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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Friday, March 30, 2018  
WELL WORK PERMIT  
Horizontal / New Drill

CUNNINGHAM ENERGY, LLC  
3230 PENNSYLVANIA AVENUE

CHARLESTON, WV 25302

Re: Permit approval for YOUNG 1H  
47-015-03505-00-00

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

A blue ink signature of James A. Martin, written in a cursive style.

Operator's Well Number: YOUNG 1H  
Farm Name: CLEVELAND MCCLURE  
U.S. WELL NUMBER: 47-015-03505-00-00  
Horizontal New Drill  
Date Issued: 03/30/2018

CTB 3/30/18

## 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, 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](mailto:DEPOOGNotify@wv.gov) within 30 days of commencement of drilling.

**PERMIT CONDITIONS CONTINUED**

9. Operator must obtain any necessary property rights regarding the portions of the proposed and existing access road not located on the surface overlying the leasehold being developed.
10. Prior to initiating any work under this permit the permittee must:
  - 1) Execute a consent order, containing an administrative penalty, with the Office of Oil and Gas addressing previous compliance issues with the King Pad and
  - 2) Maintain compliance, including penalty payments, with consent orders executed with the Division of Air Quality and the Office of Oil and Gas.

**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 - 5 ELKHURST 7.5'  
Operator ID County District Quadrangle

2) Operator's Well Number: YOUNG #1H 3) Elevation: 1,186'

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

*ck#  
11591  
\$650<sup>00</sup>*

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

6) Proposed Total Depth: 4,150' 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.

POSSIBLY USING MORE THAN 5000 BBLs OF WATER FOR COMPLETION.

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"	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	1,900'	1,900'	CTS
Production	4 1/2"	N-80	11.6 LBS	4,150'	4,150'	CTS
Tubing						
Liners						

*[Signature]*

3-15-18 RECEIVED  
Office of Oil and Gas

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

MAR 16 2018



15-03505H

4701503505H

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Mr. Jeffrey McLaughlin  
WV DEP Office of Oil and Gas

**Addendum to Young #1**

Mr. McLaughlin:

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

Carl B. Young #1 – 47-01500559  
Carl B. Young #2 – 47-01500688  
Carl B. Young #4 – 47-01500727  
George S. King #1 – 47-01500704

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

Sincerely,

Ryan E. M. Cunningham  
Cunningham Energy, LLC

RECEIVED  
Office of Oil and Gas

MAR 16 2018

WV Department of  
Environmental Protection



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

Enter Permit #: 00559

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

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- ["Pipeline-Plus" New](#)

WV Geological & Economic Survey:

Well: County = 15 Permit = 00559

Report Time: Friday, March 30, 2018 9:31:46 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4701500559	Clay	559	Union	Elkhurst	Clay	38.434935	-81.228574	480050.9	4254098.5

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_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
4701500559	12/29/1959		Original Loc Completed	Carl B Young	1					Carl B Young		Clayton 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
4701500559	12/29/1959	10/15/1959	962 Ground Level	Rouzer	Price Fm & equivs	Squaw	Development Well	Development Well	Oil w/ Gas Show	Cable Tool	Fractured	1896		1896	0	0

Pay/Show/Water Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEF	G_AFT	O_BEF	O_AFT	WATER_QNTY
4701500559	12/29/1959	Water	Unknown Water	Vertical			70						0
4701500559	12/29/1959	Water	Fresh Water	Vertical			200						0
4701500559	12/29/1959	Water	Unknown Water	Vertical			260						0
4701500559	12/29/1959	Water	Unknown Water	Vertical			605						0
4701500559	12/29/1959	Water	Salt Water	Vertical			933						0

Production Gas Information: (Volumes in Mcf)

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_GAS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4701500559	Stanley, Helen V.	1983	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Big Buck Energy Oil and Gas, Inc.	1984	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Stanley, Helen V.	1985	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Stanley, Helen V.	1986	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Stanley, Helen V.	1987	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Clayton Oil & Gas	1988	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Clayton Oil & Gas	1989	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Clayton Oil & Gas	1990	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Clayton Oil & Gas	1991	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Clayton Oil & Gas	1992	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Clayton Oil & Gas	1993	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Clayton Oil & Gas	1994	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Clayton Oil & Gas	1995	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Young Charles W Construction Services	2013	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Young Charles W Construction Services	2014	324	27	27	27	27	27	27	27	27	27	27	27	27
4701500559	Young Charles W Construction Services	2015	60	5	5	5	5	5	5	5	5	5	5	5	5
4701500559	Cunningham Energy, LLC	2016	0	0	0	0	0	0	0	0	0	0	0	0	0

Production Oil Information: (Volumes in Bbl) \*\* some operators may have reported NGL under Oil

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_OIL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4701500559	Stanley, Helen V.	1983	317	0	80	0	78	0	79	0	79	0	79	0	0
4701500559	Big Buck Energy Oil and Gas, Inc.	1984	388	80	0	79	71	0	79	0	79	0	79	0	78
4701500559	Stanley, Helen V.	1985	302	76				80	68						78
4701500559	Stanley, Helen V.	1986	238	0	81	0	78	0	79	0	79	0	79	0	0
4701500559	Stanley, Helen V.	1987	321	0	82	0	76	0	79	0	79	0	80	0	83
4701500559	Clayton Oil & Gas	1988	65	0	0	65	0	0	0	0	0	0	0	0	0
4701500559	Clayton Oil & Gas	1989	238	75	0	0	0	84	0	0	0	0	0	0	79
4701500559	Clayton Oil & Gas	1990	165	0	0	0	85	0	80	0	0	0	0	0	0
4701500559	Clayton Oil & Gas	1991	142					80			62				0
4701500559	Clayton Oil & Gas	1992	317	0	82	0	81	0	77	0	0	0	0	0	77
4701500559	Clayton Oil & Gas	1993	82	0	0	0	0	82	0	0	0	0	0	0	0
4701500559	Clayton Oil & Gas	1994	168	0	84	0	84	0	0	0	0	0	0	0	0
4701500559	Clayton Oil & Gas	1995	82					82							0
4701500559	Young Charles W Construction Services	2013	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Young Charles W Construction Services	2014	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Young Charles W Construction Services	2015	312	26	26	26	26	26	26	26	26	26	26	26	26
4701500559	Cunningham Energy, LLC	2016	3	1					1						1

Production NGL Information: (Volumes in Bbl) \*\* some operators may have reported NGL under Oil

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_NGL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4701500559	Young Charles W Construction Services	2013	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Young Charles W Construction Services	2014	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Young Charles W Construction Services	2015	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500559	Cunningham Energy, LLC	2016	0												0

Production Water Information: (Volumes in Gallons)

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_WTR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4701500559	Cunningham Energy, LLC	2016	0												0

Stratigraphy Information:

API	SUFFIX	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV DATUM
4701500559	Original Loc	Salt Sands (undiff)	Well Record	800	Reasonable	540	Reasonable	962 Ground Level
4701500559	Original Loc	'Mauch Chunk'	Well Record	1473	Reasonable	212	Reasonable	962 Ground Level
4701500559	Original Loc	Maxton	Well Record	1570	Reasonable	38	Reasonable	962 Ground Level
4701500559	Original Loc	Little Lime	Well Record	1609	Reasonable	47	Reasonable	962 Ground Level
4701500559	Original Loc	Blue Monday	Well Record	1656	Reasonable	18	Reasonable	962 Ground Level
4701500559	Original Loc	Pencil Cave	Well Record	1674	Reasonable	11	Reasonable	962 Ground Level
4701500559	Original Loc	Big Lime	Well Record	1685	Reasonable	108	Reasonable	962 Ground Level
4701500559	Original Loc	Greenbrier Group	Well Record	1685	Reasonable	143	Reasonable	962 Ground Level
4701500559	Original Loc	Keener	Well Record	1793	Reasonable	25	Reasonable	962 Ground Level
4701500559	Original Loc	Big Injun (Price&eq)	Well Record	1828	Reasonable	50	Reasonable	962 Ground Level
4701500559	Original Loc	Squaw	Well Record	1880	Reasonable	16	Reasonable	962 Ground Level

There is no Wireline (E-Log) data for this well

There is no Plugging data for this well

There is no Sample data for this well

876' BELOW ELEV.



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

Enter Permit #: 00727

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

Get Data Reset

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["Pipeline-Plus" New](#)

WV Geological & Economic Survey:

Well: County = 15 Permit = 00727

Report Time: Friday, March 30, 2018 9:29:37 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4701500727	Clay	727	Union	Elkhurst	Clay	38.436917	-81.231263	479816.8	4254319

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_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
4701500727	1/7/1920	Original Loc	Completed	J L Minner	5					Ohio Fuel			
4701500727	6/20/1963	Worked Over	Completed	Carl B Young	4					Carl Young et al			

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	
4701500727	1/7/1920	10/23/1919	927	Ground Level	Rouzer	Big Injun (Price&eq)	Big Injun (Price&eq)	Development Well	Development Well	Oil	Cable Tool	unknown	1807		1807	0	0	0	0
4701500727	6/20/1963	6/7/1963	927	Ground Level	Rouzer	Big Injun (Price&eq)	Big Injun (Price&eq)	Development Well	Development Well	Oil	unknown	Fractured	1807		0	0	0	0	0

Pay/Show/Water Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEF	G_AFT	O_BEF	O_AFT	WATER_QNTY
4701500727	6/20/1963	Water	Unknown Water	Vertical			1120						0
4701500727	6/20/1963	Pay	Oil	Vertical			1803	Big Injun (Price&eq)	0	0			

Production Gas Information: (Volumes in Mcf)

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_GAS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4701500727	Stanley, Helen V.	1983	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500727	Big Buck Energy Oil and Gas, Inc.	1984	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500727	Stanley, Helen V.	1985													
4701500727	Stanley, Helen V.	1986	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500727	Clayton Oil & Gas	1988	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500727	Clayton Oil & Gas	1989	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500727	Clayton Oil & Gas	1990	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500727	Clayton Oil & Gas	1991													
4701500727	Clayton Oil & Gas	1992	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500727	Clayton Oil & Gas	1993	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500727	Clayton Oil & Gas	1994	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500727	Clayton Oil & Gas	1995													
4701500727	Young Charles W Construction Services	2013	60	5	5	5	5	5	5	5	5	5	5	5	5
4701500727	Young Charles W Construction Services	2014	72	6	6	6	6	6	6	6	6	6	6	6	6
4701500727	Young Charles W Construction Services	2015	60	5	5	5	5	5	5	5	5	5	5	5	5
4701500727	Cunningham Energy, LLC	2016	0	0	0	0	0	0	0	0	0	0	0	0	0

Production Oil Information: (Volumes in Bbl) \*\* some operators may have reported NGL under Oil

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_OIL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4701500727	Stanley, Helen V.	1983	149	0	0	0	0	74	0	0	0	0	0	75	0
4701500727	Big Buck Energy Oil and Gas, Inc.	1984	156	0	0	78	0	0	0	0	0	78	0	0	0
4701500727	Stanley, Helen V.	1985	143			79								64	
4701500727	Stanley, Helen V.	1986	71	0	0	0	0	0	0	0	71	0	0	0	0
4701500727	Clayton Oil & Gas	1988	83	0	0	0	0	0	0	0	83	0	0	0	0
4701500727	Clayton Oil & Gas	1989	57	57	0	0	0	0	0	0	0	0	0	0	0
4701500727	Clayton Oil & Gas	1990	56	0	0	0	0	0	0	0	56	0	0	0	0
4701500727	Clayton Oil & Gas	1991	74						74						
4701500727	Clayton Oil & Gas	1992	169	0	83	0	0	0	0	0	0	0	0	0	86
4701500727	Clayton Oil & Gas	1993	83	0	0	0	0	0	0	0	0	0	0	0	83
4701500727	Clayton Oil & Gas	1994	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500727	Clayton Oil & Gas	1995	110	87				23							
4701500727	Young Charles W Construction Services	2013	72	6	6	6	6	6	6	6	6	6	6	6	6
4701500727	Young Charles W Construction Services	2014	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500727	Young Charles W Construction Services	2015	72	6	6	6	6	6	6	6	6	6	6	6	6
4701500727	Cunningham Energy, LLC	2016	3	1				1					1		

Production NGL Information: (Volumes in Bbl) \*\* some operators may have reported NGL under Oil

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_NGL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4701500727	Young Charles W Construction Services	2013	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500727	Young Charles W Construction Services	2014	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500727	Young Charles W Construction Services	2015	0	0	0	0	0	0	0	0	0	0	0	0	0
4701500727	Cunningham Energy, LLC	2016	0												

Production Water Information: (Volumes in Gallons)

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_WTR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4701500727	Cunningham Energy, LLC	2016	0												

Stratigraphy Information:

API	SUFFIX	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV DATUM
4701500727	Worked Over	Mahonig Ss/Big Dunk	Well Record	540	Reasonable	190	Reasonable	927 Ground Level
4701500727	Worked Over	Salt Sands (undiff)	Well Record	930	Reasonable	410	Reasonable	927 Ground Level
4701500727	Worked Over	'Mauch Chunk'	Well Record	1400	Reasonable	210	Reasonable	927 Ground Level
4701500727	Worked Over	Maxton	Well Record	1503	Reasonable	36	Reasonable	927 Ground Level
4701500727	Worked Over	Little Lime	Well Record	1547	Reasonable	35	Reasonable	927 Ground Level
4701500727	Worked Over	Blue Monday	Well Record	1587	Reasonable	13	Reasonable	927 Ground Level
4701500727	Worked Over	Pencil Cave	Well Record	1600	Reasonable	10	Reasonable	927 Ground Level
4701500727	Worked Over	Greenbrier Group	Well Record	1610	Reasonable	148	Reasonable	927 Ground Level

693' BELOW RL

There is no Wireline (E-Log) data for this well

There is no Plugging data for this well

There is no Sample data for this well

4701503505H

WW-2A  
(Rev. 6-14)

1). Date: FEBRUARY 23, 2018  
2.) Operator's Well Number YOUNG #1H  
State County Permit  
3.) API Well No.: 47- CLAY -

**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 CLEVELAND MCCLURE Address 5111 Hopewell Rd. Cross lanes Wv 25313  
(b) Name \_\_\_\_\_ Address \_\_\_\_\_  
(c) Name \_\_\_\_\_ Address \_\_\_\_\_  
5) (a) Coal Operator Name NONE Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration Name \_\_\_\_\_ Address \_\_\_\_\_  
(c) Coal Lessee with Declaration Name \_\_\_\_\_ Address \_\_\_\_\_  
6) Inspector JEREMY JAMES Address P.O. BOX 36 CLENDENIN, WV 25045 Telephone 304-951-2596

**TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:**

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

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: PRESIDENT  
Address: 3230 PENNSYLVANIA AVE CHARLESTON, WV 25302  
Telephone: 304-344-9291  
Email: ryan.cunningham@cunninghamenergy.com

Subscribed and sworn before me this 14th day of FEBRUARY, 2018

RECEIVED  
Office of Oil and Gas

Notary Public

MAR 16 2018

My Commission Expires January 23, 2022  
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](mailto:depprivacyofficer@wv.gov)



WW-2A Surface Waiver  
(4/16)

**SURFACE OWNER WAIVER**

County CLAY Operator CUNNINGHAM ENERGY, LLC  
Operator well number YOUNG 1H

**INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A**

The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

**NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**  
**WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:**

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

**Time Limits and methods for filing comments.** The law requires these materials to be served on or before the date the operator files his Application. You have **FIFTEEN (15) 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.

**Comments must be in writing.** Your comments must 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.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

**If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.**

**List of Water Testing Laboratories.** The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.


**VOLUNTARY STATEMENT OF NO OBJECTION**

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application for a Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through \_\_\_ including a work order on Form WW2-B, a survey plat, WW-9, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

  
\_\_\_\_\_  
Signature  
C.E. McCLURE, JR.  
\_\_\_\_\_  
Print Name

Date 03.29.18

Company Name \_\_\_\_\_  
By \_\_\_\_\_  
Its \_\_\_\_\_  
Date \_\_\_\_\_

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Office of Oil and Gas

MAR 29 2018

WV Department of  
Environmental Protection

**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
CLEVELAND MCCLURE	CUNNINGHAM ENERGY, LLC	1/8	51 - 953
SHIRLEY YOUNG	CUNNINGHAM ENERGY, LLC	1/8	52 - 50
SHAWN SMITH	CUNNINGHAM ENERGY, LLC	1/8	51 - 1020

**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:  
By: Its:

CUNNINGHAM ENERGY, LLC  
PRESIDENT

**RECEIVED**  
Office of Oil and Gas

MAR 16 2018

WW-2B1  
(5-12)

Well No. YOUNG #1

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

---

December 22, 2017

RE: Water Samples for Young #1H

There appears to be six (6) potable water sources within 1,500' of Young #1H, therefore tests should be offered and samples taken as required.

1. Cleveland McClure  
5111 Hopewell Rd  
Cross Lanes, WV 25313  
Tax Map 13 Parcel 68

2. Kenneth Crites, et ux  
1060 Bomont Rd.  
Bomont, WV 25030  
Tax Map 13 Parcel 68.1

3. April Kearns  
944 Bomont Rd.  
Bomont, WV 25030  
Tax Map 13 Parcel 67.2

4. Dencil Ray Casto  
926 Bomont Rd.  
Bomont, WV 25030  
Tax Map 13 Parcel 66

5. David Rucker  
28 Alamo Ln,  
Bomont, WV 25030  
Tax Map 13 Parcel 64

6. Clinton Mullins  
P.O. Box 1103  
Clendenin, WV 25045  
Tax Map 13 Parcel 60.2

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# Cunningham Energy, LLC. YOUNG #1H WATER



### 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

WW-9  
(5/16)

API Number 47-015 - 03505 H  
Operator's Well No. YOUNG #1

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) PORTER CREEK Quadrangle ELKHURST 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 & 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 - IF NEEDED )
- Reuse (at API Number \_\_\_\_\_)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_)

Will closed loop system be 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 NECESSARY

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

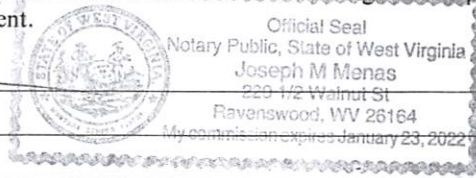
-Landfill or offsite name/permit number? CITY OF CHARLESTON LANDFILL

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 14th day of March, 2018

*[Signature]*  
Notary Public

My commission expires January 23, 2022

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

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type LIME / 10-20-20

Fertilizer amount 1/3 TON lbs/acre

Mulch HAY - 2 Tons/acre

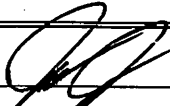
Seed Mixtures

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.

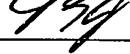
Plan Approved by:  Jeremy Jones

Comments: Silt fence is to be installed & upkept from beginning of road to Post House/yard.

road is to be rocked from main road to Post House/yard

rock checks to be insalled below all culvert outlets

Pits <sup>are</sup> to be lined w/ 30mil. liner



Title: inspector 006

Date: ~~02/23/2018~~ 3-15-18

Office of Oil and Gas

Field Reviewed?  Yes  No

MAK 16 2018

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

Operator Name: CUNNINGHAM ENERGY, LLC  
Watershed (HUC 10): PORTER CREEK Quad: ELKHURST 7.5  
Farm Name: CLEVELAND MCCLURE

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 the drilling pit, the fluid will be circulated by placing a pump with suction in one end of the pit and and the fluid discharged at 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 the trace amounts that may be present will be removed from the suction/discharge area of the pit. Samples will be taken at various 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 min. of <sup>30 mil</sup> 20 mil. thickness synthetic liner. Drill cuttings disposal will be in conformance with the Fluids/Cuttings Disposal & Reclamation Plan (Form WW-9) as submitted within the approved 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 Contro. 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.

The pad for this well in positioned upon a ridgetop area near the topographic drainage divide, at an approximate equidistant 1000' from the headwater are of the unnamed tributary of Porter Creek to the northwest.

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

Well drilling, 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 approved well work permit and provide groundwater protection measures.

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

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No existing groundwater quality data is known to currently be available for this site. Prior to WVDEP-OOG's approval of the well work permit, Cunningham Energy, LLC provided a written request to the respective surface owner/occupant seeking permission to perform water well/spring analytical testing. We have not rec'd the owners permission at this time.

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 conformance 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 application 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: 02/23/2018

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# CUNNINGHAM ENERGY, LLC. YOUNG #1H

840' +/- @ 5% to 8%  
Spacing 135' to 100'

MCCLURE  
MAP 13  
PARCEL 69

YOUNG #1H

Pipeline

Road is An Old Existing Access Road To Here.  
Upgrade Drainage Devices Where Needed.  
Begin New Construction.

175' +/- @ 2% to 4%  
Spacing 250' to 170'

KEARNS, ET UX  
MAP 13  
PARCEL 67

60' +/- @ 16% to 18%  
Spacing 55' to 50'

MCCLURE  
MAP 13  
PARCEL 68

150' +/- @ 4% to 6%  
Spacing 170' to 125'

475' +/- @ 11% to 13%  
Spacing 75' to 65'

50' +/- @ 14% to 16%  
Spacing 60' to 55'

100' +/- @ 18% to 20%  
Spacing 50' to 45'

125' +/- @ 20% to 22%  
Spacing 45' to 40'

180' +/- @ 15% to 17%  
Spacing 60' to 55'

CRITES  
MAP 13  
PARCEL 68.1

60' +/- @ 8% to 10%  
Spacing 100' to 80'

300' +/- @ 14% to 16%  
Spacing 60' to 55'

200' +/- @ 4% to 6%  
Spacing 170' to 125'

240' +/- @ 2% to 4%  
Spacing 250' to 170'

50' +/- @ 8% to 10%  
Spacing 100' to 80'

 Install Minimum 12" Culvert

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

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MAR 16 2018  
WV Department of Environmental Protection

HUPP Surveying & Mapping

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

DB

Date Drafted:

03/07/18

Job Number:

W20172537

Drawing Not To Scale NORTH



A 5050-51

15-03505-H

Form W-9

Page 2 of 2

# CUNNINGHAM ENERGY, LLC. YOUNG #1H

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MAR 30 2018

WV Department of  
Environmental Protection

KEARNS, ET UX  
MAP 13  
PARCEL 67

*JWM*

Drawing Not To Scale NORTH

Ref

Surface & Lease  
Boundary



Woods

Surface & Lease  
Boundary

Woods

YOUNG #1H

Woods

MCCLURE  
MAP 13  
PARCEL 69

Install Minimum 12" Culverts

ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH DEP OIL AND GAS BPP MANUAL. ENTRANCES AT COUNTY/STATE ROAD 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 TRAIN INLETS AND OUTLETS AS REQUIRED BY THE WV DEP OIL AND GAS BPP MANUAL. FIELD CONDITIONS, ROCK OUTCROPPING AND BEDROCK MAY PROHIBIT DRAIN TRAPS BEING INSTALLED. WHEN THESE CONDITIONS EXIST, ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED.  
EARTHWORK CONTRACTORS ARE RESPONSIBLE FOR NOTIFYING 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 DEBRISH CONTROL.

Silt Fence

Woods

**HUPP Surveying & Mapping**

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

Drafted BY:

DB

Date Drafted:

03/29/18

Job Number:

W20172537

# Cunningham Energy, LLC. YOUNG #1H



NORTH

### HUPP Surveying & Mapping

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

1" = 1000'  
Elkhurst Quad

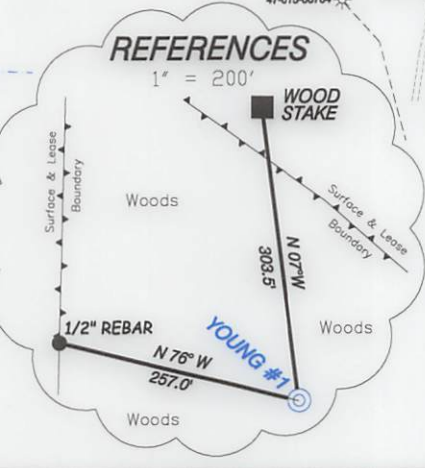
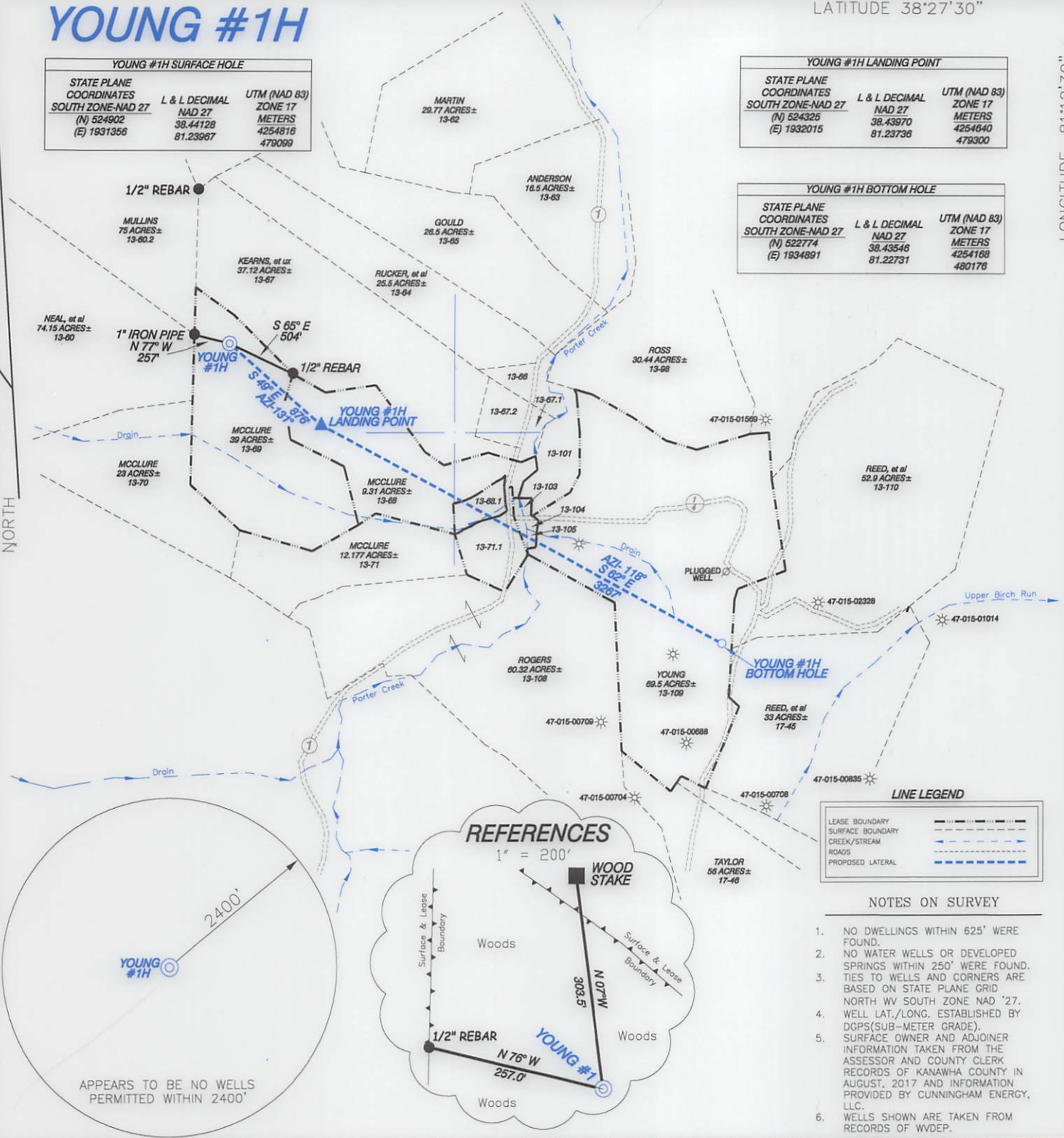
Cunningham Energy, LLC.  
3230 Pennsylvania Ave.  
Charleston, WV 25302

# YOUNG #1H

YOUNG #1H SURFACE HOLE		
STATE PLANE COORDINATES	L & L DECIMAL	UTM (NAD 83)
SOUTH ZONE-NAD 27	NAD 27	ZONE 17
(N) 524902	38.44128	METERS
(E) 1931356	81.23967	4254816
		479099

YOUNG #1H LANDING POINT		
STATE PLANE COORDINATES	L & L DECIMAL	UTM (NAD 83)
SOUTH ZONE-NAD 27	NAD 27	ZONE 17
(N) 524325	38.43970	METERS
(E) 1932015	81.23736	4254840
		479300

YOUNG #1H BOTTOM HOLE		
STATE PLANE COORDINATES	L & L DECIMAL	UTM (NAD 83)
SOUTH ZONE-NAD 27	NAD 27	ZONE 17
(N) 522774	38.43546	METERS
(E) 1934891	81.22731	4254168
		480176

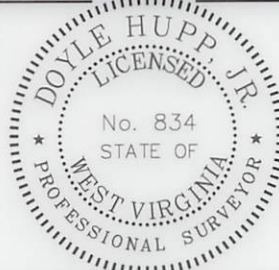


LINE LEGEND	
LEASE BOUNDARY	--- --
SURFACE BOUNDARY	-----
CREEK/STREAM	~~~~~
ROADS	====
PROPOSED LATERAL	----

- 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 DGPS (SUB-METER GRADE).
  - SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF KANAWHA COUNTY IN AUGUST, 2017 AND INFORMATION PROVIDED BY CUNNINGHAM ENERGY, LLC.
  - WELLS SHOWN ARE TAKEN FROM RECORDS OF WDEP.

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



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE MARCH 7, 2018  
 OPERATORS WELL NO. YOUNG #1H  
 API WELL NO. 47-015-  
 STATE COUNTY PERMIT 0350SH

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. W2537 (BK86-62)  
 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  GAS  LIQUID INJECTION  WASTE DISPOSAL  IF "GAS" PRODUCTION  STORAGE  DEEP  SHALLOW

LOCATION :  
 ELEVATION 1,186' WATERSHED PORTER CREEK  
 DISTRICT UNION COUNTY CLAY QUADRANGLE ELKHURST 7.5'

SURFACE OWNER CLEVELAND MCCLURE ACREAGE 39±  
 ROYALTY OWNER CHARLES YOUNG LEASE ACREAGE 124.19±  
 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- 2150' MD-4150'

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