



**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

November 24, 2014

**WELL WORK PERMIT**

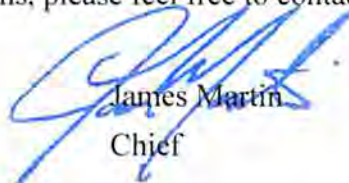
**Horizontal Well**

This permit, API Well Number: 47-1502906, issued to CUNNINGHAM ENERGY, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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

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

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



James Martin  
Chief

Operator's Well No: KING 20H  
Farm Name: TAYLOR, ROBERT  
**API Well Number: 47-1502906**  
**Permit Type: Horizontal Well**  
Date Issued: 11/24/2014

**Promoting a healthy environment.**

**11/28/2014**

## 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

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1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours
7. Well work activities shall not constitute a hazard to the safety of persons.
8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.
9. 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.

10. API well 15-02886 (Plugged) must be monitored during completion/hydraulic fracturing of API well 15-02906.
11. API well 15-70135 must have surface equipment capable of withstanding your proposed "Frac".
12. API well 15-70135 must be monitored during the completion/hydraulic fracturing process of well 15-02906.

4701502906H  
 CK# 9089  
 \$650.00

WW - 2B  
 (Rev. 8/10)

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

1) Well Operator: CUNNINGHAM ENERGY, LLC 494508594 CLAY UNION ELKHURST 7.5'  
 Operator ID County District Quadrangle

2) Operator's Well Number: KING 20H 3) Elevation: 1,291'

4) Well Type: (a) Oil X or Gas X  
 (b) If Gas: Production X / Underground Storage \_\_\_\_\_  
 Deep \_\_\_\_\_ / Shallow X

5) Proposed Target Formation(s): BIG INJUN Proposed Target Depth: 2,150'

6) Proposed Total Depth: 5,200' TMD Feet Formation at Proposed Total Depth: BIG INJUN

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 PACKER PLUS SYSTEM HOWEVER IF THE LATERAL DOES NOT ALLOW THIS WE WILL RUN CEMENT TO SURFACE USING THE WEATHERFORD WET SHOE SYSTEM AND PERFORATE.

13) 10/29/14 **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	
Conductor	13"	LS	43.6 LBS	30	30	CTS
Fresh Water	9 5/8"	LS	26 LBS	400'	400'	CTS
Coal						
Intermediate	7"	J-55	20 LBS	1900'	1900'	CTS
Production	4 1/2"	N-80	11.6 LBS	5140'	5140'	PACKERS PLUS/CTS
Tubing						
Liners						

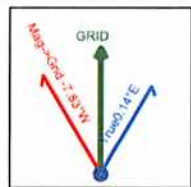
Received

Packers: Kind: \_\_\_\_\_ Sizes: \_\_\_\_\_ Depths Set \_\_\_\_\_

OCT 30 2014



Job Number: King PAD  
 Company: Cunningham Energy  
 Lease/Well: King PAD  
 Location: Southern Zone  
 Rig Name:  
 State/County: West Virginia/ Clay  
 Country: USA  
 API Number:

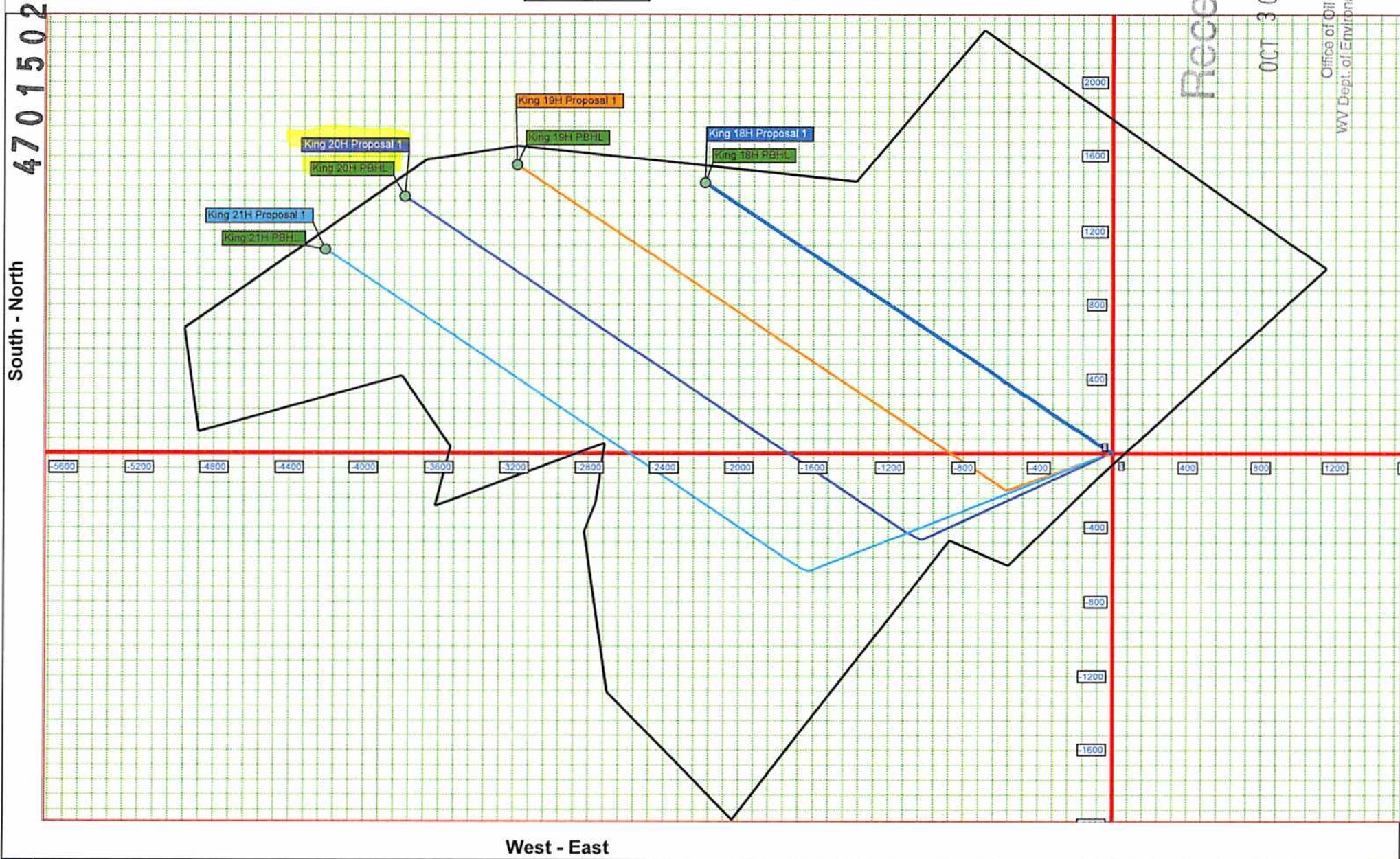


Elevation (To MSL): 1291.00 ft  
 RKB: 9.00 ft  
 Projection System: US State Plane 1927 (Exact solution)  
 Projection Group: West Virginia South 4702  
 Projection Datum: CLARKE 1866  
 Magnetic Declination: -7.97  
 Grid Convergence: -0.14041 W  
 Date: Thursday, October 09, 2014

Received

OCT 30 2014

Office of Oil and Gas  
 WV Dept. of Environmental Protection



South - North

West - East

1" = 600'



4701502906H



4701502906H

Mr. Jeffrey McLaughlin  
WV DEP Office of Oil and Gas

Addendum to King 18H; 19H; 20H; 21H

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

King #1 – 47-01502886 - plugged  
King #4 – 47-01502894 – plugged  
J.S. Cochran 6H – 47-01502895

47-015-70135 MUST HAVE APPROPRIATE SURFACE EQUIPMENT  
& WELL MUST BE MONITORED DURING FRAC.

The following wells are producing wells at the same elevation that we have removed all surface equipment from and replaced with valves which we will monitor during both drilling and fracking:

J.S. Cochran #1 – 47-0150684  
J.S. Cochran #2 – 47-01502883  
J.S. Cochran #3 – 47-01502888  
J.S. Cochran 4H – 47-01502897  
J.S. Cochran 5H – 47-01502896  
King #5 – 47-01502882  
King #6 – 47-01502881  
King #8 – 47-01502891  
King #9 – 47-01502887  
King #13 – 47-01502889  
King #14 – 47-01502890  
Young #2 – 47-0150688

Connell Heirs #18 – 47-0150708 – We are working with Rouzer on this monitoring.

King #1 – 47-01500704 – We have sent notice to Charles Young via Certified Mail on 5/12/2014 and are working with him to proceed with this monitoring this well.

Daniel O. Thompson #1 – 47-01500603

Received

OCT 30 2014

Office of Oil and Gas  
WV Dept. of Environmental Protection

In the opinion of Jim Rose, Petroleum engineer with Producers Service Corp, the treating pressures will be around 3500 psi. They will be using small stages at low rates.

Sincerely,

Danielle Boggs  
Cunningham Energy, LLC

**McLaughlin, Jeffrey W**

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**From:** Danielle Boggs <dani.bays@cunninghamenergy.com>  
**Sent:** Friday, November 14, 2014 4:09 PM  
**To:** McLaughlin, Jeffrey W  
**Subject:** 47-01502904 & 47-015-70135

Jeff –

After review of the King 18H we have discovered additional wells to be added to the area review they are listed below:

47-01530022 – WP Griffith #2 This well is showing to be plugged on 6/8/1944 we will inspect this well to the best of our abilities to avoid any issues during the fracking process.

47-01570135 – George King #1 We are currently attempting to contact the operator of this well and make an agreement with them to change out any necessary surface equipment and monitor this well during the frac process.

Thank you and if you should need any further information, please feel free to contact me.

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](http://www.cunninghamenergy.com)

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4701502906H



Select County (015) Clay    **Select datatypes:**  (Check All)

Enter Permit #: 70135

Location     Production     Plugging  
 Owner/Completion     Stratigraphy     Sample  
 Pay/Show/Water     Logs     Btn Hole Loc.

- [Table Descriptions](#)
- [County Code Translations](#)
- [Permit-Numbering Series](#)
- [Usage Notes](#)
- [Contact Information](#)
- [Disclaimer](#)
- [WVGES Main](#)
- ["Pipeline-Plus" New](#)

WV Geological & Economic Survey:

**Well: County = 15 Permit = 70135**

Report Time: Wednesday, November 19, 2014 5:42:34 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4701570135	Clay	70135	Union	Elkhurst	Clay	38.430481	-81.231958	479754.3	4253605

There is no Bottom Hole Location data for this well

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR	PROP_VD	PROP_TRGT_FM
4701570135	10/4/1912	Original Loc.	Completed	George King 1						Koontz Oil & Gas		

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	G_BEF	G_AFT	O_BEF	O_AFT	P_BEF	TI_BEF	P_AFT	TI_AFT
4701570135	10/4/1912	-/-						unclassified	unclassified	not available	unknown	unknown											

There is no Pay data for this well

There is no Plugging data for this well



4701502906H

7012 3460 0002 4924 4442

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Restricted Delivery Fee (Endorsement Required)	
<b>Total Postage &amp; Fees</b>	<b>\$ 7.40</b>

OCT 29 2014  
Postmark Here  
PS 2520

20-H

Sent To: Robert Taylor  
 Street, Apt. No.; or PO Box No.: 1967 Bomont Road  
 City, State, ZIP+4: Bomont, WV 25030

PS Form 3800, August 2006 See Reverse for Instructions

Received

OCT 30 2014

Office of Oil and Gas  
WV Dept. of Environmental Protection

11/28/2014

**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
CUNNINGHAM ENERGY, LLC	CUNNINGHAM ENERGY, LLC	1/8	210/58

**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

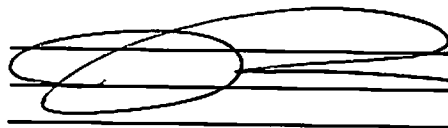
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OCT 30 2014

Office of Oil and Gas  
WV Dept. of Environmental Protection

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:  
By: Its:

  
\_\_\_\_\_

WW-2B1  
(5-12)

4701502906 H  
Well No. KING 20H

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.

SEE ATTACHED

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OCT 30 2014

Office of Oil and Gas  
WV Dept. of Environmental Protection

11/28/2014

4701502906H

7012 3460 0002 4924 2608

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Certified Fee	3.30
Return Receipt Fee (Endorsement Required)	2.70
Restricted Delivery Fee (Endorsement Required)	
Total Postage	6.49

Postmark Here  
 OCT 29 2014  
 USPS 25302

20-14

Sent To: Robert Taylor  
 Street, Apt. or PO Box: 1967 Bomont Road  
 City, State: Bomont, WV 25030

PS Form 3800, October 2013

Received

OCT 30 2014

Office of Oil and Gas  
WV Dept. of Environmental Protection

11/28/2014

# HUPP Surveying & Mapping 4701502906H

P.O. BOX 647

GRANTSVILLE, WV 26147

(304) 354-7035 [hupp@frontiernet.net](mailto:hupp@frontiernet.net) FAX: (304) 354-6548

---

June 2, 2014

RE: Water Samples for King 20H

There appears to be one (1) potable water sources within 1,500' of King 20H, therefore tests should be offered and samples taken as required.

1. Robert Wayne Taylor ✓  
1967 Bomont Rd.  
Bomont, WV 25030  
Tax Map 17 Parcels 46 & 47

MUST TEST & TAKE  
SAMPLE BEFORE SPUDDING.

Received

OCT 30 2014

Office of Oil and Gas  
WV Dept. of Environmental Protection

11/28/2014

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) TRIBUTARY OF WADE FORK Quadrangle ELKHURST 7.5'

Elevation 1.291' County CLAY District UNION

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

Will a pit be used for drill cuttings? Yes X No \_\_\_\_\_  
If so, please describe anticipated pit waste: DRILL CUTTINGS, FLUIDS FROM DRILING AND FRACTURING

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number 2D0392210 - IF NEEDED )
- Reuse (at API Number \_\_\_\_\_ )
- Off Site Disposal (Supply form WW-9 for disposal location) \_\_\_\_\_ )
- Other (Explain \_\_\_\_\_ )

Will closed loop system be used? NO

Drilling medium anticipated for this well? 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

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, 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.

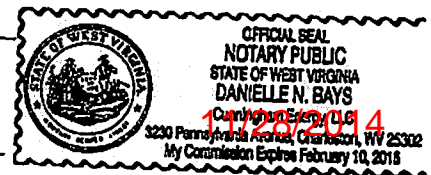
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is 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 NOV 3 2014  
Company Official Title PRESIDENT

Office of Oil and Gas  
WV Dept. of Environmental Protection

Subscribed and sworn before me this 3/14 day of JUNE October, 20 14

Daniel N. Bays Notary Public  
My commission expires 02/10/2015





4701502906H

Form WW-9

Operator's Well No. KING 20H

Proposed Revegetation Treatment: Acres Disturbed 2.75 Prevegetation pH \_\_\_\_\_

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 1/3 TON lbs/acre (500 lbs minimum)

Mulch HAY - 2 Tons/acre

Seed Mixtures

Seed Type	Area I	lbs/acre
KY 31		40
ALSIKE CLOVER		5
ANNUAL RYE		15

Seed Type	Area II	lbs/acre
ORCHID GRASS		15
ALSIKE CLOVER		5

Attach:  
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: \_\_\_\_\_

Comments: \_\_\_\_\_

Sediment control to be in place at all times.

Title: \_\_\_\_\_

Inspector

Date: \_\_\_\_\_

10/29/14

Field Reviewed? \_\_\_\_\_

Yes

No

Received

OCT 30 2014

# CUNNINGHAM ENERGY, LLC

## KING 20H

Form W-9

Page 1 of 1

TAYLOR  
MAP 17  
PARCEL 46

TAYLOR  
MAP 17  
PARCEL 53



Drawing Not To Scale NORTH

*10/28/14*  
All State BMP's  
to be followed.

Install Minimum 12' Culvert

Received  
OCT 30 2014

Office of Oil and Gas  
WV Dept of Environmental Protection

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 DDT REGULATIONS. SEPARATE PERMITS MAY BE REQUIRED BY THE DDT.

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.

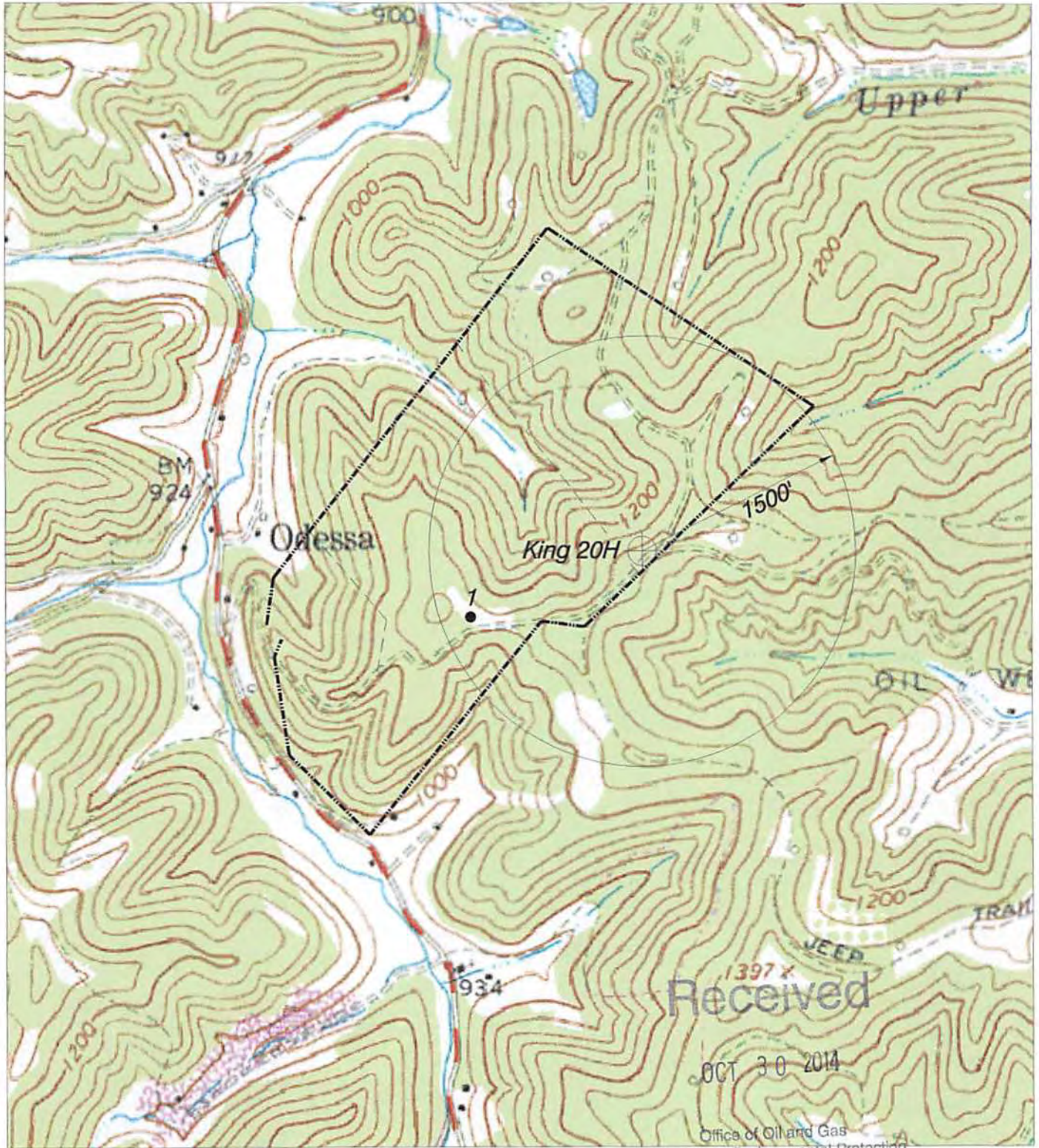
CONTRACTORS/COMPANY ARE RESPONSIBLE FOR LOCATING UTILITIES WHETHER SHOWN ON THIS PLAN OR NOT.

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.

<b>HUPP Surveying &amp; Mapping</b> P.O. BOX 647 GRANTSVILLE, WV 26147 PH: (304)354-7035 E-MAIL: hupp@frontiernet.net	Drafted BY:	Date Drafted:	Job Number:
	DB	10/27/14	W20122138

11/28/2014

# Cunningham Energy, LLC. King 20H



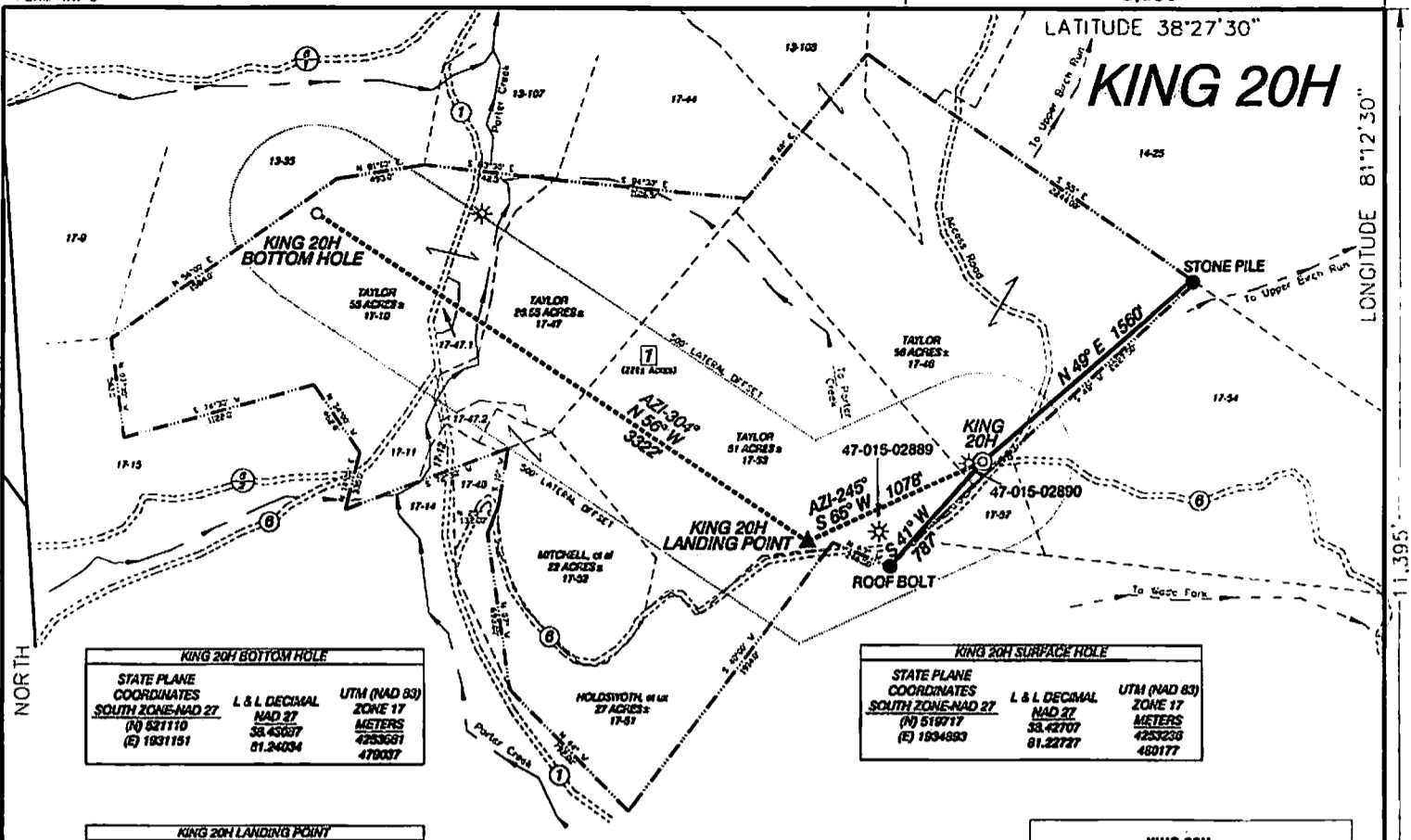
### HUPP Surveying & Mapping

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

1" = 1000'  
Elkhurst Quad

Cunningham Energy, LLC.  
3230 Pennsylvania Ave.  
Charleston, WV 25302

11/28/2014

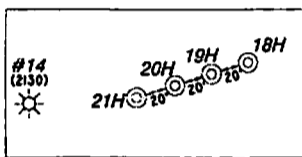


KING 20H BOTTOM HOLE		
STATE PLANE COORDINATES	L & L DECIMAL	UTM (NAD 83)
SOUTH ZONE-NAD 27	NAD 27	ZONE 17
(N) 821110	58.43637	METERS
(E) 1831151	81.24034	4253681
		478037

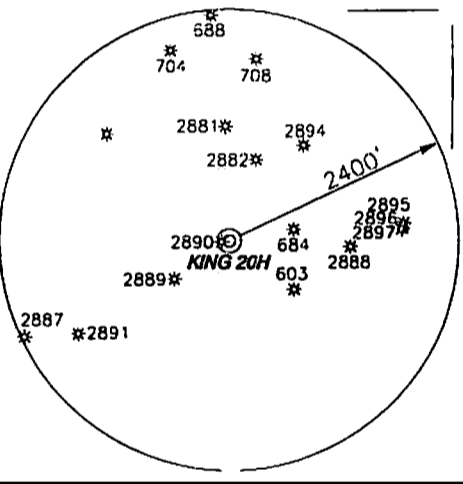
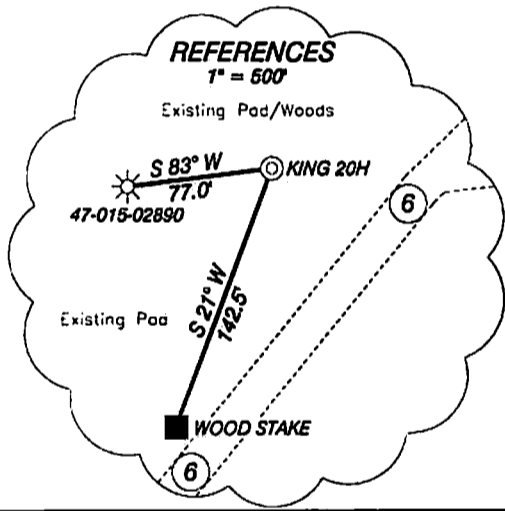
KING 20H SURFACE HOLE		
STATE PLANE COORDINATES	L & L DECIMAL	UTM (NAD 83)
SOUTH ZONE-NAD 27	NAD 27	ZONE 17
(N) 519717	58.42707	METERS
(E) 1834883	81.22727	4253238
		480177

KING 20H LANDING POINT		
STATE PLANE COORDINATES	L & L DECIMAL	UTM (NAD 83)
SOUTH ZONE-NAD 27	NAD 27	ZONE 17
(N) 518268	58.42582	METERS
(E) 1833914	81.23088	4253681
		478878

KING 20H		
LEASE	LESSOR	ACREAGE
1	CUNNINGHAM ENERGY, LLC.	228±



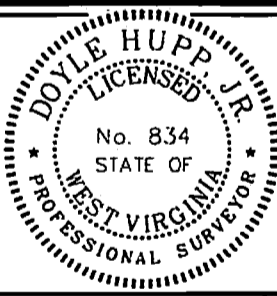
LINE LEGEND	
LEASE BOUNDARY	---
SURFACE BOUNDARY	----
CRUISE/STREAM	~~~~~
ROADS	==
PROPOSED LATERAL	-----
100' LATERAL OFFSET	.....



- NOTES ON SURVEY**
- NO DWELLINGS WITHIN 625' WERE FOUND.
  - NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND.
  - TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV SOUTH ZONE NAD '27.
  - WELL LAT./LONG. ESTABLISHED BY SG-GPS(OPUS).
  - SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF CLAY COUNTY IN JANUARY, 2014 AND INFORMATION PROVIDED BY CUNNINGHAM ENERGY LLC.
  - WELLS SHOWN ARE TAKEN FROM RECORDS OF WJDEP

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@triantel.net



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE JUNE 2, 2014  
 OPERATORS WELL NO. KING 20H  
 API WELL NO. 47-015-02906H  
 STATE WV COUNTY CLAY PERMIT 1128/2014

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. W2138 (BK71-1)  
 PROVEN SOURCE OF ELEVATION SG-GPS (OPUS) SCALE 1" = 1000'

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

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

LOCATION :  
 ELEVATION 1291' WATERSHED TRIBUTARY OF PORTER CREEK  
 DISTRICT UNION COUNTY CLAY QUADRANGLE ELKHURST 7.5'

SURFACE OWNER ROBERT TAYLOR ACREAGE 51±  
 ROYALTY OWNER CUNNINGHAM ENERGY, LLC. LEASE ACREAGE 228± **11/28/2014**

PROPOSED WORK : LEASE NO. \_\_\_\_\_  
 DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG AND ABANDON  CLEAN OUT AND REPLUG  OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ TARGET FORMATION BIG INJUN  
 ESTIMATED DEPTH TVD- 2,150' MD- 5,200'

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

COUNTY NAME  
 PERMIT



September 26, 2014

Re: King 18H, 19H, 20H, 21H  
 Original Lessor(s): King  
 156 Acres, more or less  
 Union District, Clay County, West Virginia

### Statement on Road Searches in Clay County, WV

The writer has researched the records of the Office of the Clay County Clerk in reference to the following curative requirement:

According to John McHugh, Right of Way attorney for the West Virginia Department of Transportation, numerous Clay county roads were accepted into the state road system in 1931, pursuant to W. Va. Code § 17-2A-8, and were included in the 1933 "Scrolls of the State Road Commission of West Virginia." This is a list of all of the roads that transferred from county to state control.

Whatever interest Clay County had in a particular county road in 1931 was the same interest that the State acquired at that time- no more or no less. Many county roads were acquired by prescriptive easement and consist of a right-of-way only over the surface. However, some were acquired by deed in fee simple. Therefore, because the state road commission acquired whatever interest the county had, to determine if the state of West Virginia owns the minerals under a particular road in fee simple or merely has an easement, it will depend upon the particular circumstance of acquisition.

According to John McHugh, Right of Way attorney for the West Virginia Department of Transportation, absent evidence of acquisition that a particular roadway was acquired in fee simple, the road is presumed to be an easement, and therefore will not require the state of West Virginia to sign an Oil and Gas lease.

A search was conducted for the property covered by the above listed Title Opinion, and no record of acquisition has been found in the Clay County records covering any roads that may cross or border the property.

Because no fee simple deeds have been found in the Office of the Clay County Clerk covering any roads that may cross or border the property covered by the above listed Title Opinion, it is the writer's understanding from all known evidence that any road that may cross or border the property is an easement only, and will not require an oil and gas lease from the state of West Virginia.

Thank you for your time and attention,

Sincerely,

Ryan E. M. Cunningham  
 President  
 Cunningham Energy, LLC

Received

OCT 30 2014

Office of Oil and Gas  
 WV Dept. of Environmental Protection

11/28/2014