECEIVED/ NOT REQUIRED	
	TICE OF ENTRY FOR PLAT SURVE		Y WAS CO	ONDUCTEI	RECEIVED	
■ 3. NO		☐ NOTICE NOT REQUIRED NOTICE OF ENTRY FOR PEWAS CONDUCTED or			RECEIVED/ NOT REQUIRED	
		☐ WRITTEN WAIVER B (PLEASE ATTACH)	Y SURFA	CE OWNER		
■ 4. NO	TICE OF PLANNED OPERATION				RECEIVED	
■ 5. PUI	BLIC NOTICE				RECEIVED	
■ 6. NO	TICE OF APPLICATION				☐ RECEIVED	

Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affid Received Code to the return receipt card or other postal receipt for certified mailing.

SEP 0 6 2012

Certification of Notice is hereby given:

THEREFORE, I Randy Kloberdanz, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator: Antero Resources Appalachian Corporation
By: Randy Kloberdanz

Denver, CO 80202

Its: Director of Regulatory & Environmental Affairs
Telephone: (303) 357-7310

Telephone: (303) 357-7310

Address: 1625 17th Street
Denver, CO 80202

Facsimile: (303) 357-7315

Email:

Епап.

ANNE M. PIERINI

Notary Public

State of Colorado

My Commission Expires: 6/22/16

Subscribed and sworn before me this 30 day of AVKUST 2612.

Notary Public

My Commission Expires JUNE 22, 2016

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply 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 or your personal information, please contact DEP's Chief Privacy Officer at deprivacyofficer@wv.gov.

RECEIVED
Office of Oil & Gas

SEP 0 6 2012

Name:

Name:

Name:

Address:

Address:

Address:

☐ SURFACE OWNER(s) (Impoundments/Pits)

API NO. 47- 085 - 0999 OPERATOR WELL NO. Villers Unit 2H
Well Pad Name: John Campbell North Pad

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later than the filing date of permit application. Date of Notice: 08/31/2012 Date Permit Application Filed: 08/31/2012 Notice of: ☐ CERTIFICATE OF APPROVAL FOR THE PERMIT FOR ANY WELL WORK CONSTRUCTION OF AN IMPOUNDMENT OR PIT Delivery method pursuant to West Virginia Code § 22-6A-10(b) ☐ REGISTERED ■ METHOD OF DELIVERY THAT REQUIRES A **PERSONAL** RECEIPT OR SIGNATURE CONFIRMATION **SERVICE** MAIL Pursuant to W. Va. Code § 22-6A-10(b), no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. RECEIVED Notice is hereby provided to: Office of Oil & Gas ■ COAL OWNER OR LESSEE ■ SURFACE OWNER(s) Name: PLEASE SEE ATTACHMENT Name: ___John A. and Linda J. Campbell SEP 0 6 2012 Address: 505 Oxford Road Address: Pullman, WV 26421 WV Department of Name: ☐ COAL OPERATOR **Environmental Protectic** Address: _ Name: Address: ☐ SURFACE OWNER(s) (Road and/or Other Disturbance)

WATER PURVEYOR(s)/OWNER(s) OF WATER WELL,

☐ OPERATOR OF ANY NATURAL GAS STORAGE

☐ SPRING OR OTHER WATER SUPPLY SOURCE

Name: NONE IDENTIFIED WITHIN 2000'

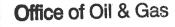
*Please attach additional forms if necessary

Address:

FIELD

Name:

Address:



SEP 0 6 2012

API NO. 47-085 - 09 9 9 8

OPERATOR WELL NO. Villers Unit 2H

Well Pad Name: John Campbell North Pad

Notice is hereby given:

WV Department of

Pursuant to West Virginia Code § 22-6A-10(b), potice is hereby given that the tune the property well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall also include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3)the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments.

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No wellpad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such

)n

(5-12)

factors, if necessary.

API NO. 47- 085 - 09999 OPERATOR WELL NO. Villers Unit 2H Well Pad Name: John Campbell North Pad

Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas Department of Environmental Protection 601 57th St. SE Charleston, WV 25304 (304) 926-0450

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation within the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the previously issued permit, or a substantial violation within the previously issued permit, or a substantial violation within the previously issued permit, or a substantial violation within the previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit for a horizontal well, including the previously issued permit for a horizontal well, including the previously issued permit for a horizontal well as a previously issu

API NO. 47- 085 OPERATOR WELL NO. Villers Uni Well Pad Name: John Campbell North Pad

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit

Notice is hereby given by:

Well Operator: Antero Resources

Telephone: ___

303-357-7310

decision and a list of persons qualified to test water.

amihalcin@anteroresources

Address: 1625 17th Street

Denver, CO 80202

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply 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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

> ANNE M. PIERINI **Notary Public** State of Colorado

My Commission Expires:.

Subscribed and sworn before me this 30 day of AVEUST 2012.

My Commission Expires_

RECEIVED Office of Oil & Gas

SEP 0 6 2012

WW-6A Notice of Application Attachment:

Coal Owners:

Owner:

John A. & Linda J. Campbell

Address:

505 Oxford Road Pullman, WV 26421

Owner:

Ruth Villers

Address:

520 Park Drive

Pennsboro, WV 26415

Owner:

Naomi P. Federkiel /

Address:

18 Olive Street

Norwalk, OH 44857

Owner:

J.W. Prunty c/o Ruth Villers

Address:

520 Park Drive

Pennsboro, WV 26415

Owner:

Kermit Conoway, Pearl Cunningham &

Thya Neusbaum, heirs

c/o Melinda Gilbertson

Address:

900 Par Lane

Dell Rapids, SD 57022

RECEIVED
Office of Oil & Gas

SEP 0 6 2012

WW-6A4 (1/12)

Operator Well No. Villers Unit 2H

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

	mit Application Filed: 08/31/2012	
to West Virginia Code § 2	22-6A-16(b)	
CERTIFIED MAIL		
RETURN RECEIPT REC	QUESTED	
elivery, give the surface ow Provided, That notice given date the notice was provided in writing by the surface ow	ner notice of its intent to enter upon the pursuant to subsection (a), section tend to the surface owner: <i>Provided, how</i>	an operator shall, by certified mail return the surface owner's land for the purpose of the notice satisfies the requirements arever, That the notice requirements of this the name, address, telephone number, r's authorized representative.
ed to the SURFACE OV	WNER(s):	
bell	Name:	
	Address:	X
	-	
ab Creek	UTM NAD 83 Northing: Public Road Access: Generally used farm name:	4,336,866m CR 9/7 Campbell, John A. & Linda J.
de: Code § 22-6A-16(b), this tronic mail address of the g may be obtained from the	operator and the operator's authorized the Secretary, at the WV Department of	ress, telephone number, and if available, ed representative. Additional information of Environmental Protection headquarters, ep.wv.gov/oil-and-gas/pages/default.aspx.
by:		
urces Appalachian Corporation	Authorized Representative:	Ashlie Mihalcin
treet	Address:	1625 17th Street
80202		Denver, CO 80202
323	Telephone:	(303) 357-7323
anteroresources.com	Email:	amihalcin@anteroresources.com
15	Facsimile:	(303) 357-7315
323 anteroresources.c	com	com Email:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply 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 or your personal information, please contact DEP's Chief Privacy Officer at deprivacyofficer@wv.gov.

WW-6A5 (1/12)

Operator Well No. Villers Unit 2H

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS **NOTICE OF PLANNED OPERATION**

Notice Time Re Date of Notice:	quirement: notice shall be provided no later 08/31/2012 Date Permit Applica			application.
Delivery metho	d pursuant to West Virginia Code § 22-6A	-16(c)		
CERTIFIE RETURN		ID LIVERY		
return receipt receipt receipt receipt oper required to be probable from the second relationship of a hordamages to the second receipt	Va. Code § 22-6A-16(c), no later than the of quested or hand delivery, give the surface overation. The notice required by this subsect rovided by subsection (b), section ten of this rizontal well; and (3) A proposed surface us surface affected by oil and gas operations to the required by this section shall be given to the	wner whose land sion shall includ article to a surfa se and compensa he extent the dat	will be used for e: (1) A copy ce owner whose ation agreement mages are comp	r the drilling of a horizontal well notice of of this code section; (2) The information e land will be used in conjunction with the t containing an offer of compensation for pensable under article six-b of this chapter.
(at the address li	y provided to the SURFACE OWNER(s) isted in the records of the sheriff at the time of & Linda J. Campbell			
		Address	•	
Address: 505 Oxfo Pullman,	ord Road WV 26421 y given:	Address		yyall operator has dayaloped a planned
Address: 505 Oxfor Pullman, Notice is hereby Pursuant to Westoperation on the State: Westounty: Reserved.	y given: st Virginia Code § 22-6A-16(c), notice is here e surface owner's land for the purpose of dril West Virginia Ritchie Union	eby given that the ling a horizontal UTM NAD 8.	e undersigned volume well on the tra Easting: Northing: Access:	ct of land as follows: 506,054m 4,336,866m CR 9/7
Address: 505 Oxfor Pullman, Notice is hereby Pursuant to West operation on the State: W. County: R. District: U. Quadrangle: P.	y given: st Virginia Code § 22-6A-16(c), notice is here e surface owner's land for the purpose of dril West Virginia Ritchie	Address eby given that th ling a horizontal UTM NAD 8	e undersigned volume well on the tra Easting: Northing: Access:	ct of land as follows: 506,054m 4,336,866m
Address: 505 Oxfor Pullman, Notice is hereby Pursuant to Westoperation on the State: W. County: R. District: U. Quadrangle: P. Watershed: R. This Notice Sha Pursuant to Westo be provided horizontal well; surface affected information relabeadquarters, Ice	y given: st Virginia Code § 22-6A-16(c), notice is here e surface owner's land for the purpose of dril Vest Virginia Ritchie Union Pulliman 7.5' Right Fork of Slab Creek all Include: st Virginia Code § 22-6A-16(c), this notice s by W. Va. Code § 22-6A-10(b) to a surface and (3) A proposed surface use and comper I by oil and gas operations to the extent the atted to horizontal drilling may be obtained ocated at 601 57th Street, SE, Charleston	Address eby given that the ling a horizontal UTM NAD 8. Public Road A Generally use that include: (1) the owner whose damages are confrom the Secret	e undersigned value well on the tra Easting: Northing: Access: d farm name: A copy of this land will be understand arm armony, at the WV	code section; (2) The information required ased in conjunction with the drilling of a n offer of compensation for damages to the der article six-b of this chapter. Additional Department of Environmental Protection
Address: 505 Oxfor Pullman, Notice is hereby Pursuant to West operation on the State: West operation of the State: West operation of the State: West operation of the State operation ope	y given: st Virginia Code § 22-6A-16(c), notice is here e surface owner's land for the purpose of dril Vest Virginia Ritchie Union Pullman 7.5' Right Fork of Slab Creek all Include: st Virginia Code § 22-6A-16(c), this notice s by W. Va. Code § 22-6A-10(b) to a surface and (3) A proposed surface use and comper if by oil and gas operations to the extent the ated to horizontal drilling may be obtained ocated at 601 57 th Street, SE, Charlestor ult.aspx.	Address eby given that the ling a horizontal UTM NAD 8. Public Road A Generally use thall include: (1) the owner whose the sation agreement damages are confrom the Secret 1, WV 25304 (1)	e undersigned value on the transition in Easting: Northing: Access: d farm name: A copy of this land will be understand ary, at the WV (304-926-0450)	code section; (2) The information required ased in conjunction with the drilling of a n offer of compensation for damages to the der article six-b of this chapter. Additional Department of Environmental Protection
Address: 505 Oxfor Pullman, Notice is hereby Pursuant to Westoperation on the State: Westoperation of the State of State	y given: st Virginia Code § 22-6A-16(c), notice is here e surface owner's land for the purpose of dril Vest Virginia Ritchie Union Pullman 7.5' Right Fork of Slab Creek all Include: st Virginia Code § 22-6A-16(c), this notice s by W. Va. Code § 22-6A-10(b) to a surface, and (3) A proposed surface use and comper il by oil and gas operations to the extent the lated to horizontal drilling may be obtained located at 601 57th Street, SE, Charleston lilt.aspx. Antero Resources Appalachian Corporation	Address eby given that the ling a horizontal UTM NAD 8. Public Road A Generally use that include: (1) the owner whose damages are confrom the Secret	e undersigned value well on the trage Easting: Northing: Access: d farm name: A copy of this land will be understand arm the WV (304-926-0450)	code section; (2) The information required ased in conjunction with the drilling of a n offer of compensation for damages to the der article six-b of this chapter. Additional Department of Environmental Protection
Address: 505 Oxfor Pullman, Notice is hereby Pursuant to West operation on the State: West operation or County: Result of the Pursuant to West operation of the State operation on the State: West operation on the Stat	y given: st Virginia Code § 22-6A-16(c), notice is here e surface owner's land for the purpose of dril Vest Virginia Ritchie Union Pullman 7.5' Right Fork of Slab Creek all Include: st Virginia Code § 22-6A-16(c), this notice s by W. Va. Code § 22-6A-10(b) to a surface and (3) A proposed surface use and comper if by oil and gas operations to the extent the ated to horizontal drilling may be obtained ocated at 601 57 th Street, SE, Charlestor ult.aspx.	Address eby given that the ling a horizontal UTM NAD 8. Public Road A Generally use thall include: (1) the owner whose the sation agreement damages are confrom the Secret 1, WV 25304 (1)	e undersigned value on the transition in Easting: Northing: Access: d farm name: A copy of this land will be understand ary, at the WV (304-926-0450)	code section; (2) The information required ased in conjunction with the drilling of an offer of compensation for damages to the der article six-b of this chapter. Additional Department of Environmental Protection

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply 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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov. **RECEIVED**

Office of Oil & Gas

SEP 0 6 2012

CERTIFICATION OF AGREEMENT WITH WVDOH to fulfill WV Code 22, Article 6A, Section 20

OIL AND GAS ROAD STATEWIDE BONDING AGREEMENT

THIS AGREEMENT, executed in duplicate, made and entered into this 28 day of February, 2012, by and between the WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS, hereinafter called "DEPARTMENT," and Antero Resources Appalachian Corporation, a Delawage company, hereinafter called "COMPANY."

WITNESSETH:

WHEREAS, Company has horizontal gas well drilling operations in certain areas of West Virginia; and

WHEREAS, the Department believes that the frequent and repetitive use of certain sections of highways in the State by Company, its contractors, agents, independent contractors or suppliers of drilling materials or drilling equipment, and employees contributes to increased wear and tear to public roads in the state road system in the State, including local roads ("State Owned Roads"); and,

WHEREAS, the Department and Company have entered into this Agreement to satisfy the requirements of the Department's policy entitled "Oil & Gas Road Policy" dated January 3, 2012, as issued by Paul A. Mattox, Jr., Secretary of Transportation / Commissioner of Highways, and any subsequent related policies, hereinafter called "Policy", a copy of which is made a part of this Bonding Agreement and is identified as Attachment 1.

NOW, THEREFORE, for and in consideration of the mutual agreements hereinafter set forth, the parties agree as follows:

- I. For purposes of this Bonding Agreement, "Project Transportation Usage" of the Company shall be understood to mean use of one or more State Owned Roads for the delivery and removal of drilling materials and drilling equipment at the site or location of one or more of Company's horizontal gas well pad locations. To the extent reasonably practical, prior to commencing use of a State Owned Road for Project Transportation Usage after January 1, 2011, the Company shall submit to the Department a section or sections of current official WVDOH County Highway maps identifying the exact location of the proposed project and the State Owned Roads that the Company will utilize for the Project Transportation Usage.
- II. Company and Department shall within 14 days of the Company's submittal, agree to a list of these sections of State Owned Roads, hereinafter called "Project Roads List", to be utilized for each of Company's projects, identified by route number and milepost; at a time to be mutually agreed to by the parties prior to initial commencement of Project Transportation Usage of a particular State Owned Road on a Project Roads List, the Company and Department will jointly review the condition of the roads and bridges on the Project Roads List. The Department will document the road type and surface condition and general right-of-way width of each section of road on the Project Road List. Either party may supplement this documentation with photographs, video or other evidence of the present condition of the road surface, shoulders, ditches, culverts, bridges or other structures or appurtenances of roads on the Project Road List, as well as approaches to the roads, utility facilities located within or along the right-of-way, or any other condition, including third-party activities, that may affect the duties and responsibilities of the parties under this Agreement. A copy of any such documentation must be made and provided to the other party within ten business days after the joint review of the roads on the Project Roads List.
- III. Department shall issue a Project Agreement or Project Permit, as applicate to Company to use State Owned Roads and may include any minor or maioffice of Gas required of Company prior to, during or after Project with the assignment of responsibilities of

SEP 0 6 2012

both parties prior to, during and after the operator has completed well fracturing..

- IV. In the Project Agreement/Project Permit, the Department shall not require the use of State Owned Roads other than the roads proposed by Company unless the Department has safety concerns as to the Company's proposed roads. A failure to agree on roads that may otherwise be lawfully used for a particular Project Transportation Usage shall result in the designation of the State Owned Roads proposed by Company, with milepost determinations as designated by Department. This Agreement shall only cover portions of State Owned Roads designated on the Project Roads List.
- V. For the duration of Company's Project Transportation Usage of the Stated Owned Roads on the Project Roads List, whether by the Company, its contractors (while working on behalf of Company), agents, independent contractors or suppliers of drilling materials or drilling equipment, or employees, the Company agrees to pay for all reasonable maintenance and repair costs incurred by the Department to repair areas of the State Owned Roads included in the Project Roads List that were directly damaged by Company's Project Transportation Usage, as determined to be reasonably necessary and appropriate by the Department. The Department shall keep a record of all labor performed by Department employees and contractors for such maintenance and repairs and shall send an invoice for the same to Company.
- VI. Company shall be responsible for the cost of all maintenance and repairs reasonably necessary to put the existing roadways, bridges and appurtenances on the Project Roads List utilized for the Project Transportation Usage in the condition that existed immediately prior to the Project Transportation Usage. Company shall not be required to pay for maintenance or repairs to put any areas of such roadways, bridges and appurtenances on the Project Roads List in a condition better than the condition that existed immediately prior to the Project Transportation Usage. Company shall also not be required to pay for maintenance or repairs to any areas of these roadways, bridges or appurtenances on the Project Roads List that are not actually utilized for the Project Transportation Usage or for damage not caused by Project Transportation Usage.
- VII. Company shall notify the Department in writing of Company's final completion of Project Transportation Usage for particular roadways, bridges and appurtenances on the Project Roads List. Within fourteen days after its receipt of written notification of the completion of the Project Transportation Usage for all roads on a Project Roads List, the Department will review the condition of the roadways, bridges and appurtenances on the Project Roads List actually utilized for the Project Transportation Usage and advise Company of any final repairs reasonably necessary to leave these roads, bridges and appurtenances in a condition reasonably deemed by Department to be equal to their condition prior to commencement of Project Transportation Usage; and, upon completion of all such final repairs by or on behalf of Company and acceptance by Department, the Company shall be released from all further liability for maintenance or repairs to roads, bridges, or appurtenances on said Project Roads List. Any maintenance or repair work under the Project Agreement/Project Permit for roads, bridges or appurtenances on the Project Roads List may be performed by a contractor directly chosen by the Company as approved by the Department, the Department's workforce, or a private contractor hired by the Department through the public bid process in accordance with state law, all of which work shall be subject to the standards and specifications of the Department.
- obligations under this Bonding Agreement, the Company's performance and payment obligations under this Bonding Agreement, the Company shall post a corporate surety bond, hereinafter called "Master Bond", with the Department named as the beneficiary, which form of bond shall be subject to the consent of the Department, not to be unreasonably withheld. The amount and form of the bond shall be in accordance with the Policy as set forth above. However, the amount of the Master Bond does not limit the amount of claims that may be made by the Department against the Company under this Bonding Agreement. The Company shall provide the Master Bond to the Department within one (1) month after the execution of this Bonding Agreement. The Master Bond shall secure the good faith performance of all payment obligations of Company under the terms of this Bonding Agreement respecting the roads, bridges and appurtenances on the Project Roads List for each Project Transportation Usage undertaken by the Company, and shall remain in effect until termination of this Agreement. Company shall not be obligated to provide any other bonds, sureties, or other guarantees of performance to the Department for Company's use of State Owned Roads, except as required in this Office and to like Gas

SEP 0 6 2012

- IX. Company shall maintain Commercial General Liability Insurance in the amount of two million dollars, with a minimum coverage of one million dollars per occurrence, for personal injury or death to persons, or for property damage, resulting from Company's Project Transportation Usage and shall present evidence of such insurance to Department upon request.
- X. Company's usage of State Owned Roads under the Project Agreement/Project Permit shall comply with all applicable Federal, State and local laws and regulations including, but not limited to, to the extent applicable, the National Environmental Policy Act, Section 404 of the Clean Water Act, Section 106 of the National Historic Preservation Act, Rare, Threatened and Endangered Species Act, Section 401 Water Quality Certification, and hazardous waste requirements. Further, upon reasonable written request of Department, Company shall furnish Department with acceptable documentation of such compliance which is in the possession of the Company.
- XI. Company shall defend, indemnify and hold Department harmless from and against any and all losses, damage, and liability, and from all claims for damages on account of or by reason of bodily injury, including death, which may be sustained, or claimed to be sustained, by any person or persons, including employees of Department, and from and against any and all claims, losses or liabilities for damages to property, arising out of the negligent or willful acts or omissions of Company, its agents, independent contractors and suppliers of drilling materials or drilling equipment, employees and contractors, in the performance of all Project Transportation Usage activities undertaken pursuant to this Agreement (collectively, "claims"). The Company shall not be responsible to indemnify, defend or hold harmless Department for any claims caused by the negligent or willful acts or omissions of the Department or its agents, employees and contractors or third parties not performing work at the direction of Company or delivering drilling equipment or drilling materials, including water, for use by or for company.
- XII. If a provision of this Agreement is or becomes illegal, invalid or unenforceable in any jurisdiction, that shall not affect the validity or enforceability of any other provision of this Agreement; or the validity or enforceability in other jurisdictions of that or any other provision of this Agreement.
- XIII. Department shall give Company a minimum of thirty days written notice of default under the terms of this Bonding Agreement and the opportunity to cure this default during such thirty-day period. If a default is not cured to the satisfaction of Department, or provision acceptable to Department is not made for a cure, Department may then elect to terminate this Bonding Agreement in whole or in part, and may in addition exercise its rights under the Master Bond or seek any other lawful relief available. Company may terminate this Bonding Agreement upon thirty days written notice to Department for any reason. In the event Company terminates this Agreement for any reason, it shall be liable for the repair and maintenance costs set forth above for prior Project Transportation Usage.
- XIV. Nothing herein shall be construed to mean that Company shall have any jurisdiction or control over any public roads in the state road system.
- XV. Company, its contractors, agents, employees and suppliers shall at all times be subject to applicable provisions of state and federal law, including without limitation laws requiring operation of vehicles in accordance with legal size and weight restrictions and posted weight limits. Oversize/overweight permits for vehicle or loads not otherwise conforming with law must be obtained in accordance with law; Department agrees to work in good faith with Company to review and grant (where authorized by law) such permits in a timely manner upon request by Company.
- XVI. This Bonding Agreement shall be construed and enforced in accordance with the laws of the State of West Virginia, as they may be amended.
- XVII. This Bonding Agreement shall be binding upon the successors and assigned EAVED party hereto.

 Office of Oil & Gas

SEP 0 6 2012

IN WITNESS WHEREOF, the parties hereto have caused this Bonding Agreement to be executed by their duly authorized officers effective as of the date first above written.

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS

State Highway Engineer

(To be executed in duplicate)

APPROVED AS TO FORM THIS DAY OF Mar. 20/2

VIRGINIA DEPARTMENT OF HIGHWAYS

> **RECEIVED** Office of Oil & Gas

> > SEP 0 6 2012

Form WW-9 Additives Attachment

SURFACE INTERVAL

- 1. Fresh Water
- 2. Soap –Foamer AC
- 3. Air

INTERMEDIATE INTERVAL

STIFF FOAM RECIPE:

- 1) 1 ppb Soda Ash / Sodium Carbonate-Alkalinity Control Agent
- 2) 1 ppb Conqor 404 (11.76 ppg) / Corrosion Inhibitor
- 3) 4 ppb KLA-Gard (9.17 ppg) / Amine Acid Complex-Shale Stabilizer
- 4) 1ppb Mil Pac R / Sodium Carboxymethylcellulose-Filtration Control Agent
- 5) 12 ppb KCL / Potassium Chloride-inorganic Salt
- 6) Fresh Water 80 bbls
- 7) Air

PRODUCTION INTERVAL

- 1. Alpha 1655
 - Salt Inhibitor
- 2. Mil-Carb
 - Calcium Carbonate
- 3. Cottonseed Hulls
 - Cellulose-Cottonseed Pellets LCM
- 4. Mil-Seal
 - Vegetable, Cotton & Cellulose-Based Fiber Blend LCM
- 5. Clay-Trol
 - Amine Acid Complex Shale Stabilizer
- 6. Xan-Plex
 - Viscosifier For Water Based Muds
- 7. Mil-Pac (All Grades)
 - Sodium Carboxymethylcellulose Filtration Control Agent
- 8. New Drill
- Anionic Polyacrylamide Copolymer Emulsion Shale Stabilizer 9. Caustic Soda
- Sodium Hydroxide Alkalinity Control 10. Mil-Lime

Calcium Hydroxide – Lime

- 11. LD-9
- Polyether Polyol Drilling Fluid Defoamer
- 12. Mil Mica
 - Hydro-Biotite Mica LCM

RECEIVED Office of Oil & Gas

SEP 0 6 2012

13. Escaid 110

Drilling Fluild Solvent - Aliphatic Hydrocarbon

14. Ligco

Highly Oxidized Leonardite - Filteration Control Agent

15. Super Sweep

Polypropylene - Hole Cleaning Agent

16. Sulfatrol K

Drilling Fluid Additive – Sulfonated Asphalt Residuum

17. Sodium Chloride, Anhydrous

Inorganic Salt

18. D-D

Drilling Detergent – Surfactant

19. Terra-Rate

Organic Surfactant Blend

20. W.O. Defoam

Alcohol-Based Defoamer

21. Perma-Lose HT

Fluid Loss Reducer For Water-Based Muds

22. Xan-Plex D

Polysaccharide Polymer - Drilling Fluid Viscosifier

23. Walnut Shells

Ground Cellulosic Material - Ground Walnut Shells - LCM

24. Mil-Graphite

Natural Graphite - LCM

25. Mil Bar

Barite - Weighting Agent

26. X-Cide 102

Biocide

27. Soda Ash

Sodium Carbonate – Alkalinity Control Agent

28. Clay Trol

Amine Acid complex – Shale Stabilizer

29. Sulfatrol

Sulfonated Asphalt - Shale Control Additive

30. Xanvis

Viscosifier For Water-Based Muds

31. Milstarch

Starch – Fluid Loss Reducer For Water Based Muds

32. Mil-Lube

Drilling Fluid Lubricant

RECEIVED
Office of Oil & Gas

SEP 0 6 2012

List of Anticipated Additives Used for Fracturing or Stimulating Well

Additives	Chemical Abstract Service Number (CAS #)
Fresh Water	7732-18-5
2 Phosphobutane 1,2,4 tricarboxylic acid	37971-36-1
Ammonium Persulfate	7727-54-0
Anionic copolymer	proprietary
Anionic polymer	proprietary
BTEX Free Hydrotreated Heavy Naphtha	64742-48-9
Cellulase enzyme	(Proprietary)
Demulsifier Base	(Proprietary)
Ethoxylated alcohol blend	Mixture
Ethoxylated Nonylphenol	68412-54-4
Ethoxylated oleylamine	26635-93-8
Ethylene Glycol	107-21-1
Glycol Ethers	111-76-2
guar gum	9000-30-0
Hydrogen Chloride	7647-01-0
Hydrotreated light distillates, non-aromatic, BTEX free	64742-47-8
Isopropyl alcohol	67-63-0
liquid, 2,2-dibromo-3-nitrilopropionamide	10222-01-2
Microparticle	proprietary
Petroleum Distillates (BTEX Below Detect)	64742-47-8
Polyacrylamide	57-55-6
Propargyi Alcohol	107-19-7
Propylene Glycol	57-55-6
Quartz	14808-60-7
Sillica, crystalline quartz	7631-86-9
Sodium Chloride	7647-14-5
Sodium Hydroxide	1310-73-2
Sugar	57-50-1
Surfactant	68439-51-0
Suspending agent (solid)	14808-60-7
Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7

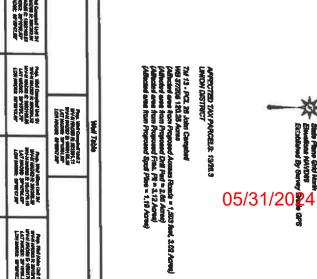


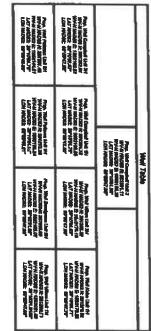
JOHN CAMPBELL NORTH DRILL PAD

ANTERO RESOURCES APPALACHIAN CORPORATION FINAL SITE DESIGN, CONSTRUCTION PLAN, & **EROSION & SEDIMENT CONTROL PLANS**









	TOWN WOLLD	TO THE PARTY OF TH	
CALIFORNIA SAMBLES SAM	TON JOHOLDE BETWEEN THE LOSS OF THE LOSS O	AFFORM STORY OF STORY	ACASA AS SOOM AND AS
THE PROPERTY OF THE PROPERTY O	PROPERTY OF THE PROPERTY OF TH	TON WACEST SOUTHWAY THE STATE OF THE STATE O	TOWNSHIP BETWEEN THE STATE OF T

ł		YAGI TIBBO	
	MODERN LOTT MOTOR LOTA MOTOR LOTA MOTOR LOTA MOTOR MOT	ATTENDED OF THE PROPERTY OF TH	
ATTO SECTION TO SECTIO	TON INCOME OF THE STATE OF THE	TO INTEREST THE ST	ACTION OF TRANSPORT OF TRANSPOR
ACTION ACTION OF THE PROPERTY	A THE STATE OF THE	TO MODE DESIGNATION OF THE PROPERTY OF THE PRO	AND MALE TRANSPORTED TO THE PERSON OF THE PE

		I
		t
}		ı
}		ı
Ì		I
		1
		ľ
		ı
		ı
ļ		1
- 1		Į
- 1		Ì

•	
THE DOCUMENT AND PORT OF THE PROPERTY OF THE P	ANTERO

ļ	ř.
1	Well
į	<u></u>
) Pad and Fracture FN Shifts comply with the following	Location Restrictions
90	3
¥	暴
2	틝
ğ	탈
ğ	95

ence to wetench, permodel atreems, natural or extitoinl take

١	S
	Ĭ
	\square
ļ	Щ
	\exists
	Z
	四
_	

COVER BHEET /LOCATION IMP SCHEDULE OF CLAMITTES ESSITING CONTITIONS PLAN ESCHEDUL OF CLAMITTES ESCHEDUL OF CLA
COVER SHEET/LOCATION MAP N CAMPBELL NORTH DRILL PAD SITE

COVER SHEET/LOCATION MAP
JOHN CAMPBELL NORTH
DRILL PAD SITE
UNION DISTRICT
RITCHIE COUNTY, WV

THE DOCUMEN	ANTERO

	S
Hornor	
Since Bros.	Enginee
CIVIL MIGROUP, Em	rironimental ar
Consulting .	Post Office for 200.
Ontobery, Worl Wybia	30301 (304) 424-4445



Allegheny Surveye, inc. 172 Thompson Drive Bridgeport, WV 26330 (304) 848-5035



86660-58



Requires that you call two business days before you dig in the state of

West Virginia.

(Section XIV: Chapter 24-C) West Virginia State Law

MISS Utility of West Virginia 1-800-245-4848

8R Yatzu, PS, EL - Alleghany Sarveys Inc. 304-848-6086 OK. 304-819-4637 Call Ton Contines, PE, PS - Homor Brothers Engineers 104-024-6445 Office

lerveyor & Engineer

PLOODPLAIN SHOWN ON DRAWINGS:

ECHAMBETUDY COMPLETED:

HIM MAP NAMBERUS) FOR SITE:

ACREAGE OF CONSTRUCTION IN FLOCOPLAIN:

Ĭ

on Aungler, Constr 5-227-8344

shn Kluecak, Engineer 17-308-1563

DO SITE CONSTRUCTION ACTIVITIES TAKE PLACE IN FLOODPLANE

FLOODPLAIN CONDITIONS

PERMIT NEEDED FROM COUNTY FLOODPLAIN COORDINATOR:

8 5

₹ ₹ luffzuydinith - Construction 04-863-3605 Oct. 304-673-6195 Cast

yen Word, Endromentel Engineer (ALLSTAR) 16-213-2660, aut 311 Oct. 304-532-7477 Coli

before you dig

DATB 5-8-2012 6-29-2012

REVISED

QUANTITIES & SPOIL AREA

WELL TABLE & AFFECTED PARCELS DATA

1. Cleanting, Grobbing, ELSS Contents 8. Timolar Remonal 9. Timolar Remonal 10. 24' SRI Sock or Si Februar 10. Bugger Still Februar 11. Cleanting A Groubbing 12. Exercise Cont. (C. C. C.) 12. Exercise France 12. Exercise France 13. Dispared Still Februar 14. Construction Entirence 15. Timolar Remonal 16. Exercise France 17. A Construction Entirence 18. Dispared Still Februar 19. A Construction Entirence 19. A Construction Entirence 19. B. Dispared Still Februar 19. A Construction Entirence 19. B. Dispared Still Februar 19. A Construction Entirence 19. A Construction Entirence 19. A Construction Entirence 19. A Late Number 19. A Late Number 19. A Late Number 19. B. Dispared Still Februar 19. B. Dispared Still Februar 19. A Late Number 19. A Construction Construction 10. Dispared Still Februar 19. A Construction State of Very Courter Fluir Appropriate (2") TONES 19. A Construction State of Very Courter Fluir Appropriate (2") TONES 19. A Courter Fluir Later 19. A Courter State Countries Fluir Appropriate (2") TONES 19. A Courter Fluir Later 19. A Courter State Countries Fluir Appropriate (2") TONES 19. A Courter State Countries Fluir Appropriate (2") TONES 19. A Courter Fluir Later 19. A Courter State Countries Fluir Appropriate (2") TONES 19. A Courter Fluir Later 19. A Courter State Countries Fluir Appropriate (2") TONES 19. A Courter Fluir Later (2") TONES 19. A Courter Fluir Later (2") TONES 19. A Courter Fluir Appropriate (2") TONES 19. A Courter Fluir Later (2") TONES 19. A Courter Fluir Later (2") TONES 19. A Courter Fluir Appropriate (2") TONES 19. A Courter Fluir Later (2") TONES 19.	Well Site: John Campboll North Drill Pad & Frac, Water Pit. Unit Outhing Edition Unit Outhing Outhing Edition Unit Outhing Outhing Edition Unit Outhing Outhing Edition Unit Outhing Outhing Outhing Pad & Frac. Water Pit. A. Clearing Chibbing France AC 6.26 \$ 8.26 \$ C. 28 St Store Crist France LF 2.89 \$ \$ C. 28 St Store Entrance LF 2.89 \$ \$ C. 27 Store Pad LF 2.89 \$ \$ C. Procession Countries Feats LF 7.382 \$ \$ D. Access Reads CY 4.78 \$ \$ D. Ac	286			-	The second secon
1. Cleaning, Grubbing, EAS Confeds 1. Cleaning & Grubbing 2. A. Cleaning & Grubbing 3. Throws Namework 3. D. Super Sitt Femore 4. C. 24° Sitt Scork or Sitt Femore 5. D. Super Sitt Femore 6. D. Construction Entirece 6. D. Prace Waker Pil 7. D. Accesses Reads 7. D. Accesses Reads 7. Devention Disch 7. Rip Rap 7. Devention Disch 7. Rip Rap 7. Devention Disch 7. A Sitt String 7. Devention Disch Checks 7. A Sitt String 7. A Sitt String 7. A Sitt String 7. A Sitt String 8. Sitt Store Disch Checks 8. Sitt Pad 17 Manus Conster Run Aggregate (2") TOAS 8. Sitt Store Disch Checks 8. Contil Pad 357 Stone (7") TOAS 8. Sitt Pad 357 Stone (7") TOAS 8. Sitt Disch Sitt Store 8. Disch Pad 357 Stone (7") TOAS 8. Sitt Disch Sitt Store 8. One Pad 357 Stone (7") TOAS 8. Sitt Disch Sitt Store 9. Disch Pad 357 Stone (7") TOAS 9. Sitt Pad 357 Stone (7") T	Well Site: John Campbell North Drill Pad & Frac, Water Pit. Unit Outham, Ghibáng, EdiScorteós Unit Outhamy CAC 9.89 \$ B. Timber Samova 2. Boowacher (CA Only) 2. Boowacher (CA Only) 2. Boowacher (CA Only) 2. Contribution Enfrance LF 2. S \$ C. Process Reade CY 7.282 \$ \$ D. Diff Pad CY 7.282 \$ \$ D. Access Reade CY 7.282 \$ \$ D. Access Reade CY 7.282 \$ \$ D. Access Reade CY 7.282 \$ \$ D. Diff Pad CH Diff Drive Market CY 7.282 \$ D. Diff Pad Charlet CY 7.282 \$ L. Drive Drive Drive Drive Market CY 7.282 \$ L. Process Reade SY 2.48 \$	֡	4-7-			いるないできまれているかんのうと
1. Cleanting, Grubbing, EAS Controls 4. Cleanting & Grubbing B. Timber Startward B. Timber Startward B. Timber Startward B. Timber Startward C. 24' Sitt Stock or Sitt Fenore C. 25' Sitt Stock or Sitt Fenore C. 27' 20,400 Sitt Stock or Sitt Fenore C. 27' 20,400 Sit Sitt Stock or Sitt Fenore C. 27' 20,400 Sit Sitt Stock or Sitt Fenore C. 27' 20,400 Sit Sitt Stock or Sitt Fenore C. 24' Sitt Stock or Sitt Fenore C. 25' Sitt Stock or Sitt Fenore C. 27' 20,400 Sit Sitt Stock or Sitt Fenore C. 27' 20,400 Sit Sitt Sitt Stock or Sitt Stock	Well Site: John Campbell North Drill Pad & Frac, Water Pit Unit OWNTH OWNTH Unit UNIT OWNTH OWNTH Unit PRICE 1. Clearing & Grubbing A.C. Gasing A.C. Gasing 4.89 \$ A. Clearing & Grubbing A.C. Gasing 4.20 \$ D. Buyer Bit Fences L.F. 1984 \$ \$ D. Buyer Bit Fences L.F. 1984 \$ \$ D. Buyer Bit Fences L.F. 288 \$ \$ D. Buyer Bit Fences L.F. 288 \$ \$ D. Drift Beal L.F. 288 \$ \$ \$ D. Drift Beal C.C. 27 20,048 \$ \$ D. Drift Beal C.C. 27 20,048 \$ \$ D. Drift Beal C.C. 27 20,048 \$ \$ D. Drift Beal Drift Beal C.C. 7278 \$ \$ D. Drift Beal Drift Beal C.C. 7278 \$ \$ D. A. Water Beal Brift Beal C.C. 7278 \$ \$ \$ D. A. Water Beal	9	1	Ĕ.		A CONTRACTOR OF THE PARTY OF TH
1. Cleaning, Grubbing, EAS Confloris A. Cleaning & Grubbing EAS Confloris C. 24° Sill Scot or Sill Fenors C. 24° Sill Fenors C. 24° Sill Scot or Sill Fenors C. 24° Sill Feno	Well Site: John Campbell North Drill Pad & Frac, Water Pit. Uniff OWATITY Uniff Patice. 1. Clearing Chibbing Ess Controls UNIT OWATITY Uniff Patice. A. Clearing & Ghubbing AC 9.59 \$ B. Timber Farmone LF 1984 \$ D. Buper SR Farmone LF 1984 \$ D. Drift State State of State Farmone LF 288 \$ D. Drift State State of State Farmone LF 288 \$ D. Drift State State of State Farmone LF 288 \$ D. Drift State State of State		96		E A	
1. Cleaning, Grubbing, EAS Confecis	Well Site: John Campbell North Drill Pad & Frac. Water Pit Claming, Grubbing, EAS Confects A. Glawing & Grubbing EAS Confects A. Glawing & Grubbing EAS Confects C. 24° Sill Scock or Bufferrore C. 24° Sill Scock or Bufferrore C. 28° Sill Scock or Bufferrore C. 28° Sill Scock or Bufferrore C. 28° Sill Scock or Sufferrore C. 28° Sill Scock of Sufferro		cys .	-	=	<u> </u>
1. Cleaning, Grubbing, E&S Confects 2. A. Cleaning & Grubbing 3. A. Cleaning & Grubbing 3. C. 24° Six Scott or Six Fenore 3. D. Super Six Fenore 4. C. 34° Six Scott or Six Fenore 5. D. Super Six Fenore 6. D. Super Six Fenore 7. C. 27° Six Scott or Six Fenore 8. Diff Pad 9. Construction (Cut Cut) 9. A. Construction (Cut Cut) 9. A. Construction (Cut Cut) 9. A. Construction Enfrance 9. Diff Pad 1. Robert Fix Cut	Well Site: John Campbell North Drill Pad & Frac. Water Pit Claming, Ghubing, E&S Confecia A. Glasing & Ghubing E&S Confecia C. 24 Sit 3 Sock or Sit Fenore E. Timbus Remove D. Super Sti France D. Super Sti F			_j	-	Fence and Caries
1. Cleaning, Grubbing, E&S Confecie A. Cleaning & Grubbing E&S Confecie C. 24° Bill Scote or 8s Fence D. Buper Stit Fence LF 1,924 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Well Site: John Campbell North Drill Pad & Frac. Water Pit C Gaming, Ghubbing E&S Confecia A. Glaming, Ghubbing E&S Confecia C. 24° Sill Stock or Sill France C. 24° Sill Stock or Sill France C. 24° Sill Stock or Sill France D. Super Stif France D. Super Stif France C. Prace Water Pit C Frace Water P	H	13	ge.		
1. Cleaning, Grubbing, E&S Combrols 2. Salaring & Grubbing E&S Combrols 3. A. Cleaning & Grubbing AC	Well Site: John Campbell North Drill Pad & Frac. Water Pit Claming, Grubbing E&S Comhoris A. Claming & Grubbing E&S Comhoris C. 24 Still Stock or Sit France E. Timber Removel C. 25 Still Stock or Sit France D. Super Sit France D. Super Sit France C. 26 Still Stock or Sit France D. Super Sit France C. 27 Still Stock or Sit France D. Super Sit France C. 27 Still Stock or Sit France D. Super Sit France C. 27 Still Stock or Sit France D. Super Sit France C. 27 Still Stock or Sit France D. Super Sit France C. 27 Still Stock or Sit France D. Super Sit France C. 27 Type Sit Stock or Sit France C. 28 Still Stock or Sit France C. 29 Still Stock or Sit France C. 20 Still Stock or Sit France C. 20 Still Stock or Sit France C. 20 Still Pad 3 Still Stock or Sit France C. 20 Still Pad 3 Still Stock or Sit France C. 20 Still Pad 3 Still Stock of Minus Crusher Run Aggragate (2) TOMS C. Across Roads Canderdile Fabric (US 200) C. Life Stock Stock of Minus Crusher Run Aggragate (2) TOMS C. Across Roads Canderdile Fabric (US 200) C. Life Stock Stock of Minus Crusher Run Aggragate (2) TOMS C. Across Roads Canderdile Fabric (US 200) C. Life Stock Stock of Minus Crusher Run Aggragate (2) TOMS C. Across Roads Canderdile Fabric (US 200) C. Life Stock Stock of Minus Crusher Run Aggragate (2) TOMS C. Across Roads Canderdile Fabric (US 200) C. Life Stock Stock of Minus Crusher Run Aggragate (2) TOMS C. Across Roads (2) TOMS C. Across Roads (2) Toms C. Company Roads (2)		-60		8	
1. Clearing, Grubbing, EAS Controls 1. Clearing & Grubbing 2. A. Clearing & Grubbing 3. C. Are Six Sock or all Fenore 3. C. Are Six Sock or all Fenore 4. C. D. Super Six Fenore 5. C. Are Six Sock or all Fenore 6. D. Super Six Fenore 7. C. Are Six Sock or all Fenore 8. D. Super Six Fenore 8. D. Super Six Fenore 9. C. Are Six Sock or all Fenore 9. D. Super Six Fenore 9. C. Are Six Sock or all Fenore 9. C. Dell Fed 40 Mrt. Liner 9. C. Dell Fed 30 Teach Appropriate (8) TONS 9. C. Dell Fed 30 Teach Appropri	Well Site: John Campbell North Drill Pad & Frac. Water Pit. Clearing & Grubbing. E&S Controls A. Clearing & Grubbing. E&S Controls C. 24' Sit Stock or a life fenore Life 1,944 \$			The second of		かい かけんせんく でう
1. Cleaning, Grubbing, E&S Controls 2. Carring & Grubbing 3. A. Cleaning & Grubbing 4. C. 24' Sill Scotc or all Fenore 3. C. 24' Sill Scotc or all Fenore 4. C. 24' Sill Scotc or all Fenore 5. C. 24' Sill Scotc or all Fenore 5. C. 24' Sill Scotc or all Fenore 6. C. 24' Sill Scotc or all Fenore 6. C. 24' Sill Scotc or all Fenore 7. C. Price Weller Pill 7. C. C. Price Weller Pill 7. C. C. Price Weller Pill 7. C. Delli Pied 40 Mr. Liner 7. A. Cornel Pice Signature 7. C. Delli Pied 40 Mr. Liner 7. A. Cornel Pied 3' Clean Augurgatin (8) 7. C. Delli Pied 1' Minus Cruster Run Augurgatio (2) TONS 7. A. Cornel Roads 4' Minus Cruster Run Augurgatio (2) TONS 7. A. Cornel Roads 6' Minus Cruster Run Augurgatio (3) TONS 7. A. Cornel Roads 6' Minus Cruster Run Augurgatio (3) TONS 7. A. Cornel Roads 6' Minus Cruster Run Augurgatio (3) TONS 7. A. Cornel Roads 6' Minus Cruster Run Augurgatio (3) TONS 7. A. Cornel Roads 6' Minus Cruster Run Augurgatio (3) TONS 7. A. Cornel Roads 6' Minus Cruster Run Augurgatio (3) TONS 7. A. Cornel Roads 6' Minus Cruster Run Augurgatio (3) TONS 7. A. Cornel Roads 6' Minus Cruster Run Augurgatio (3) TONS 7. A. Cornel Roads 6' Minus Cruster Run Augurgatio (3) TONS 7. A. Cornel Roads 6' Minus Cruster Run Augurgatio (3) TONS 7. A. Cornel Roads 6' Minus Cruster Run Augurgatio (3) TONS 7. A. Cornel Roads 6' Minus Cruster Run Augurgatio (3) TONS 7. A. Cornel Roads 6' Minus Cruster Ru	Well Site: John Campbell North Drill Pad & Frac. Water Pit. Clearing Rubbing Ess Controls A. Clearing & Grubbing Ess Controls B. Throber Removel C. 24' Sit Sock or sit fenore D. Supper Sit France D. Access Roadis D.	200	A CONTRACTOR OF THE PERSON OF	1	Ç	THE REPORT OF THE PARTY OF THE
1. Clearing, Grubbing, EAS Controls 2. Clearing & Grubbing 3. Caseing & Grubbing 4. Clearing & Grubbing 5. A. Clearing & Grubbing 6. 24 St 88 Sock or \$11 Fenore 7. Caseing & Grubbing 7. Septiment	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing Anubbing Ess Controls A. Clearing & Grubbing Ess Controls A. Clearing & Grubbing Ess Controls B. Tarbour Removed C. Cay Sill Sock or Sill Femore B. Cay Sill Sock or Sill Femore C. Page Sill Sill Sill Sill Sill Sill Sill Sil	1				10000
1. Clearing, Grubbing, E&S Controls 1. Clearing & Grubbing 2. Clearing & Grubbing 3. Clearing & Grubbing 4. Clearing & Grubbing 4. Clearing & Grubbing 5. Clearing & Grubbing 6. Desper Bill Femore 2. Excursion Femore 2. Excursion Femore 2. Excursion Femore 3. Clearing March 1974 4. Clearing March 1974 5. Construction Enforce 6. Desper Bill Femore 2. Excursion Femore 8. Desper Bill Femore 8. Desper Bill Femore 9. Cry 7,3822 9. Cry 7,3822 9. Cry 7,3822 9. Cry 7,3823 9. Cry 7,38	Well Site: John Campbell North Drill Pad & Frac. Water Pit. Clearing Rubbing Ess Controls UNIT CMANTITY UNIT PRUCE A. Clearing & Grubbing AC 9.95 \$ B. Timber Removel AC 3.90 \$ B. Timber Removel LF 1.984 \$ B. Days Signature of Removel LF 2.89 \$ D. Supper Bit Ferrors LF 2.89 \$ D. Accessory Control of Prince LF 2.89 \$ A. Construction Enfrance CY 7.278 \$ B. Drift Pad CY 7.282 \$ B. Drift Pad CY 7.278 \$ C. Prace Weber Pit LF 7.292 \$ D. Access Roads CY 7.278 \$ E. Topical Distriction CY 7.278 \$ E. Topical Marce	Ě	- Market	100	W. S. F. W.	
1. Cleaning, Grubbing, EBS Controls 2. Cleaning & Grubbing 3. Throber Remove 3. Throber Remove 4. Cleaning & Grubbing 4. C. Act Set Scork or at Fenore 5. D. Supper SH Fenore 2. Decrevation (Cut Only) 4. Construction Enfrance 5. Decrevation Enfrance 6. Prox Weler Pit 6. Roberts Roads 6. Troped 7. Throber Remove 8. Throber Remove 9. Throber Remove 9. Throber Remove 9. Throber Remove 1. Prox Type 1. Roberts District 1. Prox Type 1. Roberts District 9. Accesse Roads 1. Roberts District 1. All Prox Connective Plys 1. All Prox Connective Plys 2. Supper Shreet Checkson 3. Julie Multing 1. All Prox Connective Plys 1. All Prox Connective Plys 2. Supper Shreet Checkson 3. Julie Multing 4. Accesse Roads 5. Accesse Roads of Multing (TRuth) 5. Julie Multing 6. Accesse Roads of Multing (TRuth) 7. Accesse Roads of Clean Augmengate (2) TONS 8. Accesse Roads of Clean Augmengate (2) TONS 8. A Committee Roads Greet Film Augmengate (3) TONS 8. A Committee Roads Greet Clean Augmengate (3) TONS 8. A Committee Roads Greet Clean Augmengate (3) TONS 8. A Committee Roads Greet Clean Augmengate (3) TONS 8. A Committee Roads Greet Clean Augmengate (3) TONS 8. A Committee Leymont 8. A Committee Leymont 8. A Committee Leymont 8. A Committee Roads Greet Clean Augmengate (3) TONS 8. A Committee Roads Greet Clean Augmengate (3) TONS 8. A Committee Leymont 8. A Committee Leymont 8. A Committee Roads Greet Clean Augmengate (3) TONS 8. A Committee Leymont 8. A Committee Leymont 8. A Committee Clean Augmengate (3) TONS 8. A Committee Leymont 8. A	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing Grubbing E&S Controls A. Clearing Grubbing E&S Controls B. Thriber Remove C. 24 Sit Sinck or Sit Fence D. Super Sit	8				代したがいると
1. Clearing, Grubbing, EAS Controls 2. Clearing & Grubbing 3. Clearing & Grubbing 4. Clearing & Grubbing 5. A. Clearing & Grubbing 6. AP SR Stock or Sit Fenox 6. D. Super Bill Fenox 7. Construction Enforce 7. Construction Enforce 8. DR Pad 9. DR Pad 9. DR Pad 10. Access Roads 10. Access	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing Anubbing Ess Controls A. Clearing & Grubbing Ess Controls A. Clearing & Grubbing Ess Controls B. Timber Remove III Fenore B. Timber Remove III Fenore B. D. Apper Bit Fenore C. Processor Remove III Fenore C. Doll Ped 10 Menus Crustner Run Aggregate (2) TONS C. Accessor Remove Crustner Run Aggregate (2) TONS C. Accessor Remove Crustner Run Aggregate (2) TONS C. Accessor Remove Crustner Run Aggregate (3) TONS C. Accessor Remove Crustner Run Aggregate (2) TONS C. Accessor Remove Crustner Run Aggregate (2) TONS C. Accessor Remove Crustner Run Aggregate (3) TONS C. Accessor Remove Crustner Run Aggregate (3) TONS C. Accessor Remove Crustner Run Aggregate (3) TONS C. Accessor Runder C. Processor Run		6/8		48	10 cz. Fell Under Leyment
1. Clearing, Grubbing, EAS Controls 2. Clearing & Grubbing 3. Those Removed C. 24' Sill Stock or Sill Ferrors C. D. Super Sill Ferrors C. Front Weller Pit C. Arocese Roadis C. Colil Fed 4D Nr. Liner C. Doll Fed 5' Clean Arocese Run Aggregate (2') C. Doll Fed 5' Clean Arocese Run Aggregate (3') C. Doll Fed 5' Clean Arocese Run Aggregate (3') C. Doll Fed 5' Clean Arocese Run Aggregate (3') C. Doll Fed 5' Clean Arocese Run Aggregate (3') C. Doll Fed 5' Clean Arocese Run Aggregate (3') C. Doll Fed 5' Clean Arocese Run Aggregate (3') C. Doll Fed 5' Clean Arocese Run Aggregate (3') C. Doll Fed 5' Clean Arocese Run Aggregate (3') C. Arocese Roadis 4' Weller Explicit (US 2001) Sill Ped 5' Clean Aggregate (3') C. Arocese Roadis 4' Weller Explicit (US 2001) Sill Ped 5' Clean Aggregate (3') C. Arocese Roadis 4' Weller Explicit (US 2001) Sill Ped 5' Clean Aggregate (3') C. Arocese Roadis 4' Weller Explicit (US 2001) Sill Ped 5' Clean Aggregate (3') C. Arocese Roadis 4' Weller Explicit (US 2001) Sill Ped 5' Clean Aggregate (3') C. Arocese Roadis 4' Weller Explicit (US 2001) Sill Ped 5' Clean Aggregate (3') C. Arocese Roadis 4' Weller Explicit (US 2001) Sill Ped 5' Clean Aggregate (3') C. Arocese Roadis Aggregate (3') C. Arocese Roadis 4' Well Res Clean Aggregate (3') C. Arocese Ro	Well Site: John Campbell North Drill Pad & Frac. Water Pit I. Clearing Grubbing Ess Controls UNIT OUANTITY UNIT PRICE A. Clearing & Grubbing B. Tarriour Ramoval AC 9.95 B. Tarriour Ramoval AC 3.90 B. Tarriour Ramoval LF 1.984 C. 24' Sill Sock or Sill Fence LF 2.88 D. Super Sill Fence LF 2.88 S. Drift Fence LF 2.88 S. Drift Fence CF 7.382 C. Proceed Reads CF 7.382 D. Access Reads Disch LF 7.278 G. Roundelde Disch LF 7.278 J. Rip Raje LF 7.278 S. Julia Suma SY 418 S. Julia Suma SY 418 S. Julia Suma SY 418 S. Processor Reads (Free Rule) SY 418 S. Writer Rule SY 418 S. V. 24' Sump S A. Cell Rule SY 418 S. Sille S <tr< td=""><td></td><td>64</td><td></td><td>SY</td><td>A. (One) 80 mil Layer</td></tr<>		64		SY	A. (One) 80 mil Layer
1. Cleaning, Grubbing, EBS Conteres 1. Cleaning & Grubbing 2. A. Cleaning & Grubbing 3. Throber Namoved 2. At Sill Scotc or Sill Fenore 3. D. Supper Sill Fenore 3. Description Enfrance 4. C. Cy 7,382 5. Description Enfrance 5. Description Enfrance 6. Proof Weder PR 6. Cy 7,382 5. Description Enfrance 6. Proof Weder PR 7. Access Roadis 7. Proper Sill Fenore 7. Cy 7,382 7. Cy 7,382 7. Sill Fenore 8. Description Enfrance 8. Cy 7,382 8. Sill Fenore 8. Description Enfrance 8. Cy 7,382 8. Sill Fenore 8. Description Enfrance 8. Cy 7,382 8. Sill Fenore 8. Description Enfrance 8. Cy 7,382 8. Sill Fenore 8. Description Enfrance 8. Cy 7,382 8. Sill Fenore 8. Description Enfrance 8. Description Enfra	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing Grubbing E&S Controls A. Clearing Grubbing E&S Controls B. Tarrior Remove B. Tarrior Rem					. Frac. Will
Clearing, Grubbing, E&S Controls	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing Cambring East Controls Vicarring & Grubbing East Controls Vicarring	li.		Section 1	Same of	
Clearing & Grubbing & E&S Combrols	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing & Grubbing E&S Controls Clearing & Grubbing E&S Controls Construction Fermon This Removed Control Construction Enfrance Expression	7		が対して	1	The state of the s
Clearing, Grubbing, E&S Controls	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing Grubbing E&S controls Unit OUANTITY UNIT PRUCE Clearing & Grubbing Ses Controls AC 8.89 \$ 1. A2 8.8 \$ 1. Constrols Control Clearing Clearing Control Clearing C		6/4	2,853	82	Access Roads Gaolectia Fabrio (US 200)
Clearing, Grubbing, ESS Combots	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing, Bribbing, E&S Comitoria L Clearing & Grubbing I Timber Remove I Thomas Re		44	1,768	SNOT	Access Roads 4" Minus Crusher Run Aggregate
Clearing Grubbing ESS Combots	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing, Grubbing, Edit Connerties L'Gesering & Grubbing L'Immoer Removes Removes Readis Romer Pit L'Immoer Removes Romer Ro		64	L	BNO	Drift P
Clearing Grubbing EAS Controls	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing, Grubbing, ESS Controls Clearing & Grubbing Timble Remove Timble Remov		SI	1	CNS	Ditti Ped 3" Casen Aggrage
Clearing & Grubbing & E&S Combots	Well Site: John Campbell North Drill Pad & Frac. Water Pit Unit OutAntity Unit Pad & Frac. Water Pit Unit OutAntity Unit Pad & Frac. Water Pit Unit OutAntity Unit Pad & Frac. Unit OutAntity Unit Pad S		1	1	Į G	CONTROL WIND CARREST PURITY PROPERTY
Clearing Grubbing E&S Controls	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing, Gnibbing, Eds Controls Clearing & Inthibing, Eds Controls Clearing & Sociot of Sit Fence 1. Timber Removed 1. T	1	1	1		CHARLES AND LAND
Clearing, Grubbing, E&S Controls	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing Grubbing Ess Controls Clearing Grubbing A Controls Clearing Site Society Construction of Site Fenore Limber Removel Limber Removel Limber Site Fenore Cry 7,282 Site Construction Entrance Cry 7,278 Site Access Reads Cry 7,278 Site Control Site Site Site Site Site Site Site Site	1		1	2 9	
Clearing Grubbing ESS Combots	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clashing Bribbing Ess Combris UNIT OUANTITY UNIT PRUCE Clashing & Grinbbing A Grinbbing A Grinbbing A Grinbbing A Grinbbing A Grinbibing A Grinbbing A Grinbing A Grinbbing A Grinbing A Grinbbing A Grinbing A Grinbbing A Gri	1	91	1	ş	A Chill Dayl AD Mill I have
Clearing, Grubbing, E&S Controls	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing, Gnibbing, Eds Controls Clearing & Gnibbing Eds Controls Clearing & Snot or Sit Fence 1. Those Removes 2. Site of the Control of	1	į	TA ORIGINAL MANAGEMENT		The state of the s
Clearing, Grubbing, E&S Controls	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing, Grubbing, Ess Controls Literating, Grubbing Ess Controls Literating & Grubbing Ess Ess Ess Ess Ess Ess Ess Ess Ess Es	4.			The same	la la
Clearing, Grubbing, ESS Combots	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing, Bribbing, E&S Controls L. Clearing & Grubbing I. Timber Removed I. Super Sill Fenome I. Exp. I. Super Sill Fenome I. Fraction Sill Fenome I. Timber Removed I. Timber Removed I. Timber Removed I. Timber Removed I. Fraction Sill Fenome I. Fraction Sill Fenome I. Timber Removed I. Fraction Sill Fenome II. Fracti		-		TONS	#8 Stone (Ditch Checks)
Clearing Grubbing E&S Combots	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing, Grubbing, E&S Controls L Clearing & Grubbing E&S Controls L Clearing & Grubbing E&S Controls L Timber Removed C Timber		40		ENO	
Clearing, Grubbing, EAS Controls	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing, Grubbing, Eds Controls Clearing & Broken Stroken Clearing & Broken Stroken Control Famous Super Sit Fenors Super Sit Fenors Construction Entrance Constru	3			-3	
Clearing, Grubbing, EAS Controls	Well Site: John Campbell North Drill Pad & Frac. Water Pit Unit Guideling E&S Controls Unit Guideling E&S Controls Unit Guideling E&S Controls AC SAS \$.					
Clearing, Grubbing, ESS Combrols	Well Site: John Campbell North Drill Pad & Frac. Water Pit Clearing a Grubbing E&S Comeros Unit OLANTITY UNIT PRUCE Committee	Š	100	12	g	24" Sump
LF 289 8 CY 7,382 8 CY 7,382 8 CY 7,278 8 CY 7,278 8 CY 7,278 8 CY 7,282 8 CY 7,282 8 CY 7,282 8 CY 7,282 8 CY 7,286 8 CY 7,286 8 CY 7,287 8 CY 7,288 8 CY 7,288 8 CY 7,288 8 CY 1,294 8 CY 1,294 8 CY 4,291 8 CY 4,291 8 CY 4,291 8 CY 4,291 8	AC BAB S LF 1,884 S LF 2,89 S LF 1,884 S CY 7,282 S CY 7,283 S CY 7,278 S SY 478 S		•	030	ç	
UNIT OUANTITY UNIT PRUCE	AC BAB S AC BAB S AC S.50 S LF 1,984 S CY 7,982 S CY 7,278 S LF 722 S CY 7,278 S LF 722 S CY 7,278 S		en	2	87	3. Julia Maliting
UNIT OUANTITY UNIT PRUCE	AC 8.98 \$ AC 8.98 \$ AC 8.98 \$ LF 1.984 \$ LF 289 \$ CY 7.288 \$ CY 7.278 \$ CY 7.288 \$ CY 4.311 \$ EV 4.78 \$		er	91.0	Q.	Synthetic
LF 289 3 CY 7,278 5	AC BAB S LF 1,288 S CY 7,278 S CY 7,278 S LF 1,294 S CY 7,382 S CY 7,278 S LF 1,294 S CY 7,278 S LF 1,294 S CY 7,278 S LF 1,294 S	1	0	970	9	MID NOD
UNIT OUANITITY UNIT PRUCE	AC 9.98 \$ AC 9.98 \$ AC 9.98 \$ AC 9.98 \$ LF 1.994 \$ LF 288 \$ CY 7.892 \$	1			2	The second family for the second
Clearing & Grubbing E&S Controls	Well Site: John Campbell North Drill Pad & Frac. Water Pit Inning Grubbing E&S Controls Clearing & Grubbing Controls Clearing & Grubbing Controls Innine Remove AC 9.99 \$ 19 1,994 \$ 19 288 September (Cu Chin) Construction Entrance Drill Pad Controls Cry 7,382 \$ Cry 7,278 \$ Downston Dich	1	0	- Parent	1	Li Tibris (Access Board)
Clearing, Grubbing, E&S Controls Clearing & Grubbing Clearing & Grubbing Clearing & Grubbing AC AC S.90 S.9	Well Site: John Campbell North Drill Pad & Frac. Water Pit Unif Quantity Unif Quantity Unif PRICE Clearing & Grubbing E&S Controls Clearing & Grubbing AG Shabbing AG 9.99 \$ Clearing & Grubbing AG 9.99 \$ Throise Racet or Sill Fenore LF 1.994 \$ Saper Bit Fenore LF 2.88 \$ Saper Bit Fenore LF 2.88 \$ Saper Bit Fenore LF 2.88 \$ Saper Bit Fenore CFY 7.982 \$ Control Contr		•	A GOL	7	- 1
Constrict Control Co	Well Site: John Campbell North Drill Pad & Frac. Water Pit Identing Grubbing, E&S Controls Clienting & Grubbing Thomas Removed AC 9.89 \$ Thomas Removed AC 9.80 \$ LF 1,984 \$ Serverabor (Cd Only) Construction Entrance Diff Pad Diff Pad Acc 9.80 \$ LF 288 \$ CY 7,982 \$ Access Removed CY 7,382 \$ Access Removed CY 7,382 \$ CY 4,331 \$		20	3	91	Щ
Mainting, Grubbing, E&S Controls Clearing & Grubbing Timbur Removel 24' SR Sock or Stiff Fence Lip 1,934 3 Super SR Fence Lip 288 3 AC SR SR Sock or Stiff Fence Lip 288 3 AC SR SR Sock or Stiff Fence Lip 288 3 AC SR SR Sock or Stiff Fence Lip 288 3 AC SR SR Sock or Stiff Fence Lip 288 3 AC SR SR Sock or Stiff Fence Lip 288 3 AC SR SR SC SR	Well Site: John Campbell North Drill Pad & Frac. Water Pit Maring Guibbing E&S Controls Clearing & Guibbing Thiber Rarrovel 24 58 Sock or Sit Fenoe 24 58 Sock or Sit Fenoe 25 58 Sock or Sit Fenoe 26 59 50 50 50 50 50 50 50 50 50 50 50 50 50		60	32	ઇ	
Resiring Grubbing EAS Controls Clearing & Grubbing Tenhour Removal AC 9.99 \$ Super Sit Fenos Super Sit F	Well Site: John Campbell North Drill Pad & Frac. Water Pit Maring Rubbing, E&S Controls Clearing & Grubbing Clearing & Controls		••	7,278	ઇ	. 1
Clearing Grubbing EdS Controls	Well Site: John Campbell North Drill Pad & Frac. Water Pit Maring, Grubbing, E&S Controls Clasering & Grubbing, E&S Controls Clasering & Grubbing Tribus Removals AC 9.99 \$ 24" Sill Sock or Sill Fences Lif 1,994 \$ Signer Sill Fences Lif 288 Signer Sill Fences Lif 288 Controls Control	1	49	20,049	থ	
Tambur Remove Society Controls AC 8.98 \$ Tambur Remove AC 1.99 \$ Tambur Remove	Well Site: John Campbell North Drill Pad & Frac. Water Pit Laming, Grubbing, E&S Controls Clearing & Grubbing, E&S Controls Clearing & Grubbing Clearing & Grubbing Controls Controls LF 288 Construction Entinos LF 288 Construction Entinos EA 2 5		69	7,382	જ	B. Drift Pad
Maring, Grubbing, E&S Controls Clearing & Grubbing Tenthur Remove Super Still Femore LF 258 Scott of Still Femore LF 258 Scott of Cut Cut () LF 258	Well Site: John Campbell North Drill Pad & Frac. Water Pit Isaning, Grubbing, E&S Controls Gaering & Grubbing E&S Controls Gaering & Grubbing AC 8.98 \$ Throber Removel 24' Sit Sock or \$11 Fenore LF 1,984 \$ Super Sit Fenore LF 258 \$ Super Sit Fenore LF 258 \$		44	2	5	A. Construction Entrance
Rearing, Grubbing, EAS Controls Classing & Grubbing Tambur Ramoval 24* Sell Scoker Sell-Finds Super SRI Fends LF 288 \$ LF 288 \$	Well Site: John Campbell North Drill Pad & Frac. Water Pit Lanning Grubbing E&S Controls UNIT OUWITTY UNIT PRUCE Clasming & Grubbing A Grubbing A C 8.98 \$ 1 Tanbur Rumoval AC 8.98 \$ 1 Tanbur Rumoval AC 8.98 \$ 1 Tanbur Rumoval LF 1.984 \$ 1 1.984 \$					
Haming, Grubbing, E&S Controls Gramma, Grubbing, E&S Controls Gramma, Grubbing Gramman Gramman AC Gramm	Well Site: John Campbell North Drill Pad & Frac. Water Pit Laning, Grubbing, E&S Conkris UNIT OUANTITY UNIT PRUCE Clearing & Grubbing AC 0.98 \$ Timbur Ramoval AC 3.80 \$ 24' Sill Stock or Sill Fenore LF 288	198	ALC: UNITED BY	1	200	
Tambur Removal	Well Site: John Campbell North Drill Pad & Frac, Water Pit Islaning, Grubbing, E&S Controls Gaering & Grubbing Gaering & Grubbing AC AC S.80 S S S S S S S S S S S S S	R	10.10	1000	N. Carlot	この かんしょう かんしょう かんしょう アン・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・
Mainting, Grubbing, EAS Controls Clearing & Grubbing Clearing & Grubbing AC AC AC AC AC AC AC AC AC A	Well Site: John Campbell North Drill Pad & Frac, Water Pit Maning, Grubbing, E&S Controls Clearing & Grubbing AC Thribur Removal AC Self Self Fenom AC Self Self Self Fenom AC Self Self Self Self Self Self Self Self		,0	280	-	
Manifing Grubbing EdS Controls Clearing & Grubbing AC 9.98 \$ Timber Removal AC 3.80 \$	Well Site: John Campbell North Drill Pad & Frac, Water Pit Washing, Grubbing, E&S Controls Classing & Grubbing AC 9.96 \$ Tribut Removal		10	189		110
Mening Grubbing E&S Controls UNIT OUANTITY UNIT PRICE Clearing & Grubbing AC 8.98 \$	Well Site: John Campbell North Drill Pad & Frac, Water Pit wiff QUANTITY UNIT PRICE Clearing & Guideing & AC 8.98 \$		40	3.80	8	
aring, Grubbing, E&S Combros	Well Site: John Campbell North Drill Pad & Frac, Water Pit unit QUANTITY UNIT PRICE aring, Grubbing, E&S Controls		45	9.98	8	Clearing & Grubb
UNIT PRICE	Water Pit					ering, Grubbing,
LACT CICE AND ADDRESS AND PARTY OF THE PROPERTY OF THE PERSON OF THE PER	Well Site: John Campbell North Drill Pad & Frac. Water Pit	ğ	UNIT PRICE	_	UNIT	
The state of the s	Wall City John Comphell North Dell Dad & Fran Water Di		11 (1900)	04 41 180.	7181	AACH CIGO: ACHT CON BOOK CACHEL

THE PARTY OF MARKET SPICES OF TAXABLE PARTY.	WANTED THE TRANSPORT OF ITS BASE USED ON THE PART OF T	ARCAD DECEMBER 4 TO MATTER AND BANGLETIC MATTERS (THAT ARE TO BE DECIDED A MET AND	

GRA	GRADING VOLUMES	UMES	
DESCRIPTION	CUT (CY)	FILL (CY)	NET (CY
MAIN ACCESS ROAD 1	274	275	<u>-</u>
MAIN ACCESS ROAD 2	3,810	869	2,941
DRILL PAD	8,807	18,221	-9,414
FRAC PIT	21 717	14,371	7,346
FRAC PIT ACCESS ROAD	4.410	2	4,408
SPOIL PADS	0	5,282	-5,282
TOTAL	39,018	39,020	-2

	FRAC	FRAC PIT VOLUMES	E S	
ELEVATION	BARRELS	GALLONS	ACRE-FT	UNINCISED ACRE-FT
979 (BOTTOM)	0	0	0	0
981	4.045	169,882	0.521	o 24
983	9,965	418,556	1.285	0:
286	17 163	720,903	2.212	o /2
987	25,753	1,081,702	3.320	1.108
989	35.850	1,505,801	4.621	2.409
991	47.568	1,998,018	6.132	3.920
993	61.015	2,562,817	7.865	5.653
995	76.287	3 204 292	9.834	7.622
997	93.480	3 926 459	12.050	9.838
TOP RERMI	112 691	4 733 343	14.526	12.314

The earthwork quentities provided are en estimate for consideration. The quentities shown may be greater or less then extuelly excevated. The engineer is not responsible for variances from the estimated quantities and does not certify to their accuracy.

DATE 5-8-2012 6-29-2012 REVISED QUANTITIES & SPOIL AREA
REVISED LOD TABLE

> SCHEDULE OF QUANTITIES JOHN CAMPBELL NORTH DRILL PAD SITE

CUT SLOPE 2
FILL SLOPE 2
FRAC PIT INTERIOR 3
PAD CONTAINMENT BERM SLOPE 1.
CUT SWELL FACTOR 1.
FILL SHRINK FACTOR 1.
PAD ELEVATION: 1

2:1 2:1 3:1 1.5:1 1.05 1.00 1014.0

UNION DISTRICT RITCHIE COUNTY, WV





MAIN ACCESS ROAD 1
MAIN ACCESS ROAD 2
FRAC PIT ACCESS ROAD
DRILL PAD
FRAC PIT
WASTE & SPOIL PADS

LOD AREAS (ACRES)
ICRIPTION AREA
ICRIPTION AREA
ICRIPTION AREA
ICRIPTION AREA
I 0.28
I 0.28
I 0.70
I PAD 2.65
IC PIT ACCESS ROAD 2.65
IC PIT 3.12
ITE & SPOIL PADS 9.88
AL WOODED AREA 3.80

TOTAL WOODED AREA

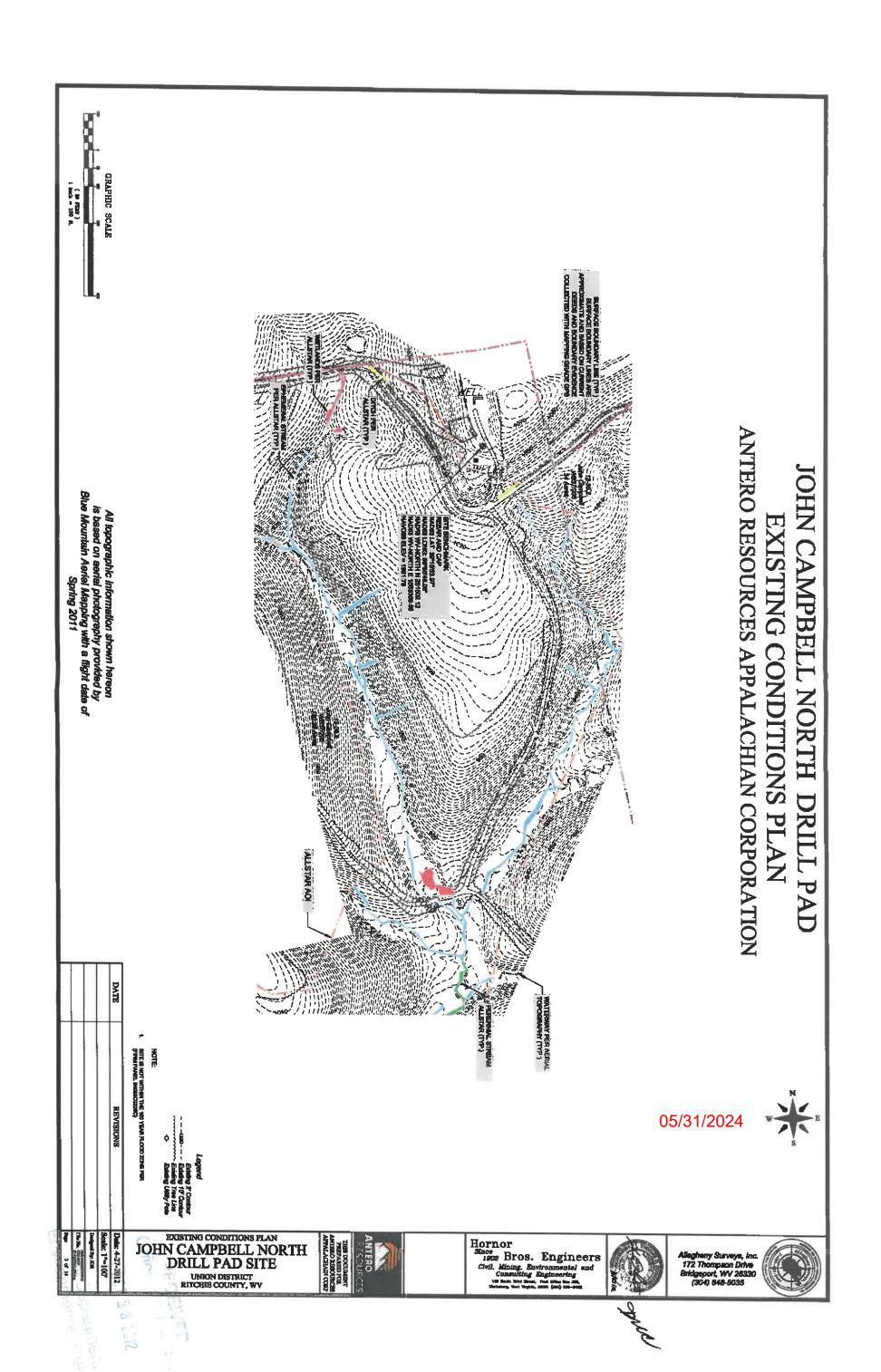
GRADING

Hornor
Since
1908 Bros. Engineers
Civil, Mining, Ravironmental and
Consulting Engineering
108 Such Ted Start, Fed One See See,
Children, Yout One See See,
Children, Yout One See See,



Allegheny Surveye, Inc. 172 Thompson Drive Bridgeport, WV 26330 (304) 848-6035





CONSTRUCTION, GENERAL AND EROSION AND SEDIMENT N OTES

- THE FANC PT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND THE SCOTE OF WORK AND SHALL CONFORM GENERALLY WITH THE SERVER, REPRIA, DEPTHS AND DISENSIONS SHOWN.
- THE CONSTRUCTION DOCUMENTS SHOW THE ENSITING AND NEW GRACES AND RESIDE, ETC. THAT ALL CUT AND FILL ESTIMATES AND MAKE UPON. THE ENSITEMS ESTIMATES OF THE CLAMITICS! AND CALL CHILDS AND MAY CHANGE BARDO ON ACTION, PERIO CONSTRUCKS.
- S. THE GRACES, PERME, DEPTHE, AND DIMENSIONS MAY CHANGE BASED ON ADTIME FIELD CONDITIONS. THE EXCHERN RESERVES THE RIGHT TO CHANGE GRAZICE, BERLIE, CLEYTHE AND DIMENSIONE AS RECEIBARY TO MEET FIELD CONDITIONS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER ALL RESCONSILE FACILITIES AND PROVIDE INFORMATION AND SAMPLES AS REQUIRED BY THE ENGINEER POR PROPER ADMITCHING AND TESTING OF MATERIAL NOTIONAGES.
- THE COMPACTOR SPALL HARE ON SITE AT ALL TIBES WHICH CONSTRUCTION IS BY PROCESSES A COMPETENT OF SUPERING THE COMPACTOR OF SANTH BESIDE AND ENBARCHMENTS, THE COMPACTION OF SANTH BESIDE AND ENBARCHMENTS, THE COMPACTION OF SANTH BESIDE AND ENBARCHMENTS, THE
- A 3F BLT BOOK OR BLT TENZE BYALL BE NISTALLED PRIOR TO CLEARING AND GRUDBING AS SYSTAM ON THE DRAWINGS IN ACCORDANCE WITH MY DIP BEST MANAGEMENT PRACTICES MANUAL CHAPTER 3. BUREAUX WATER SHALL BE DIMENTED AWAY PROM ALL DRECHANTONS AND THE FACE OF ALL FILS TO PREVENT FLOQUED AND SOFTENING OF THE SUBGRIDE OR COMPACTED MATERIALS.
- CLEARNO AND GRUBBING BYALL REMOVE ALL BRUIN, TIDERS, ROOTS, STUMPS, FENCES, SCHIS OR ARY OTHER MATERIAL THAT IS HE RELIED FOR THE CONSTRUCTION, 450HE BYUNES HAV REMAIN AT THE FAPROVIA OF THE ENCHRETS. NO CLEARNO CERTS BY THE FAR CHARLE FUND CHARTE WITHOUT THE LANCOWNERS AND ENGINEERS WITH THE PERIOSSION, ANY DEBYS BUINN, BYTE BYALL BE RECIPED AND MALCHED.
- TOP BOLL BHALL BE STREPPED AND STOCKFILED WITH APPROPRIATE STARRIGATION AND BLI FERKE TO PREVENT BROSKIN THE TOP BOLL SHALL BE RELIED OUTSING THE REGLAMMICH PROCESS OR ON THE FACE OF THE BIPOLADMENT PRIOR TO
- 10. PRIDE TO PLACING ANY FILL THE EXPOSED SUBGRADE BLALL BE COMPACTED AND PROOF ROLLED TO PRODUCE A STALL AND UNVIELDING SITE. TOS CUTS OF TO MINIMAN WIDE SHALL BE EXCAVATED ON ALL RECEIVINS SLOTES TO PROVIDE A BASE FOR THE IMPOLEMENT LESS.

. FRAC PIT BETANG SHALL BE UNBORMLY GRACED SOL FREE PROM AGGREGATE EXCEIDAD IV. THE FILL SHALL BE FREE OF ALL ORGANIC MATERIAL, BITANPY, BRUSH, OR OTHER DELITEROUS MATTER.

- 12. ALI PILL BRALL DE PLACED NI LOCRE LIPTO OF LIP TO 12 AND SHALL DE COMPACTED TO AT LESET 655 OF THE LABORATORY MANDE PLACES OF THE LABORATORY DESCRIPTION OF STANDARD PRODUCTION THE THE THROUGH OF STANDARD COMPACTED AND THE COMPACTED COMPACTOR. COMPACTOR COMPACTED COMPACTOR PLACES ON EXCHANGE OF THE COMPACTOR COM

- IF OPTIMAS OR SEEPS ARE ENCOUNTENED, SUBSURFACE DRAININGS FEATURES SHALL WE INSTALLED PRIOR TO FILL PLACEMENT, CONTINCT ENGINEER FOR ENALUNTON AND RECONNENDATION OF CONFECTIVE MENALUNGS.
- AT THE FILL TO SECRETAL FULL HEARANGERIES SHALL BE SEPECIFED BY COMPRETENT BESIDENCE OR SOLL MATERIAL.
- TT, ANY SOFT AREAS SHALL SE OVER-EXCANATED TO A FISH MATERIAL AND BACKFLLED WITH A WELL COMPACTED STRUCTURAL FILE. FILL PLACED AGAINST EXISTING BLOPES SHALL BE BENCHED INTO THE EXISTING MATERIAL DURING FILL PLACEMENT TO REDUCE THE POTENTIAL POR DEVELOPMENT OF A SMOOTH INTERFACE BETWEEN THE FILL AND EXISTING SLOPE.
- PAL TREALINESD TO CORTAIN DESIGNAPACES SHALL SE PLACED AS CONTROLLED, COMPACTED FALL THE FAL SHALL SEFFICE OF THASH, WICKLY, TOPICAL, DESIGNACIA, COMI, COMI, MINE REPUBE, PROZEM MATERIAL, AND PECCES OF ROCK GREATER THA OF NUMP DIMERICADE.
- CLINARI PLACEMENT OF MATERIAL, MONITON OR ARPAITE SACH LAYDR OF FILL, AN NECENSARY, TO OSTAIN THE RECURSED COMPACTION, PILL 1910,LD NOT HE PLACES ON SURFACES THAT AND MAJOOT OR RECORN, OR HAVE MOT SEEN APPROVED BY PRIOR PROOF-ROLLING, PRES WAITER (IPAL) SE PREMENTED FROM APPEARSHIG ON THE SURFACE CURING OR BLESSCOLENT TO COMPACTION OPERATIONS.
- 21. THE PILL OUTBLOPES SHALL BE OVERSUILT AND TRUMED BACK TO DESIGN CONFIGURATIONS TO VERIFY PROPER, COMPACTION. AN ACCEPTABLE LEVEL. WHEN THE SCALLS TOO DISK, WATER MAY BE UNPORMED APPLIED TO THE LAYER TO BE COMPACTED. AN ACCEPTABLE LEVEL. WHEN THE SCALLS TOO DISK, WATER MAY BE UNPORMED APPLIED TO THE LAYER TO BE COMPACTED. AN ACCEPTABLE LEVEL. WHEN THE SCALLS TOO DISK, WATER MAY BE UNPORMED APPLIED TO THE LAYER TO BE COMPACTED.
- 22. ORNALIAN MATERIALS, SUCH AS AASHTO NO. 57 STONE SHALL BE COMPACTED TO 50% OF ITS THE ATTAC DENSITY, AS DETERMINED BY ASTN D 4509 AND D 4504 TEST METHODS.
- 23. THE INSIGE OF THE FRACETT SWALL BE BOTH SHOOTH DRUM ROLLED AND FREE OF PROTRUDING OR SHARP ROCKS IN OWDER TO RECEIVE THE LINER. PRIOR TO THE LARTH NEIGHLATION THE COTTINATION BRALL COTTACT THE BUTWEYOR TO DO AN ASBURIT BUTWEY OF THE BEPCHROMENT TO ENGLINE CONFORMANCE WITH THE ENGINEERTS SHAWINGH, THE BUTWEYOR BHALL PROVIDE THE REPORTION TO THE ENGINEER, WHICH THE REPORT OF THE PROVINCE ON ANY VARIATION FROM THE DAMINIOS AND DIRECT THE CONTINACTION TO DO CORRECTIVE WORK.
- LINER BHALL BE POLYFLEX INPERVIOUS TEXTURED YORK OUTSIESMANE, BMAIL, METALLED BI ACCORDINACE WITH MANUSPICTURENS INVITALITIENDE. THE TUP OF THE LINER SHALL BE TUPNED DOWN BYTO A F ANCHOR TRIBADH AT THE TUP OF THE BENEATO BACKFILLED WITH BELET FILLAS SHOWN ON THE OPANIMASS OR AS REQUIRED BY THE LINER. MANUSPICTURES.
- YARDA TO ASSULT CERTIFICATION, THE COMPRIADTOR SAVAL, PROJECTE THE ENGINEERS WITH A COMPLIETE BINGTH THAT NCLLICES ALL PHOTO DOCUMENTATION, ALL COMPRITION TEST PROPORTER, REGILLTE AND MAPA, A REPORT OF ALL COTT AND YILL YOURANDS IN CUBIC VANDS, AND, A COPY OF THE ASSULT COMPRISATION SURVEY PRODE TO LIKER PLACEMENT.
 - PATICIDARIANE COCIMINATATION BIALL DE TAIGNE PER THE CONTRACTOR AND PROCEDO TO THE BRANCHEST OF THE CALLYMING ACTIVITIES (1, SIE AF THE CLASHIES AND CHILDRING), THE SIE THEN TOWOR RESEDIAN), 1, THE OFFICE AND THE TOWOR RESEDIAN), 1, THE OFFICE AND THE TOWOR RESEDIAN), 1, THE OFFICE AND THE TOWOR OF THE TOWOR OF THE TOWOR THE AND THE TOWORD THE TOWORD

GENERAL MOTES

EROSION AND SECURENT CONTROL NARRATIVE

PRINCET DESCRIPTION. THE PURPOSE OF THE PROCEST IS TO GROVE AND INSTITUTE RECORD AND INSTITUTE PROCESS. AND INSTITUTE PROCESS.

<u>WITHER RITE CONTINUES.</u> THE EXISTING RITE BEOFEN GRUEBLAND AND UTLAND HAVE WOODS WITH GETTLE TO DESIGNATELY RITED TO CONVEYNY WITH 5% TO 20% BLOFEL HO EXCERCIN IS NOTICED ON BITE. OR IN ANY INTURAL VANACE MATE.

- WORK ON THE PROJECT EVALL CONTINUE TO THE LITERY EXITIONS OF THE WAST VERBURG EXPANDABLY OF THE PROJECT EVALUATION OF THE PROJECT HANDSOOK. IN THE REPORT OF THE PROJECT OF

- ALL DAVA MLETS SHALL BE PROTECTED FIGH SILTATION, IMPRESTIVE PROTECTION GENERAL BE REPLACED AND THE INLET CLEANERS. PLUSISHIO IS NOT MY ACCOMPANIE. MEM-8 OF CLEANERS.

- ALL TEST RESULTS SHALL BE SUBMITTED TO THE EMMINEST, FALLING TO COMDUST SCHOOLY TESTS SHALL BE CAUSE FOR MUNICIPALITY, TESTS SHALL BE CONDUSTED AT THE SOLE COST OF THE CONTINUITYS OR HIS AGENT
- CONTRACTOR SHALL SUBJET AND ADHESE TO A GENERAL GROUNDWATER PROTECTION PLAN.

- DURNIC CONSTRUCTION OF THE PROJECT, BOLL STOCKPULES SHALL BE GTARLIZED ON PROTECTED WITH SECREPHT TRADPRICA INSTALLABLE.
- GIVAN ZANTON MEMANINEN SIMALL HE APPLIED TO EMPTHEN STRUCTURES BUCH AS MEPCHICASTRI, CHES AND DIVERSIONS DAMEDWITELY AFTER INSTALLATION.
- WANTINGS STATT DE BESTANDLITA SIVENTEZO DO BARKELLA MILITERI BACHEN WOND SEDIMENITACIO. BRANDESA, LIPANDEN CELANDLA VENDENDE DEL MENDED DEL VENDEN ELSET LIPANDEN CELEMICANO. LE DEMONSTA DE LEGIMENTA DE LA CONTROL DE LA
- AL DISTURBED AREAS NOT PAVED OR BULT UPON SHALL BE KYDED BEEDED AND PRITILIZED, PERTORAL PRIMAMENT TOP GOLING, REEDING AND FERTILIZAD AS SOOM AFTER PANNED GRADING AS POSSESS. E SEEDING SHALL COUNTY WITH THE PALLONNED.
- A. TOPGOL 4 ENCH MANAGEM FOR FEDERALENT TURE

- ANY INDOMESTANCES FOUND BETWEEN THIS DIMMINIST AND SECURIZATIONS AND ARE CONTITIONS OF ANY INCOMMINISTRANCES FOUND BETWEEN THIS DIMMINISTRANCES OF AMERICAN THE MOLAMINIST OF THE CHAMMINIST OF BETWEEN THE MOLECULAR AND ARE THE THE CHAMMINIST OF BETWEEN THE CONTITION AND THE CHAMMINISTRANCES OF BETWEEN THE CONTITION AND THE CHAMMINISTRANCES OF BETWEEN THE CONTITION AND THE CHAMMINISTRANCES OF BETWEEN THE CHAMINISTRANCES OF BETWEEN THE CHAMMINISTRANCES OF BETWEEN THE CHAMINISTRANCES O

- al matemas dieed for fal or mack fal by also effect of modit, rooms, rooms, buildesi or any other Memocrames egglythe matemas, inspaties/actory matemas also relide han made fals and response Debas devend falsom any govern

ECONO AND SETMENT CONTROL MEMBRISH, UNIL DIS TRACION AND SETMENT CONTROL PROCINCIS SAULTS STANDARDA AND SECURATIONS OF THE CONTRACTOR IN ANNASSITE PROCOSTRUCT AL CEVIDIS SANDED ON THIS WESSITE AND CONTROLS OF THE WEST VIRGINIA MANUAL. TO THE APPLICATIONS OF THE WEST VIRGINIA MANUAL. TO TO JAL SIGN OF THE TRACE WAS TO A PRINCIPED BY A VIN SECUMENT CONTROL MEMBRISHED.

THE CHARACTE OF LANG LANG THE LEGENTH WAS DESCRIBED WHEN THE WIDE THE CHARACTER WAS DESCRIBED WHEN THE WORK DESCRIBED WHEN THE

STRUCTURM, CRACTICER:

APPRINCE MALL RECORDING TO BE CONSTRUCTED AS SHOWN ON THE PLANS.

ONE SHOW BETWEEN WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.

OUTLIES SHOWN ON THE PLANS.

APPRINCE TRACTICE THE THE CONSTRUCTED AS SHOWN ON THE PLANS.

APPRINCE TRACTICE THE THE CONSTRUCTED AS SHOWN ON THE PLANS.

- SATERACTORY MATERIALS FOR USE AS TELL FOR PAOLANDIA INCLUDE INVITENAS CLASSIFED IN ASTIN CARRAN CAN, OD CAN, O

ENDSION CONTROL NOTES

- FERTILIZER-800 POUNCE PER ACHES OF 10-20-10 FERTILIZEN OR EQUINALENT POLIKOAGE OF DIFFERENT AVALYMIA, WORK INTO SCIL. PROCE TO SECURAC.
- LALE (PERMANENT GREDNO) AGNICULTURAL LINE BYREAD AT NATE OF 4 TONEACRE WORK INTO SOIL FRION TO DEED WG.
- MALCH-WOOD FINNIN OR CHOPPED STIPMY AT RATE OF 2 TOWN PER ACRE, HYDROMALCH AT RATE OF 30 EALES FIRM ACRE.

5-8-2012 DATE

EVISED QUANTITIES & SPOIL AREA

- RED 45 LUA, PIRI ACINI TALL PERCUE AND 20 LUA. PER ACINE PERCUANUL RYS GRAND. TO BE SEEDED BY HYDRO LIERDEN.

- EDIORION AND RECIMENT CONTROL MERIANES RANL DE MANTANES DALS, DELOCATE MICHIEMPERIAGESPROY AND GRALL RE DEROCED AFTER ENERT AMENALL RECIDED ANSA BANL DE OFFICIENTE TREGULARLY AND BANL DE MATTERED, FETTILIZED. RECENTED AND MALVIAND ÀS MECHANIANT TO ORTHAN A DÉSHE BITAND OF GROSS.

SAY MOLEOG ON SETTING SAFEL SYSTY SUB-LEG

ICLE: NO BOIL STUDIES OR SUBSURENCE BAYESTROATIONS WEST PERFORMED FOR THE PROJECT. PROPERTY: THE SITE IS BORDENED ON ALL SIDES BY UPLAND HANDWOODS.

NOUTBIDE OF THE PROPOSED

MANAMA WITCH STREET CONTRACTION WINEY

OTICAL EICENTANERA CONTROL MANTENANCE, ALL ST BLOFFE AND STEEPER, DITCHES AND OTHER CONTROLLS VILL OF CHESTERS DISTICAL ERCCON AREAS, THESE AREAS SHALL BE MONTROLLD AND MANTENAND CALY WAS AFTEN CONTROLL OF BLOFFE CONTROLLED AREAS, THE COLOR CONTROLL MEANING ANTI-PORTY WAS ANTI-PORTY TO SCHARLED THE FLACEMENT OF ADDITIONAL EROSION CONTROL MEANING SUPPOSEDTY.

- CONTRACTOR IS NUMERONABLE FOR LOCATIRG ALL PUBLIG OR PRIVATE UTILITIES PARICI UE IN OR ADJACCHYTO THE ISTRUCTION 16'TE. THE CONTRACTOR BUYLL INC. RESPONDING FOR THE REPORT, AT 185 OR 185 CONTRACTOR AND TIRKO URLETTED CAMACED DUMBAG CONSTRUCTION, CHYCTY-EIGHT HOURD PROR TO ANY EXCANDING THE TIRKOTTOR SIVALL CALL MIRES UTILITY AT 2003, 652-7551.
- BRITALIATION OF CONCRETE, CONSUBATED HETRAL, OR HIDTE STORM FIFE SHALL BE IN CONFORMANOS WITH THESE DEMENDER.

- THE BYFIL BY PLACED IN LIFTS AT A MAXIMUM INCOMPACTED DETTY OF 13-MOVED WITH SOM, THEIR FROM ADDRESATES EXCENDED.
- DICE SHALL BE HELD PROOF TO THE START OF CONSTRUCTION.

- THE CONTRACTOR BIALL ARRANGE FOR A FIG. CONSTRUCTION CONFERENCE WITH THE APPROPRIATE EXCEND AND SEBMENT CONTROL INSPECTION 44 HOURS PRICE TO BESINNERS WORK.
- ALL ENDROM CONTRAC, DEACES AS SENSINI OR AS RECURSOR, ARE TO BE CONSTRUCTED TO THE CURSORS ENABLADED AND SEUDPORTIONS OF THE REST VIRGENA ENDROM AND SEDIMENT CONTROL SET MANAGEMENT PRACTICE MANUAL AND ARE TO BE IN PACKE PICKET OF ALL COMMENCATION.
- ROCKOM AND SIZINEANT COMMOLINE SAGINES SHALL BE MANTIMED COMMINICIAEN, RELICIONED WISSIASO AS SICIORANTA AND SHALL RECHEROINE AFTER LEGREY RANGELL BESUDO MERGAS HALL BE CHEROUD PROCESSANT AND SHALL BE WATERED, FENTILIZED, REGISTETO AND MALDHED AS NECESSANT TO OSTAM A DENSE STAND OF GROSS.
- AL DISTURBED AREAS NOT PAYED OR BULL IPON ARE TO BE FERTILIZED AND HYDRO-RESIDD WITH STRAW AND COTTON PRODUCT WITH TACK ABENTS BY THE COMPINATION IN ACCORDANCE WITH THE CLARESTIC WIST VINISHAL EXCESSION AND REGISTRATIC CONTROL BEST MANAGEMENT PROCESSE MANAGE.
- ALL CHAIN MLETS SHALL BE PROTECTED FROM SETATION, HIEF BETTING PROTECTION DEVICES SHALL SE MANDIMELY REPLACED AND THE PREFE CLEANED, FLUSHING BINOT AN ACCEPTABLE METHOD OF CLEANING.
- PROMINENT OR TEMPORARY SOIL STABLEZNYCK SMALL BE APPLIED YN DESKUED MESAS WYTHIN BERNON'S AFTER FRAN. CHON'D CENUERS AREAS THAT MAY NOT ELA TE SMAL CHAVE BELL THALL PRIMA DOMANT (ANAMEN SIMED WITH SERVIC STAN BE THAN 21 DAYS, REMANIENT STABLEZNYCK SMALL BE APPLIED YN ARBAS THAT ARE TO BE LEFT DOMANT FOR MORE THAN
- ORBANY RAMBO AND TANDA PROMISTER CHESA SECRIMON RAMBO AND CONHOLMANDISC BATTERCED TO TRAVO SEMBANY BANJUL RE COMMITTERS AS A PROFETTED MARY UNIO DISTUMBANO ACTIVITY AND SAUL REMAINE FINCTIONAL STORE UNBLOFF LAND DISTURBANCE: TANDS FAACE.
- PERMANENT TOTAL CANTON: ALL AREAS LIET IN ACCARRED BY ETHERS RAILONING OR PAYEMENT SAVIL, 88 STABLERS WITH THE PROPERTY OF THE RAIL LAND LAY WITH PROPERTY OF THE PROPERTY.

K. MAKE MODESCATIONS FOR PERMANENT STORM WATER MANAGEMENT.

THOSE OWN NOTIONAL BY WATER STATES OF THE WHAN

nt control heasther ow be repond and repartitistics.

FRANT BEEDING MUST OCCUR WITHIN 7 DAYS OF FINAL

AND HALLINGS TO BE THEN GETS AND SECTION OF THE SEC

ANTENANZE, AND OTHER COMMISSIATIONS AND GREEKED WHITE PROTECTION ALL RECEION AND SEXISIEST CONTROL SERVICES WILL BE CHECKED AND GREEKEN TO SERVICES. THE WHITE BE CHECKED AND GREEKEN THE SERVICES OF THE SERVICES OF THE WHITE BE CHECKED AND GREEKEN THE SERVICES. THE SERVICES OF THE SERVI

IO A HYDRO-GEEDER, HYDRO-MULCH PRODUCTS SHULL SE MOCE STO GRECIFICATIONS.





F. CALVERT INLET AND OUTLET PROTECTION SHALL SE CONSTRUCTED MANEDATELY LIFON FLACISHENT OF PLETS AND COLVENT INLET AND CONSTRUCTED.

GRANDAG CHEMATONIA AS RECURRED. DUT BLOFES AND MIL BLOPES BYALL BY TOPOCHED AS MEEDED. DITCH LINES BYALL BY DEANED, ALL DITCHES HALL HAVE AT LEAST GRAND LINEG PROTECTION OR CHURATHY BASED ON OTICH BLOSE WITH THE PLUCHARD DETERMINATIONS O TO 4% - ORGANIC JUTE HALTING, 4 TO 10% - EMPILETIC MATTING (TON), AND 19% - 20% - REFORM.

WARRY PRAME GRADES & ADMINISTE TOPROSE. TO BE EN ARES ON JALL ENTERGREEN ARES AND VILVERE, NOTICE CHESTAND ARE DATEMENT ARES AND RECULUTED. A DRIE MANNE SPRICH DE REVIEW HAD TESTED TO DETERMINE RECOMMENDED. TOMBE PER ARES. PER PLETE AT A HATE OF PROLINGE AND RETEX SYNDAID DE APPLIED HA A MENGLISK LINE AT A RATE OF A PERSONE AND DE LINE PER ACHIE OF PERSONNEL OF YOURS TO PER ACHE. GREED WITH AUGUST LINE OF TALL FERNICE AND DE LINE PER ACHIE OF PERSONNEL ATTE GRADES.

D. CLEAR AND GRUE, REMOVE TOWARD MADE AT AM AREA DETERMINED IN THE PIELD WHORE ESPAINS WILL NOT TAKE PLACE. TOWARD REPORTULE TO BE SEEDED AND MACHIND. BUT PRIVE BIVAL HE DOMESTIALD BY ANOIND TOWARD. BY DOMESTIALD.

B. COMMINUST THE CONSTRUCTION ENTRANCE.

C. CONSTRUCT ALL PROPOSED SEDMENT CONTROL DEV DIVERSIONS AND SEDIMENT BASINS SHALL BE SECOCI

A A PRE-CONSTRUCTION CONTENENCE WALL RELIGION SITE WITH CONTRACTOR TO REVIEW THE CONSTRUCTION DIPAYMENCE AND PROVIDE ANY REQUIESTED QUIDANCE.

MANAGEMENT STRATEGIES: CONSTRUCTION WILL BE AS SOOK AS POSSILLE THE LOS OWNERS PROJECTOR OF ALL ENGINE AND RECOMENT CONTROL MEMORES BEOGROPH AND RECOMENT CONTROLS SYMLE BE RESHOWN STABILIZED.

SECURICE OF EVENTS:





RÓBÓ AS GCON AS CLEARNA AND GRUBBING OPERATIONS ALLÓM. 3 AND MILICHED IMMEDIATION.

Hornor Since Bros. Engineers 1902 Bros. Engineers Civil, Mining, Savironmental and Consulting Engineering 100 both by 2 Brat. Post Other backs. Databalang, Bart Works. 2021 (2014) 605-804

STATING ENACTIONS TO PROJUME. TO POPUL WILL BE STERRINGD FROM THE SITE AND STOCKING BY AN AREAS OF AN AREAS OF THE PRODUCT TO PROJUME AND AREAS OF THE PRODUCT TO PROJUME AND AREAS OF THE PROJUMENT FOR ARMY BY AN AREAS OF THE PROJUMENT FOR ARMY BY AND AREAS OF THE SECOND WAS ARRESTED AND ARREST AND AREAS OF THE SECOND WAS ARRESTED AND ARREST AND AREAS OF THE SECOND WAS ARREST AND A



Allegherry Surveys, inc. 172 Thompson Drive Bridgeport, WV 26330 (304) 848-5035

CONSTRUCTION, GENERAL AND EAS NOTES JOHN CAMPBELL NORTH **DRILL PAD SITE** UNION DISTRICT RITCHIE COUNTY, WY

P.

