west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Earl Ray Tomblin , Governor
Randy C. Huffman , Cabinet Secretary
www.dep.wv.gov

Thursday, October 13, 2016
WELL WORK PERMIT
Horizontal / New Drill

CUNNINGHAM ENERGY, LLC
3230 PENNSYLVANIA AVENUE

CHARLESTON, WV 25302

Re: Permit approval for SAMPLES 6H
47-039-06379-00-00

This well work permit 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 any additional specific 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 permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 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- 0450.

James A. Martin
Chief

Operator's Well Number: SAMPLES 6H
Farm Name: HUFFMAN, ROBERT
U.S. WELL NUMBER: 47-039-06379-00-00
Horizontal / New Drill
Date Issued: 10/12/2016

Promoting a healthy environment.

3906379

PERMIT CONDITIONS

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

CONDITIONS

1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.

2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.

3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.

4. All pits must be lined with a minimum of 30 mil thickness synthetic liner.

5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.

6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours.

7. Well work activities shall not constitute a hazard to the safety of persons.

8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced, drilling ceased, completion of any other permitted well work and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

9. Prior to any hydraulic fracturing of this well, the Stump No. 1 well (API No. 4703906384) must be plugged.

3906379

10. A limited volume of wastewaters may be discharged to land only with the approval of the OOG Inspector to achieve compliance with the provisions for waste treatment and the discharge limitations and monitoring requirements specified under the General Water Pollution Control Permit (GP-WV-1-88).

11. Be advised that if you drill a horizontal gas well other than a coalbed methane well, which disturbs three acres or more of surface, excluding pipelines, gathering lines and roads, or utilizes more than two hundred ten thousand gallons of water in any thirty day period it would require a permit/bond under Chapter 22-6A.

Inspector's Addendum of Samples 6, 7, 8, 9 & wells

(1) Operator Shall Contact Inspector 8 hour in Advance of Casing and cementing All casings. Including time of Service Company Arrivals. Contact in Advance of Frac jobs

(2) Conduct an Area of Review to Inspector to have possible communication of pressurized Drilling & Treatment

(3) Starting from Doctor's Creek tank Battery will maintain Access road's sediment & Erosion controlls including Rip Rapping ditch's with more than 15% grade. Make sure all culverts, sediment & Erosion Device's are in place & maintained

(4) Pits on Engineered Drawing's are Close 5000 BBL Exclusion. Cunningham Energy will have pits surveyed when being built. All Soils will be cleared compacted so not to go above exclusion & will be verified as such. This doesnt Excluded the use of padding & liner help in Breach of pits Must use a minium 30 mill liner. but larger mill would be Acceptable

(5) Must contact USACOE to Address Ephemeral Stream between Old & New Construction

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9-1-16

4703906378

CUNNINGHAM ENERGY

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Mr. Jeffrey McLaughlin
WV DEP Office of Oil and Gas

Addendum to Samples 6H, 7H, 8H, 9H

Mr. McLaughlin:

The following wells were identified for plugging and/or have already been plugged to prevent communication during the frac process on our planned horizontal wells

Cromwell #2 – 47-3904907

[Stump #1 47-039-06384 ABANDONED WELL TO BE PLUGGED. PRIOR TO FRACTURE.]

The following wells are producing wells at the same elevation which we will monitor during both the drilling and fracking process:

Cromwell 1A – 47-03906303
Cromwell 2A – 47-03906304
Samples 5 – 47-03906306
Crum 1A – 47-03906349
Crum 2A – 47-03906350
Mary Bird 1A – 47-03906345
Bird Dodd 1A – 47-03906321
Samples 4 – 47-03906305. This well is located near the origin points of all the horizontals to be drilled, however, the Samples 6H, 7H, 8H, and 9H will all be over 500' away from the Samples #4 vertical wellbore when the TVD reaches the Weir Sand. Therefore, we do not anticipate this well being a communication risk.

The following well is shown in this area as well however as per DEP records this well was never drilled:

5770 Farm Name: Fred Gardner API: 47-039-01277

We anticipate the treating pressures will be between 2400 – 3000 psi.

Sincerely,

Danielle Boggs
Cunningham Energy, LLC

4703906379

CUNNINGHAM ENERGY
AGGRESSIVE HYDROCARBON INTELLIGENCE

Mr. Jeffrey McLaughlin
WV DEP Office of Oil and Gas

Addendum to Samples 6H, 7H, 8H, 9H

Dear Mr. McLaughlin:

As shown on Form W-9 the disposal pits for the Samples 6H, 7H, 8H and 9H crosses surface property of both Mr. Robert Huffman and Mr. L. Dale Ashley. We maintain leases on both pieces of property. The disposal pits are temporary in nature and will be reclaimed after completion of all the pad wells.

When constructing the disposal pits Cunningham Energy intends to separate the cut/fill dirt according to the surface property boundaries. When removed the cut/fill dirt from Mr. Huffman's property will be stored on his property for later use during the reclamation process and the same with Mr. Ashley's cut/fill dirt.

We will be notifying both parties of our intentions via the permit package which will contain this letter.

Should you have any questions, please feel free to contact us at (304) 344-9291.

Best Regards,

Ryan Cunningham

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Cunningham Energy, LLC 3230 Pennsylvania Ave, Charleston, WV 25302 DIRECT: (304) 344.9291 FAX: (304) 344.9290

4703906379
4703906379 CK# 10290 $650x4 = $2600.00

WW - 2B
(Rev. 8/10)

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

1) Well Operator: CUNNINGHAM ENERGY, LLC

Operator ID	County	District	Quadrangle
494508594	KANAWHA	BIG SANDY	CLIO 7.5'

2) Operator's Well Number: SAMPLES 6H 3) Elevation: 945'

4) Well Type: (a) Oil X or Gas ____

(b) If Gas: Production ____ / Underground Storage ____

Deep ____ / Shallow X

5) Proposed Target Formation(s): WEIR Proposed Target Depth: 2,150'
6) Proposed Total Depth: 2,000 TVD/6,380 MD Feet Formation at Proposed Total Depth: WEIR
7) Approximate fresh water strata depths: 200'
8) Approximate salt water depths: 1475' - 1525'

9) Approximate coal seam depths: NO COAL LISTED ON TITLE

10) Approximate void depths,(coal, Karst, other): NONE

11) Does land contain coal seams tributary to active mine? NONE

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)
DRILL AND STIMULATE A NEW SHALLOW HORIZONTAL WELL. WE PLAN TO RUN THE WEATHERFORD WET SHOE SYSTEM AND PERFORATE. See addendum

Henry Ulrich 9-1-16

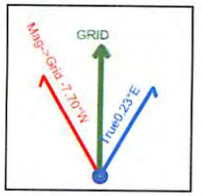
13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	13 3/8"	LS	43.6 LBS	30'	30'	CTS
Fresh Water	10 3/4"	J-55	40.5 LBS	400'	400'	CTS
Coal						
Intermediate	8 5/8"	J-55	24 LBS	1900'	1900'	CTS
Production	5 1/2"	P-110	20 LBS	6,380'	6,380'	CTS
Tubing						
Liners						

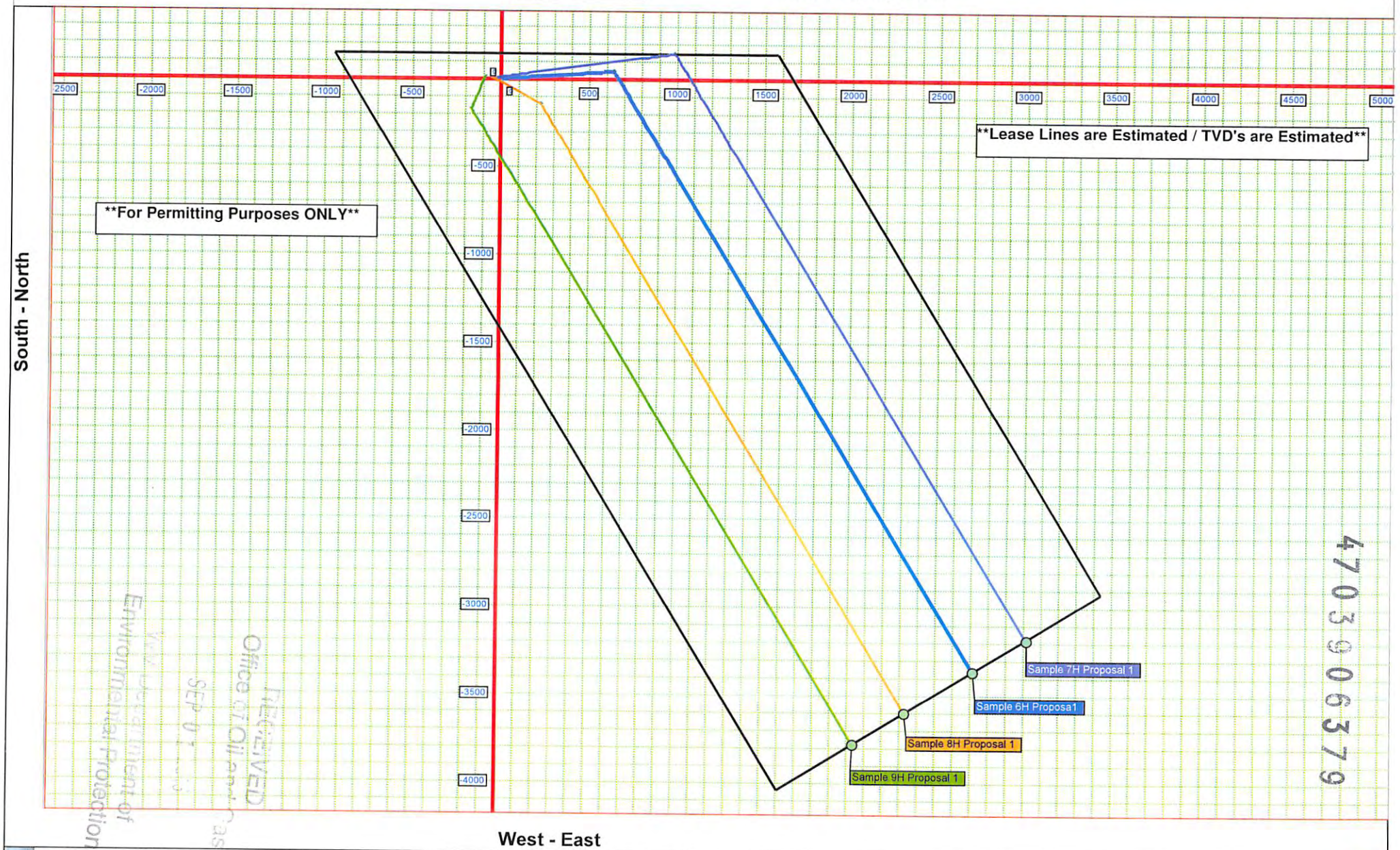
Packers: Kind: See ATTACHed Addendum
Sizes:
Depths Set

HW

Job Number: Sample PAD Spider
Company: Cunningham Energy
Lease/Well: Sample PAD
Location: Southern
Rig Name:
State/County: West Virginia/ Kanawha
Country: USA
API Number:



Elevation (To MSL): 945.00 ft
RKB: 9.00 ft
Projection System: US State Plane 1927 (Exact solution)
Projection Group: West Virginia South 4702
Projection Datum: CLARKE 1866
Magnetic Declination: -7.93
Grid Convergence: -0.22619 W
Date: Tuesday, May 12, 2015



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WEATHERFORD WET SHOE SYSTEM

A method for cementing casing into a wellbore, which method comprises the steps of: (a) providing float equipment into said casing at or adjacent the downstream extremity thereof; (b) inserting a bottom plug into said casing and pumping it down said casing with cement, and (c) inserting a top plug into said casing above said cement and pumping it down said casing, characterized by (d) providing a plug seat upstream of said float equipment, said bottom plug being shaped and configured so that it will pass said plug seat and land on said float equipment and said top plug being shaped and configured so that it will land on said plug seat.

4703906379H

CUNNINGHAM ENERGY

AGGRESSIVE HYDROCARBON INTELLIGENCE

Samples 6H, 7H, 8H and 9H Proposed Frac Design

- +/- 20 Stages
- 3,000 barrels per stage
- 50,000 lbs. Sand/Stage
- 50 bbl/Minute Downhole Rate

Areas adjacent to existing wells will not be fracked to avoid well-to-well communication.

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OCT 4 2016

WV Department of
Environmental Protection

Cunningham Energy, LLC 3230 Pennsylvania Ave, Charleston, WV 25302 DIRECT: (304) 344.9291 FAX: (304) 344.9290

4703906379

WW-2A
(Rev. 6-14)

1). Date: AUGUST 22, 2016

2.) Operator's Well Number SAMPLES 6H

3.) API Well No.: State 47- County 037 - Permit

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

4) Surface Owner(s) to be served:
(a) Name ROBERT HUFFMAN ✓
Address P.O. BOX 796
CLENDENIN, WV 25045
(b) Name L. DALE ASHLEY ✓
Address 43 DOCTORS CREEK RD.
CLENDENIN, WV 25045
(c) Name
Address

6) Inspector TERRY URBAN
Address P.O. BOX 1207
CLENDENIN, WV 25045
Telephone 304-549-5915

5) (a) Coal Operator
Name
Address

(b) Coal Owner(s) with Declaration
Name
Address

Name
Address

(c) Coal Lessee with Declaration
Name
Address

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

___ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas

OR

X Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties by:

___ Personal Service (Affidavit attached)
X Certified Mail (Postmarked postal receipt attached)
___ Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form 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 CUNNINGHAM ENERGY, LLC
By: RYAN E. M. CUNNINGHAM
Its: MEMBER
Address: 3230 PENNSYLVANIA AVENUE
CHARLESTON, WV 25302
Telephone: 304-344-9291
Email: ryan.cunningham@cunninghamenergy.com

Official Seal
Notary Public, State of West Virginia
Joseph M Menas
220 1/2 Walnut St
Ravenswood, WV 26164
My commission expires January 23, 2022

Subscribed and sworn before me this 23rd day of August, 2016

Notary Public

My Commission Expires January 23, 2022

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SEP 01 2016
WV Department of
Environmental Protection

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a 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 of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov

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WW-70
Rev. 7/01

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SEP 09 2016

WV Department of
Environmental Protection

Affidavit of Personal Service

State Of West Virginia

County Of Kanawha

The undersigned, being first duly sworn, says that the undersigned served a true and complete copy of all sides of--

(1) Notice on Form WW-2(A) ✓/ WW-3(A)__/ WW-4(A)__/ WW-5(A)__/ WW-6(A)__
(2) Application on Form WW-2(B) ✓/ WW-3(B)__/ WW-4(B)__/ WW-5(B)__/ WW-6(B)__
(3) Plat showing the well location on Form WW-6, and
(4) Construction and Reclamation Plan on Form WW-9

--all with respect to operator's Well No. SAMPLES 6H located in BIG SANDY District, KANAWHA County, West Virginia, upon the person or organization named--

L. DALE ASHLEY

--by delivering the same in KANAWHA County, State of WEST VIRGINIA on the 9TH day of SEPTEMBER, 2016 in the manner specified below.

[COMPLETE THE APPROPRIATE SECTION]

For an individual:

[✓] Handing it to him ✓/ her___/ or, because he___/ she___/ refused to take it when offered it, by leaving it in his___/ her___/ presence.

[ ] Handing it to a member of his or her family above the age of 16 years named _____ who resides at the usual place of abode of the person to be served, and asking the family member to give it to the person to be served as soon as possible.

For a partnership:

[ ] Handing it to _____, a partner of the partnership or, because the partner refused to take it when I handed it over, by leaving it in the presence of the partner.

For a limited partnership:

[ ] Handing it to the general partner, named _____, or, because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner.

For a corporation:

[ ] Handing it to the corporation's employee___/ officer___/ director___/ attorney in fact___/ named _____.

(Signature of person executing service)

Taken, subscribed and sworn before me this 9th day of September 2016.
My commission expires January 23, 2022.

Notary Public

(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE)

Official Seal
Notary Public, State of West Virginia
Joseph M Menas
220 1/2 Walnut St
Ravenswood, WV 26164
My commission expires January 23, 2022

4703906379

WW-2A1
(Rev. 1/11)

Operator's Well Number SAMPLES 6H

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

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

(1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;

(2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
SOPHIA SAMPLES, ET AL	CUNNINGHAM ENERGY, LLC	1/8	259 - 420

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: CUNNINGHAM ENERGY, LLC
By: Its: PRESIDENT

Office of Oil and Gas
SEP 01 2016
WV Department of Environmental Protection

4703906379

WW-2B1
(5-12)

Well No. SAMPLES 6H

West Virginia Department of Environmental Protection
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name STURM ENVIRONMENTAL
Sampling Contractor HUPP SURVEYING

Well Operator CUNNINGHAM ENERGY, LLC
Address 3230 PENNSYLVANIA AVENUE
CHARLESTON, WV 25302
Telephone 304-344-9291

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

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HUPP Surveying & Mapping

P.O. BOX 647
GRANTSVILLE, WV 26147
(304) 354-7035 hupp@frontiernet.net FAX: (304) 354-6548

March 11, 2015

RE: Water Samples for Samples #6H

There appears to be fifteen (15) potable water sources within 2,000' of Samples #6H, therefore tests should be offered and samples taken as required.

1. C F & Janis Smith
   47 Doctors Creek Rd.
   Clendenin, WV 25045
   Tax Map 12 Parcel 63

2. Leslie Ashley, et al
   43 Doctors Creek Rd.
   Clendenin, WV 25045
   Tax Map 12 Parcels 58, 60 & 64

3. Donald Snodgrass
   30100 Six Mile Rd.
   Livonia, MI 48152
   Tax Map 12A Parcel 39 & 45

* 4. Jack Bird (DECEASED) :. JEFF BIRD (SON)
   30 Doctors Creek Rd.
   Clendenin, WV 25045
   Tax Map 12A Parcel 42

5. Karen Nichols
   28 Doctors Creek Rd.
   Clendenin, WV 25045
   Tax Map 12A Parcel 43

6. Hobert Dye
   28 Doctors Creek Rd.
   Clendenin, WV 25045
   Tax Map 12A Parcel 44

7. Marvin Samples
   7 Doctors Creek Rd.
   Clendenin, WV 25045
   Tax Map 12 Parcels 53, 55, 64 & 67

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8. James & Eula Huffman
   P.O. Box 796
   Clendenin, WV 25045
   Tax Map 12 Parcel 62

9. Brenda Dye
   P.O. Box 248
   Clendenin, WV 25045
   Tax Map 12 Parcel 61

10. David & Pamela Huffman
    1619 Doctors Creek Rd.
    Clendenin, WV 25045
    Tax Map 12 Parcel 61.1

11. Ronald & Christy Flores
    40 Doctors Creek Rd.
    Clendenin, WV 25045
    Tax Map 12 Parcel 46

12. Jeffrey Taylor
    1810 Doctors Creek Rd.
    Clendenin, WV 25045
    Tax Map 12 Parcel 46.2

13. Billy & Rita Huffman
    52 Doctors Creek Rd.
    Clendenin, WV 25045
    Tax Map 12 Parcel 46.1

14. Dorman Skeens
    9 Doctors Creek Rd.
    Clendenin, WV 25045
    Tax Map 12 Parcel 67.1

15. Robert Huffman
    P.O. Box 796
    Clendenin, WV 25045
    Tax Map 12 Parcel 67.2

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Westbrook, Joshua P

From: dani.bays@cunninghamenergy.com
Sent: Wednesday, October 05, 2016 2:26 PM
To: Westbrook, Joshua P
Subject: Water Testing Requests

David and Pam Huffman	1619 Doctors Creek Rd	Clendenin	WV	25045	304.548.7782
Jeff Bird (Jack-deceased)	4068 indian Creek Rd	Elkview	WV	250071	304.545.0448

Water Sample Requests
CJW

Thank you,
Danielle N. Boggs
Cunningham Energy
3230 Pennsylvania Ave
Charleston, WV 25302
Direct: (304) 344-9291
Cell: (304) 553-5850
Fax: (304) 344-9290
www.cunninghamenergy.com

CUNNINGHAM ENERGY
AGGRESSIVE HYDROCARBON INTELLIGENCE

NOTICE OF CONFIDENTIALITY
This e-mail message and its attachments (if any) are intended solely for the use of the addressees hereof. In addition, this message and the attachments (if any) may contain information that is confidential, privileged and exempt from disclosure under applicable law. If you are not the intended recipient of this message, you are prohibited from reading, disclosing, reproducing, distributing, disseminating or otherwise using this transmission. Delivery of this message to any other person than the intended recipient is not intended to waive any right or privilege. If you have received this message in error, please promptly notify the sender by reply e-mail and immediately delete this message from you system.

Disclaimer: Sender is not a United States Securities Dealer or Broker or United States Investment Adviser. This email letter and any and all attachments and related documents are never considered to be a solicitation for any purpose in any form or content. Upon receipt of these documents you, as the Recipient, hereby acknowledge this Warning and Disclaimer. These Confidential communications are protected under Gramm-Leach-Biley Act 15 USC, Subchapter 1, sections 6801-6809 and other laws addressing the disclosure of Non-Public Personal Information. All information is subject to change without notice.

4703906379

Form W-9

CUNNINGHAM ENERGY
SAMPLES #6H Water

NORTH

HUPP Surveying & Mapping P.O. BOX 647 GRANTSVILLE, WV 26147 PH: (304)354-7035 E-MAIL: hupp@frontiernet.net	1" = 1000' CLIO Quad	CUNNINGHAM ENERGY 3230 PENNSYLVANIA AVE. CHARLESTON, WV 25302

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Office of Oil and Gas
OCT 4 2016
WV Department of

4703906379

WW-9
(5/16)

API Number 47 - 039 -
Operator's Well No. SAMPLES 6H

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name CUNNINGHAM ENERGY, LLC OP Code 494508594

Watershed (HUC 10) DOCTOR'S CREEK Quadrangle CLIO 7.5'

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes ☑ No ☐

Will a pit be used? Yes ☑ No ☐

If so, please describe anticipated pit waste: DRILL CUTTINGS, FLUIDS FROM DRILLING AND FRACTURING.

Will a synthetic liner be used in the pit? Yes ☑ No ☐ If so, what ml.? 30 MIL

Proposed Disposal Method For Treated Pit Wastes:

? ■ Land Application (if selected provide a completed form WW-9-GPP)
■ Underground Injection (UIC Permit Number 2D0392210)
_____ Reuse (at API Number _____)
_____ Off Site Disposal (Supply form WW-9 for disposal location)
_____ Other (Explain _____

Will closed loop systembe used? If so, describe: NO

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. AIR; FRESHWATER

-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used in drilling medium? SOAP; KCL AND/OR CLAY STABILIZER

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. LEAVE IN PIT/HAUL IF NEEDED

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) CEMENT & LIME

-Landfill or offsite name/permit number? CITY OF CHARLESTON LANDFILL

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto 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 or imprisonment.

Company Official Signature _____

Company Official (Typed Name) RYAN E. M. CUNNINGHAM

Company Official Title PRESIDENT

Subscribed and sworn before me this 31 st day of AUGUST, 2016

_____ Notary Public

My commission expires ~~08/31/2016~~ January 23, 2022

Official Seal
Notary Public, State of West Virginia
Joseph M Menas
209 1/2 Walnut St
Ravenswood, WV 26164
My commission expires January 23, 2022

Office of Oil & Gas
Environmental Protection

4703906379

Form WW-9

Operator's Well No. SAMPLES 6H

Proposed Revegetation Treatment: Acres Disturbed 2.75 Prevegetation pH

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-10-10

Fertilizer amount 1/3 TON lbs/acre

Mulch HAY - 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY - 31	40	ORCHID GRASS	15
ALSIKE CLOVER	5	ALSIKE CLOVER	5
ANNUAL RYE	15		

Attach:
Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by:

Comments: See Attached Addendum

RECEIVED
Office of Oil and Gas
SEP 01 2016
WV Department of
Environmental Protection

Title: Inspector Oil & Gas Date: 9-1-16

Field Reviewed? (✓) Yes ( ) No

WW-9- GPP
Rev. 5/16

API Number 47 - 039 -
Operator's Well No. SAMPLES 6H

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

Operator Name: CUNNINGHAM ENERGY, LLC

Watershed (HUC 10): DOCTORS CREEK Quad: CLIO 7.5

Farm Name: ROBERT TAYLOR

1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

Prior to discharge of fluid from a drilling pit, the fluid will be circulated by placing a pump with suction in one end of the pit and the fluid discharged into the other end of the pit, lime will be added as necessary to the discharge end of the pit, and the fluid circulated for turnover of two pit volumes. Field samples will be taken of the pit fluid to determine pre-discharge parameters respective to WVDEP - OOG regulations; and, any visable free floating oil other than trace amounts that may be present will be removed from the suction/discharge area of the pit. Samples will be taken at varous points of the discharge for testing.

2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

Drilling pits will be lined with a minimum of 30 mil thickness synthetic liner. Drill cuttings disposal will be in conformace with the Fluids/Cuttings Disposal & Reclamation Plan (Form WW-9) as submitted within the application for this well. Land application of treated drilling pit wastewaters will conform with the applicable procedures specified within the WVDEP OOG's General Water Pollution Control Permit No. GP-WV-1-88.

3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

Doctor's Creek is the closest water body this well will be approximately 1/2 mile from this water body. The closest WV Groundwater Public Water Supply Intake is Carbide Rec. Club, Blue Creek Well, Well #1 and the closest WV Surface Water Downstream Public Water Supply Intake is WVAWC Kan. Valley Dist. WVAWC Kan. Valley Primary Elk River.

4. Summarize all activities at your facility that are already regulated for groundwater protection.

Well driling, associated casing installation and cementing, well stimulation, and other typical activities as may be encountered during the exploratory, developmental, maintenance/reworking, treatment operations and closure phases of this well are already regulated in the well work permit and provide groundwater protection measures.

RECEIVED
Office of Oil and Gas
SEP 01 2016
WV Department of
Environmental Protection

5. Discuss any existing groundwater quality data for your facility or an adjacent property.

No existing groundwater quality data is known to currently be available for this site. Cunningham Energy, LLC has provided a written request to the respective surface owner/occupant seeking permission to perform water well/spring analytical testing. We will perform all requested testing by these surface owner/occupants.

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

No waste material originating from this well site will be used for either deicing purposes or as fill material upon the property. Land application of drilling pit fluid may, however, be conducted in confromance with the applicable procedures specified within the WVDEP, OOG's General Water Pollution Control Permit No. GP-WV-1-88. Additionally, drill cuttings may remain in place in conformance with the Fluids/Cuttings Disposal and Reclamation Plan as submitted within the approved appplication for this well.

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

The groundwater protection instruction and training for employees will include required reading of this Groundwater Protection Plan (GPP). The GPP will also be discussed in employee meetings. New employees will be required to review the GPP.

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

The well operator will perform quarterly self-inspections of respective equipment and all GPP elements.

Signature: _____

Date: 8/22/16

4703906379

WW-9- GPP
Rev. 5/16

API Number 47 - 039 -
Operator's Well No. SAMPLES 6H

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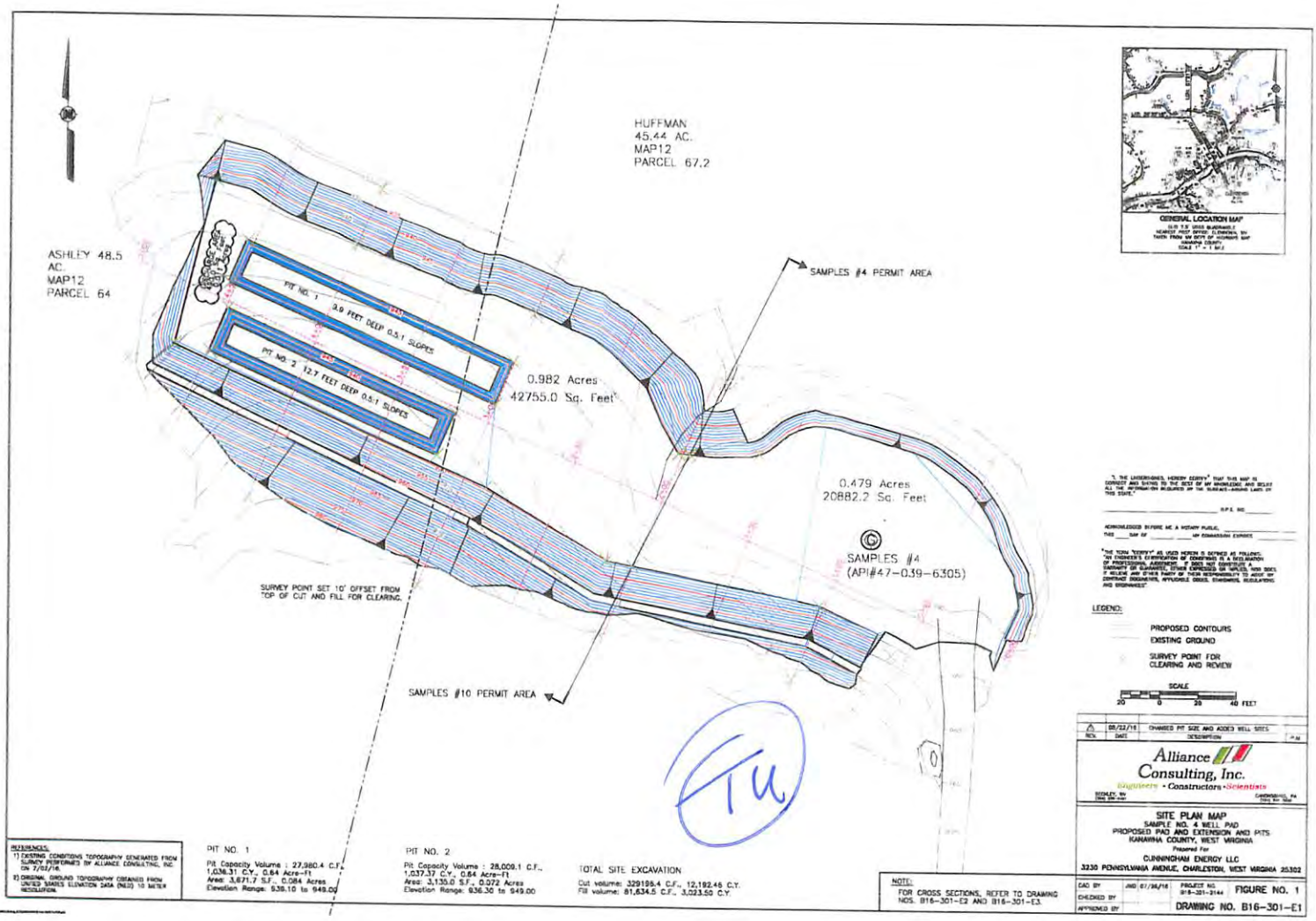
Signature: _____

Date: 8/22/16

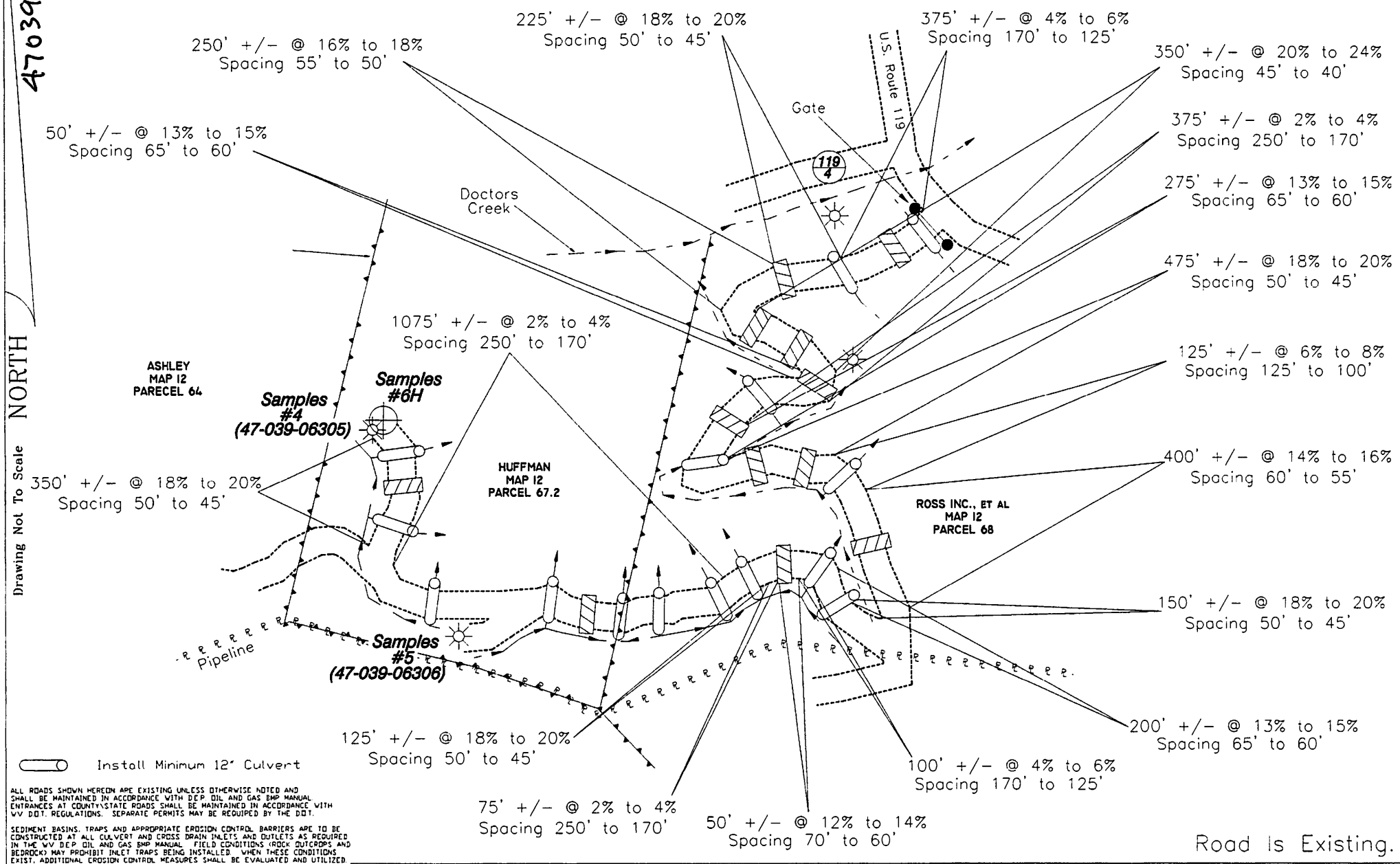
4703906379


HUFFMAN
45.44 AC.
MAP12
PARCEL 67.2
ASHLEY 48.5
AC.
MAP12
PARCEL 64
SAMPLES #4 PERMIT AREA
PIT NO. 1 9.9 FEET DEEP 0.5:1 SLOPES
PIT NO. 2 12.7 FEET DEEP 0.5:1 SLOPES
0.982 Acres
42755.0 Sq. Feet
0.479 Acres
20882.2 Sq. Feet
SAMPLES #4
(API#47-039-6305)
SURVEY POINT SET 10' OFFSET FROM TOP OF CUT AND FILL FOR CLEARING.
SAMPLES #10 PERMIT AREA
GENERAL LOCATION MAP
LEGEND:
PROPOSED CONTOURS
EXISTING GROUND
SURVEY POINT FOR CLEARING AND REVIEW
SCALE
20 0 20 40 FEET
05/22/16 CHANGED PIT SIZE AND ADDED WELL SITES
Alliance Consulting, Inc.
Engineers • Constructors • Scientists
SITE PLAN MAP
SAMPLE NO. 4 WELL PAD
PROPOSED PAD AND EXTENSION AND PITS
KANAWHA COUNTY, WEST VIRGINIA
Prepared For
CUNNINGHAM ENERGY LLC
3230 PENNSYLVANIA AVENUE, CHARLESTON, WEST VIRGINIA 25302
REFERENCES:
1) EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM SURVEY PERFORMED BY ALLIANCE CONSULTING, INC. ON 7/02/14.
2) ORIGINAL GROUND TOPOGRAPHY OBTAINED FROM UNITED STATES ELEVATION DATA (NED) 10 METER RESOLUTION.
PIT NO. 1
Pit Capacity Volume : 27,980.4 C.F.
1,036.31 C.Y., 0.64 Acre-Ft
Area: 3,871.7 S.F., 0.084 Acres
Elevation Range: 939.10 to 949.00
PIT NO. 2
Pit Capacity Volume : 28,009.1 C.F.
1,037.37 C.Y., 0.64 Acre-Ft
Area: 3,135.0 S.F., 0.072 Acres
Elevation Range: 936.30 to 949.00
TOTAL SITE EXCAVATION
Cut volume: 329195.4 C.F., 12,192.46 C.Y.
Fill volume: 81,634.5 C.F., 3,023.50 C.Y.
NOTE:
FOR CROSS SECTIONS, REFER TO DRAWING NOS. B16-301-E2 AND B16-301-E3.
CAD BY JMD 07/26/16
CHECKED BY
APPROVED BY
PROJECT NO. B16-301-3144
FIGURE NO. 1
DRAWING NO. B16-301-E1

4703906379

Form W-9

CUNNINGHAM ENERGY, LLC.
SAMPLES #6H



ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH DEP OIL AND GAS BMP MANUAL. ENTRANCES AT COUNTY\STATE ROADS SHALL BE MAINTAINED IN ACCORDANCE WITH WV DOT REGULATIONS. SEPARATE PERMITS MAY BE REQUIRED BY THE DOT.

SEDIMENT BASINS, TRAPS AND APPROPRIATE EROSION CONTROL BARRIERS ARE TO BE CONSTRUCTED AT ALL CULVERT AND CROSS DRAIN INLETS AND OUTLETS AS REQUIRED IN THE WV DEP OIL AND GAS BMP MANUAL. FIELD CONDITIONS (ROCK OUTCROPS AND BEDROCK) MAY PROHIBIT INLET TRAPS BEING INSTALLED. WHEN THESE CONDITIONS EXIST, ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED.

EARTHWORK CONTRACTORS ARE RESPONSIBLE FOR NOTIFYING TO THE OPERATOR AND INSPECTOR PRIOR TO ANY DEVIATION FROM THIS PLAN.

CONTRACTORS/COMPANY ARE RESPONSIBLE FOR LOCATING UTILITIES WHETHER SHOWN ON THIS PLAN OR NOT.

TEMPORARILY SEED AND MULCH ALL SLOPES AFTER CONSTRUCTION OF LOCATION.

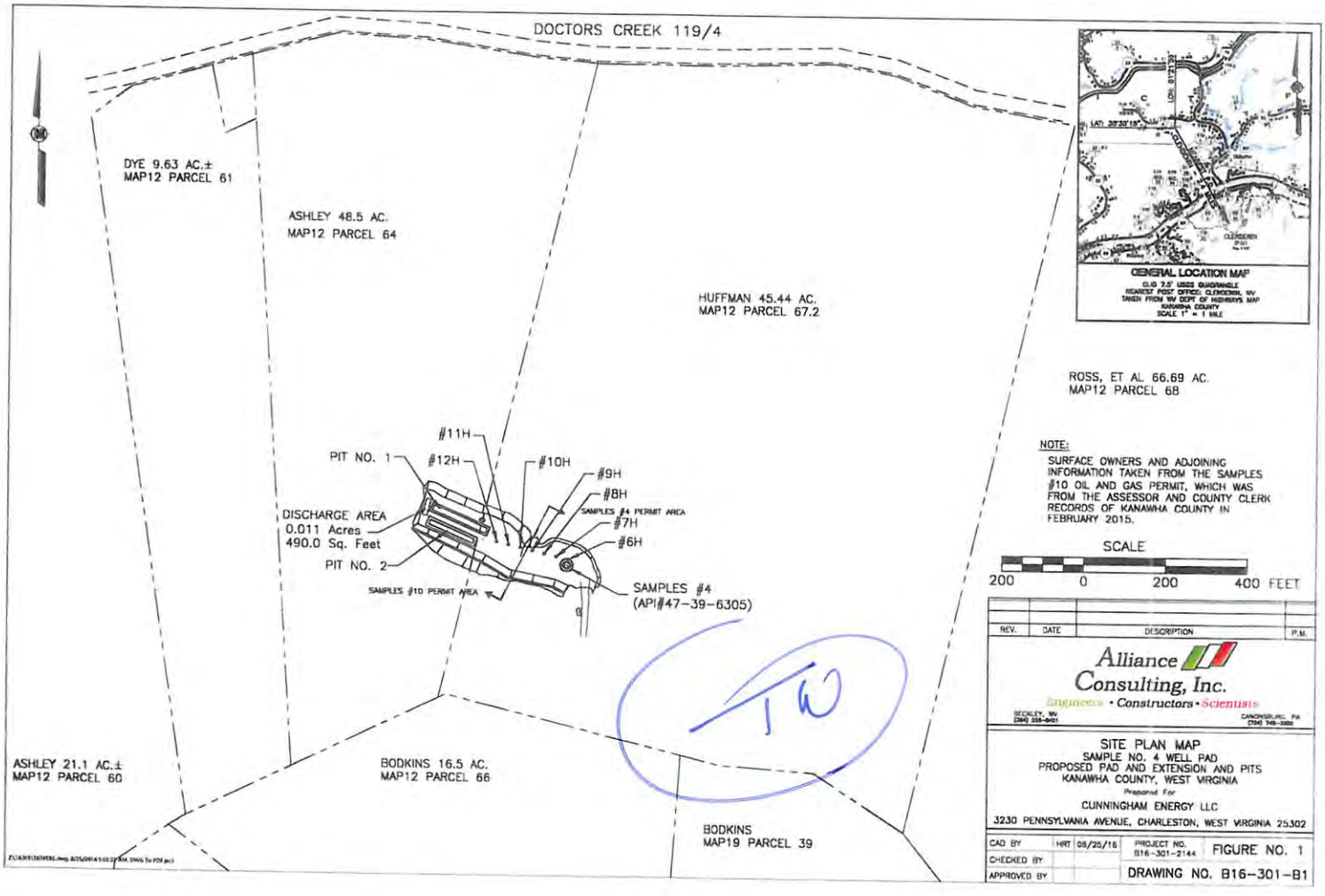
CUT AND STACK ALL TIMBER ABOVE 6-INCHES IN DIAMETER AND THICKER.

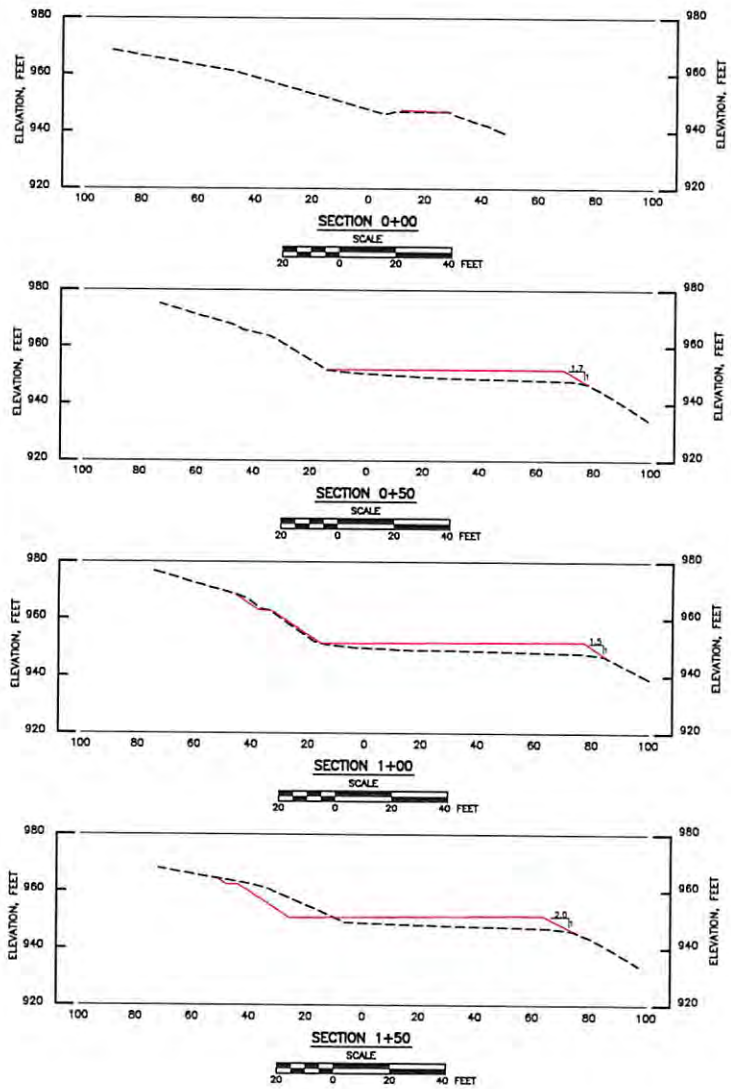
STACK BRUSH BELOW LOCATION FOR SEDIMENT CONTROL.

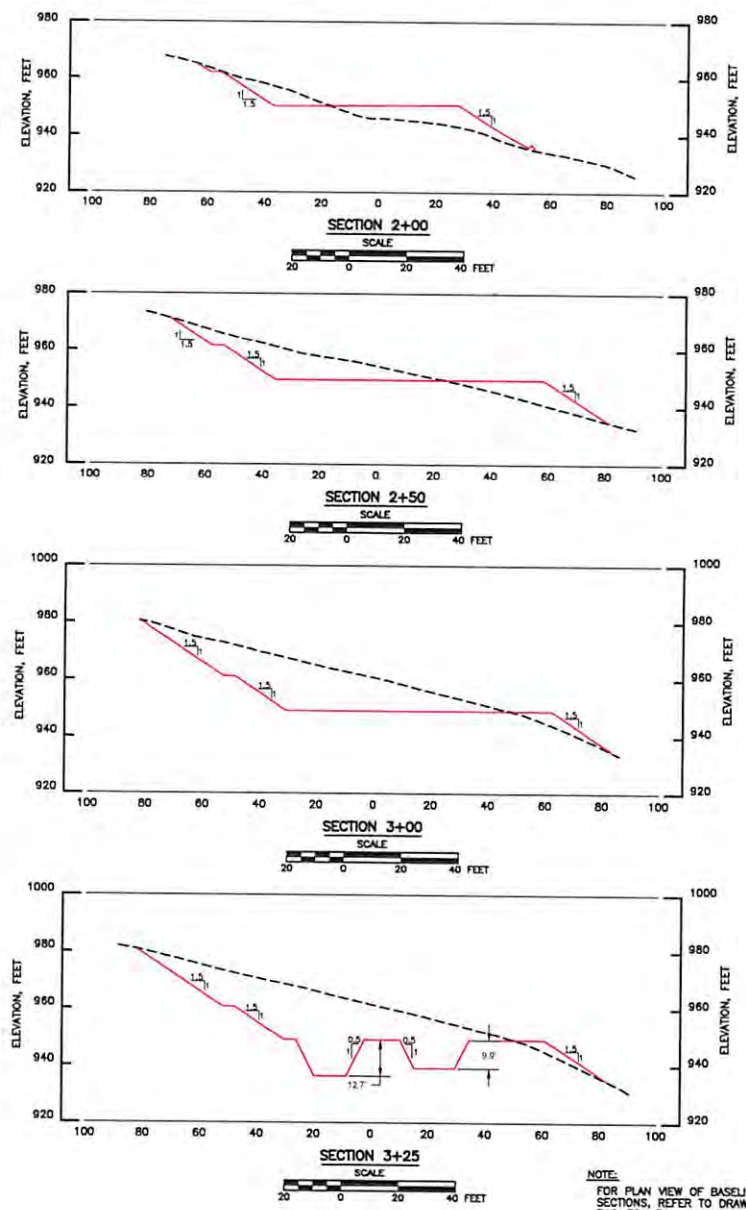
HUPP Surveying & Mapping
P.O. BOX 647 GRANTSVILLE, WV 26147
PH:(304)354-7035 E-MAIL: hupp@frontiernet.net

Drafted BY:	Date Drafted:	Job Number:
DB	03/11/15	W20112041

4703906379


DOCTORS CREEK 119/4
DYE 9.63 AC.±
MAP12 PARCEL 61
ASHLEY 48.5 AC.
MAP12 PARCEL 64
HUFFMAN 45.44 AC.
MAP12 PARCEL 67.2
ROSS, ET AL 66.69 AC.
MAP12 PARCEL 68
ASHLEY 21.1 AC.±
MAP12 PARCEL 60
BODKINS 16.5 AC.
MAP12 PARCEL 66
BODKINS
MAP19 PARCEL 39
PIT NO. 1
PIT NO. 2
#11H
#12H
#10H
#9H
#8H
#7H
#6H
SAMPLES #4 PERMIT AREA
SAMPLES #10 PERMIT AREA
DISCHARGE AREA
0.011 Acres
490.0 Sq. Feet
SAMPLES #4
(API#47-39-6305)
GENERAL LOCATION MAP
CLIO 7.5' USGS QUADRANGLE
NEAREST POST OFFICE: CLENDENIN, WV
TAKEN FROM WV DEPT OF HIGHWAYS MAP
KANAWHA COUNTY
SCALE 1" = 1 MILE
NOTE:
SURFACE OWNERS AND ADJOINING INFORMATION TAKEN FROM THE SAMPLES #10 OIL AND GAS PERMIT, WHICH WAS FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF KANAWHA COUNTY IN FEBRUARY 2015.
SCALE
200 0 200 400 FEET
REV. DATE DESCRIPTION P.M.
Alliance Consulting, Inc.
Engineers • Constructors • Scientists
SITE PLAN MAP
SAMPLE NO. 4 WELL PAD
PROPOSED PAD AND EXTENSION AND PITS
KANAWHA COUNTY, WEST VIRGINIA
Prepared For
CUNNINGHAM ENERGY LLC
3230 PENNSYLVANIA AVENUE, CHARLESTON, WEST VIRGINIA 25302
CAD BY HRT 08/25/16
CHECKED BY
APPROVED BY
PROJECT NO. B16-301-2144
FIGURE NO. 1
DRAWING NO. B16-301-B1





NOTE:
FOR PLAN VIEW OF BASELINE CROSS SECTIONS, REFER TO DRAWING NO. B16-301-E1.

"I, THE UNDERSIGNED, HEREBY CERTIFY* THAT THIS MAP IS CORRECT AND SHOWS TO THE BEST OF MY KNOWLEDGE AND BELIEF ALL THE INFORMATION REQUIRED BY THE SURFACE-MINING LAWS OF THIS STATE."

_____ R.P.E. NO._____

ACKNOWLEDGED BEFORE ME A NOTARY PUBLIC, _____
THIS ____ DAY OF _____, ____ MY COMMISSION EXPIRES _____

*THE TERM "CERTIFY" AS USED HEREIN IS DEFINED AS FOLLOWS: "AN ENGINEER'S CERTIFICATION OF CONDITIONS IS A DECLARATION OF PROFESSIONAL JUDGEMENT. IT DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EITHER EXPRESSED OR IMPLIED, NOR DOES IT RELIEVE ANY OTHER PARTY OF THEIR RESPONSIBILITY TO ABIDE BY CONTRACT DOCUMENTS, APPLICABLE CODES, STANDARDS, REGULATIONS AND ORDINANCES".

LEGEND:

- - - - EXISTING GROUND
——— PROPOSED GROUND

SCALE
20 0 20 40 FEET

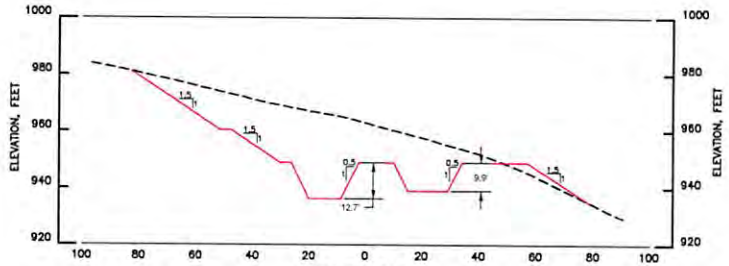
REV.	DATE	DESCRIPTION	P.M.
1	10/03/16	CHANGED PIT SIZE	

Alliance Consulting, Inc.
Engineers · Constructors · Scientists
BECKLEY, WV (304) 255-8441 CANONSBURG, PA (724) 746-3630

BASELINE CROSS SECTIONS STATION 0+00 THROUGH 3+25
SAMPLE NO. 4 WELL PAD
PROPOSED PAD AND EXTENSION AND PITS
CLAY COUNTY, WEST VIRGINIA
Prepared For
CUNNINGHAM ENERGY LLC
1212 STAUNTON ROAD, CHARLESTON, WEST VIRGINIA 25314

CAD BY	JWD	07/28/16	PROJECT NO. B16-301-2144	FIGURE NO. 2
CHECKED BY				
APPROVED BY			DRAWING NO. B16-301-E2	

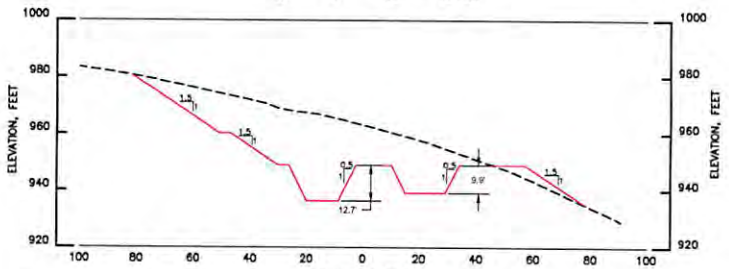
4703906379



SECTION 3+50

SCALE

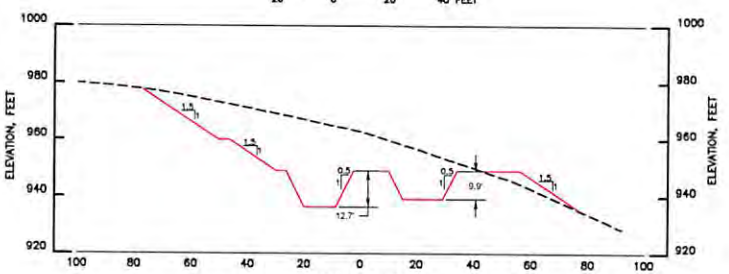
20 0 20 40 FEET



SECTION 3+75

SCALE

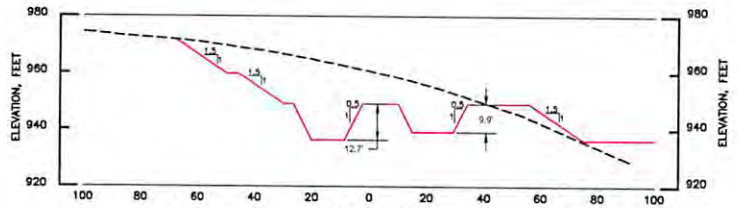
20 0 20 40 FEET



SECTION 4+00

SCALE

20 0 20 40 FEET



SECTION 4+25

SCALE

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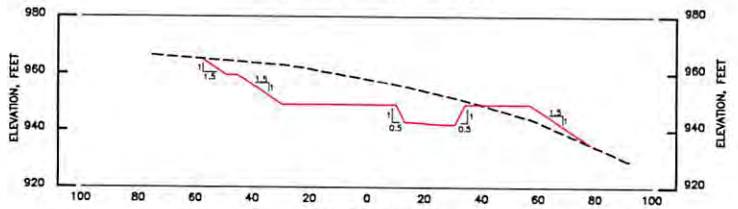
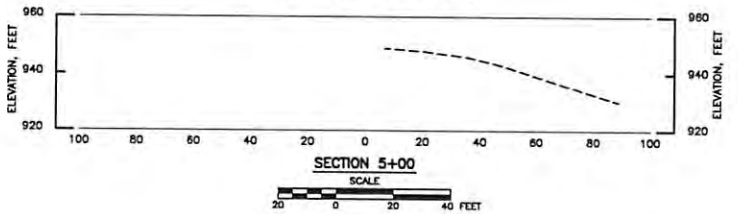


SECTION 4+50

SCALE

20 0 20 40 FEET



SECTION 5+00

SCALE

20 0 20 40 FEET

"I, THE UNDERSIGNED, HEREBY CERTIFY* THAT THIS MAP IS CORRECT AND SHOWS TO THE BEST OF MY KNOWLEDGE AND BELIEF ALL THE INFORMATION REQUIRED BY THE SURFACE-MINING LAWS OF THIS STATE."

_____ R.P.E. NO._____

ACKNOWLEDGED BEFORE ME A NOTARY PUBLIC, _____

THIS ____ DAY OF _____, ____ MY COMMISSION EXPIRES _____

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LEGEND:

- - - - EXISTING GROUND
——— PROPOSED GROUND

SCALE

20 0 20 40 FEET

NOTE:

FOR PLAN VIEW OF BASELINE CROSS SECTIONS, REFER TO DRAWING NO. B16-301-E1.

REV.	DATE	DESCRIPTION	P.M.
1	10/03/16	CHANGED PIT SIZE	

Alliance Consulting, Inc.
Engineers · Constructors · Scientists
BECKLEY, WV (304) 256-9441 CHAMBERSBURG, PA (724) 746-3132

BASELINE CROSS SECTIONS STATION 3+50 THROUGH 5+00
SAMPLE NO. 4 WELL PAD
PROPOSED PAD AND EXTENSION AND PITS
CLAY COUNTY, WEST VIRGINIA
Prepared For
CUNNINGHAM ENERGY LLC
1212 STAUNTON ROAD, CHARLESTON, WEST VIRGINIA 25314

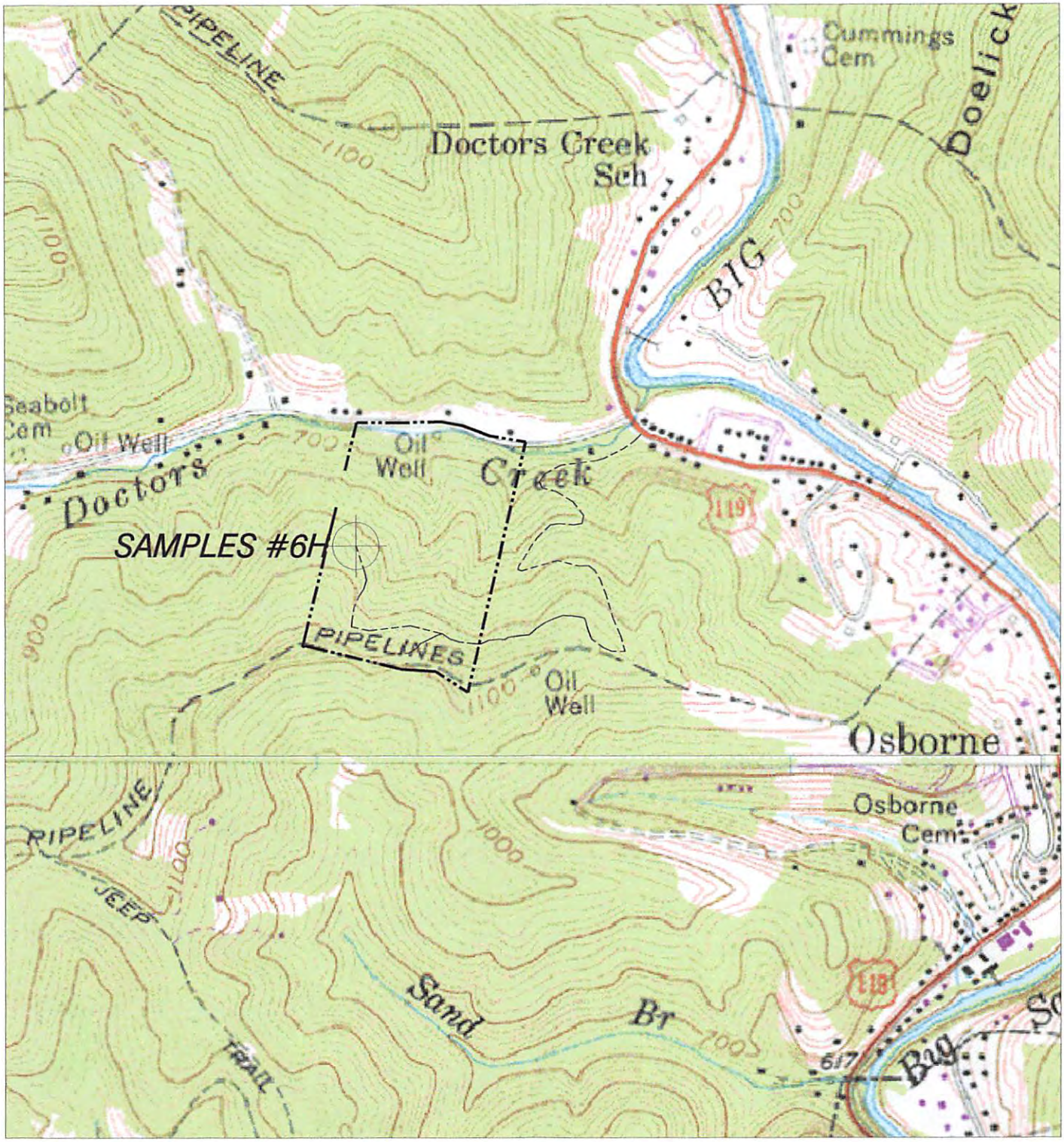
CAD BY	JWD 07/28/16	PROJECT NO. B16-301-2144	FIGURE NO. 3
CHECKED BY			
APPROVED BY			DRAWING NO. B16-301-E3

4703906379

3906379H

Form W-9

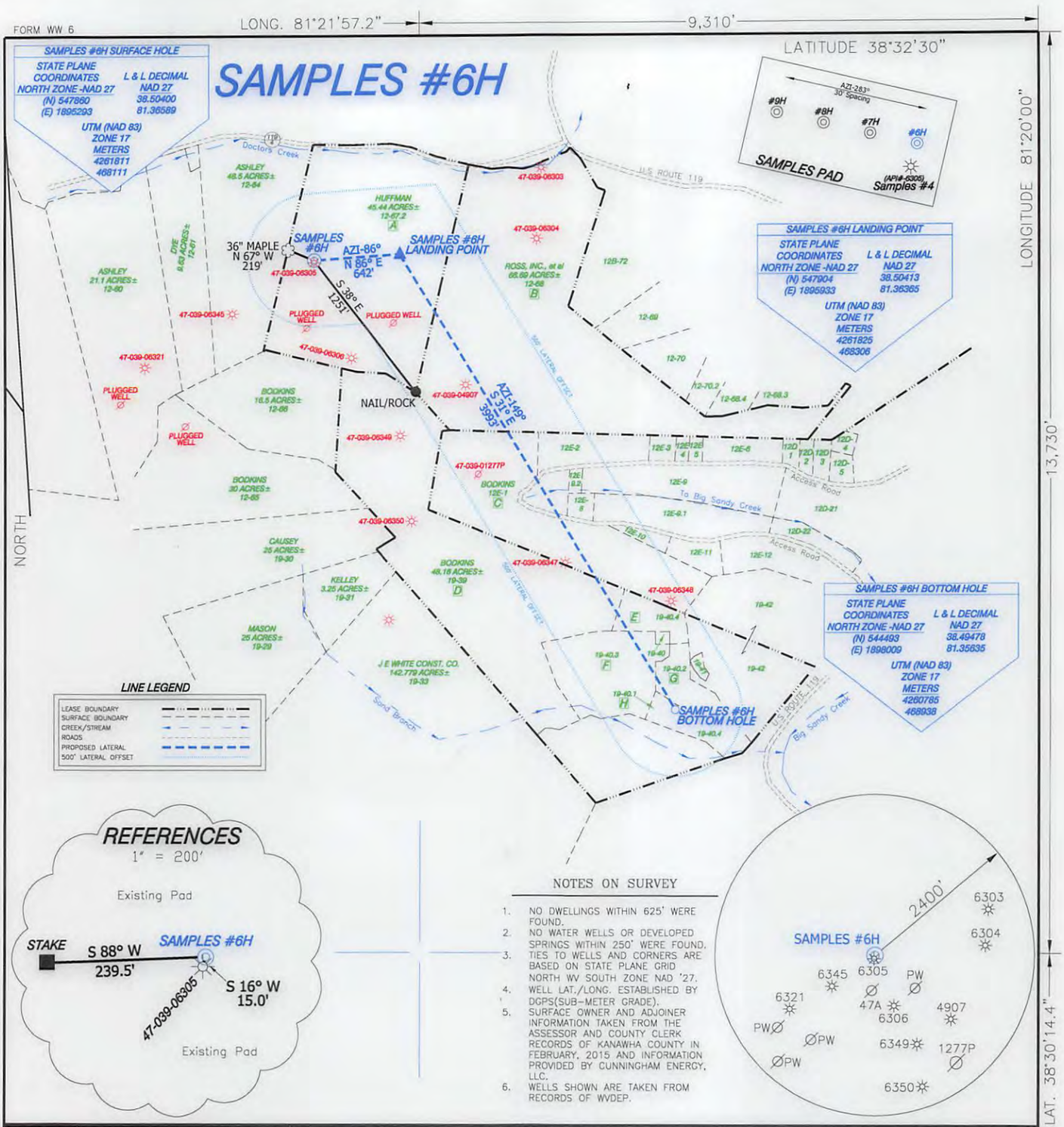
CUNNINGHAM ENERGY, LLC.
SAMPLES #6H



NORTH

HUPP Surveying & Mapping	1" = 1000'	CUNNINGHAM ENERGY, LLC.
P.O. BOX 647 GRANTSVILLE, WV 26147 PH:(304)354-7035 E-MAIL: hupp@frontiernet.net	CLIO Quad	3230 PENNSYLVANIA AVE. CHARLESTON, WV 25302

FORM WW-6



NOTES ON SURVEY

1. NO DWELLINGS WITHIN 625' WERE FOUND.
2. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND.
3. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV SOUTH ZONE NAD '27.
4. WELL LAT./LONG. ESTABLISHED BY DGPS(SUB-METER GRADE).
5. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF KANAWHA COUNTY IN FEBRUARY, 2015 AND INFORMATION PROVIDED BY CUNNINGHAM ENERGY, LLC.
6. WELLS SHOWN ARE TAKEN FROM RECORDS OF WVDEP.

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 834

HUPP Surveying & Mapping
P.O. Box 647 Grantsville, WV 26147
(304) 354-7035 EMAIL: hupp@frontiernet.net

DOYLE HUPP JR. LICENSED No. 834 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE MARCH 24, 20 15

OPERATORS WELL NO. SAMPLES #6H

API WELL NO. 47 — 039 — 06379 H
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. W2041 (BK74-38)
SCALE 1" = 1000'
PROVEN SOURCE OF ELEVATION DGPS (SUB-METER)

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

WELL TYPE : OIL X GAS ___ LIQUID INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

LOCATION :
ELEVATION 945' WATERSHED DOCTORS CREEK
DISTRICT BIG SANDY COUNTY KANAWHA QUADRANGLE CLIO 7.5'
SURFACE OWNER ROBERT HUFFMAN ACREAGE 45.44±
ROYALTY OWNER SOPHIA SAMPLES, et al LEASE ACREAGE 418.74±
PROPOSED WORK : LEASE NO. ___
DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___ OTHER ___
PHYSICAL CHANGE IN WELL (SPECIFY) ___ TARGET FORMATION WEIR
ESTIMATED DEPTH TVD- 2,000' MD-6,640'

COUNTY NAME

PERMIT

WELL OPERATOR CUNNINGHAM ENERGY, LLC. DESIGNATED AGENT RYAN CUNNINGHAM
ADDRESS 3230 PENNSYLVANIA AVE. CHARLESTON, WV 25302 ADDRESS 3230 PENNSYLVANIA AVE. CHARLESTON, WV 25302

FORM WW 6

3906379H

SAMPLES #6H

LONG. 81°21'57.2" — 9,310'

LATITUDE 38°32'30"

LONGITUDE 81°20'00"

13,730'

LAT. 38°30'14.4"

NORTH

SAMPLES #6H SURFACE HOLE

STATE PLANE COORDINATES NORTH ZONE -NAD 27	L & L DECIMAL NAD 27
(N) 547860	38.50400
(E) 1895293	81.36589

UTM (NAD 83)
ZONE 17
METERS
4261811
468111

SAMPLES #6H LANDING POINT

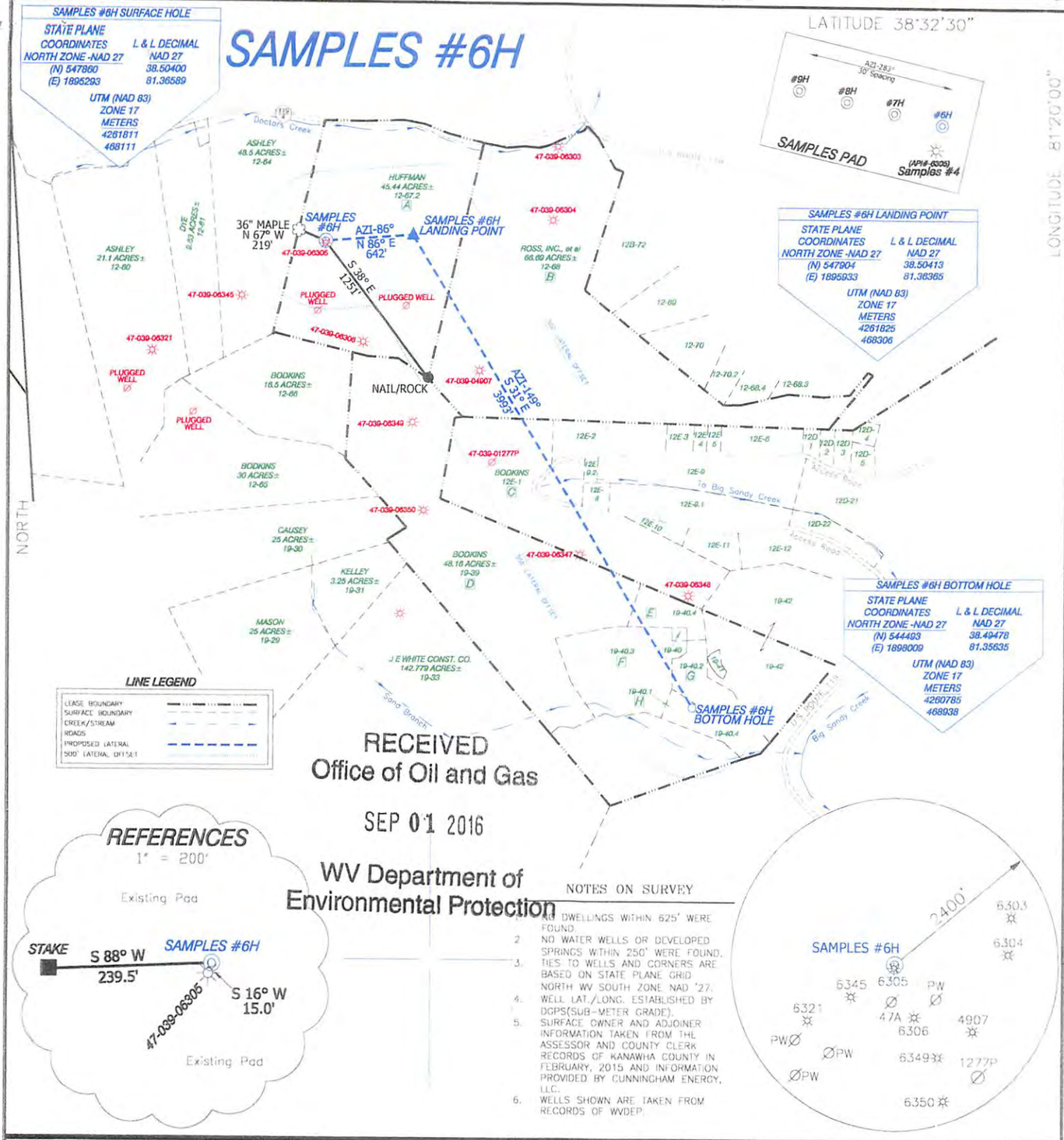
STATE PLANE COORDINATES NORTH ZONE -NAD 27	L & L DECIMAL NAD 27
(N) 547904	38.50413
(E) 1895933	81.36365

UTM (NAD 83)
ZONE 17
METERS
4261825
468306

SAMPLES #6H BOTTOM HOLE

STATE PLANE COORDINATES NORTH ZONE -NAD 27	L & L DECIMAL NAD 27
(N) 544493	38.49478
(E) 1898009	81.35635

UTM (NAD 83)
ZONE 17
METERS
4260785
468938



LINE LEGEND

- LEASE BOUNDARY
- SURFACE BOUNDARY
- CREEK/STREAM
- ROADS
- PROPOSED LATERAL
- 500' LATERAL OFFSET

RECEIVED
Office of Oil and Gas
SEP 01 2016
WV Department of Environmental Protection

REFERENCES
1" = 200'

NOTES ON SURVEY

1. 18 DWELLINGS WITHIN 625' WERE FOUND.
2. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND.
3. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV SOUTH ZONE NAD '27.
4. WELL LAT./LONG. ESTABLISHED BY DGPS(SUB-METER GRADE).
5. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF KANAWHA COUNTY IN FEBRUARY, 2015 AND INFORMATION PROVIDED BY CUNNINGHAM ENERGY, LLC.
6. WELLS SHOWN ARE TAKEN FROM RECORDS OF WVDEP.

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 834

DOYLE HUPP, JR. LICENSED No. 834 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE MARCH 24, 20 15

OPERATORS WELL NO. SAMPLES #6H

API WELL NO. 47 — 039 — 06379 H
STATE COUNTY PERMIT

HUPP Surveying & Mapping
P.O. Box 647 Grantsville, WV 26147
(304) 354-7035 EMAIL: hupp@frontiernet.net

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. W2041 (BK74-38)
PROVEN SOURCE OF ELEVATION DGPS (SUB-METER) SCALE 1" = 1000'

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

WELL TYPE : OIL X GAS ___ LIQUID INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

LOCATION :
ELEVATION 945' WATERSHED DOCTORS CREEK
DISTRICT BIG SANDY COUNTY KANAWHA QUADRANGLE CLIO 7.5'
SURFACE OWNER ROBERT HUFFMAN ACREAGE 45.44±
ROYALTY OWNER SOPHIA SAMPLES, et al LEASE ACREAGE 418.74±
PROPOSED WORK : LEASE NO. ___
DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___ OTHER ___
PHYSICAL CHANGE IN WELL (SPECIFY) ___ TARGET FORMATION WEIR
ESTIMATED DEPTH TVD- 2,000' MD-6,640'

WELL OPERATOR CUNNINGHAM ENERGY, LLC. DESIGNATED AGENT RYAN CUNNINGHAM
ADDRESS 3230 PENNSYLVANIA AVE. CHARLESTON, WV 25302 ADDRESS 3230 PENNSYLVANIA AVE. CHARLESTON, WV 25302