

05/17/2019



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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, May 17, 2019  
PERMIT MODIFICATION APPROVAL  
Horizontal / New Drill

DALE, DAVID DBA DD OIL COMPANY  
P. O. BOX 406

SPENCER, WV 252760406

Re: Permit Modification Approval for DRILCO 2018 1H  
47-085-10386-00-00

**CHANGE TARGET FORMATION FROM INJUN SANDSTONE TO WEIR SANDSTONE  
AND MODIFY THE CASING PROGRAM TO ACCOMODATE THIS CHANGE**

DALE, DAVID DBA DD OIL COMPANY

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

If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin  
Chief

Operator's Well Number: DRILCO 2018 1H  
Farm Name: SAMUEL & BARBARA KENSLER  
U.S. WELL NUMBER: 47-085-10386-00-00  
Horizontal New Drill  
Date Modification Issued: 05/17/2019

Promoting a healthy environment.

WV Department of Environmental Protection  
STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

1) Well Operator: DD OIL CO.      1H      RITCHIE      UNION      BURNTHOUSE  
DALE. DAVID DD OIL CO.      Operator ID      County      District      Quadrangle

2) Operator's Well Number: DRILCO 2018 1H      3) Elevation: 1245

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

5) Proposed Target Formation(s): WEIR SANDSTONE      Proposed Target Depth: 2450  
6) Proposed Total Depth: 5450 (2450 + 3000h) Feet      Formation at Proposed Total Depth: WEIR 2,450  
7) Approximate fresh water strata depths: NONE  
8) Approximate salt water depths: NONE

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

*Michael*  
*5/16/19*

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)  
BUILD WELL LOCATION AND DRILL 2,450 FT TO WEIR SANDSTONE.  
STARTING AT 1,700 FT., EMPLOY DIRECTIONAL DRILLING TECHNIQUES TO ALLOW FOR A 3,000 FOOT  
LATERAL DRILL IN THE WEIR FORMATION WITH ESTIMATED 10-STAGE FRAC

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	20	H40	94LB	40FT	40FT	CTS
Fresh Water	13 3/8	J55	54.5	400FT	400FT	CTS
Coal	NONE					
Intermediate	9 5/8	H40	36LB	1700FT	1700FT	CTS
Production	4 1/2	N80	13.3 LB	5450FT	5450FT	CTS
Tubing	NONE					
Liners	NONE					

Packers: Kind: NONE  
SIZES: NONE  
Depths Set NONE

**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
DRIICO OIL & GAS CORP (Hardman Drilling purchased by DRILCO OIL & GAS CORP) March 1995 Ritchie County	DD OIL CO PO BOX 406 SPENCER, WV 25276  (see attached Farm Out Assignment)	1/8	BOOK 122 PAGE 50

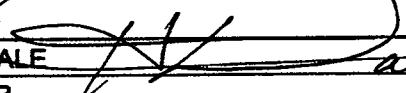
**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

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:

DD OIL CO  
  
 HUGH D DALE  
 OPERATOR

MAY 16 2019

AND ASSOCIATED OIL AND GAS INTERESTS

WV Department of Environmental Protection

State of West Virginia

County of RITCHIE

Record and Return to:

DRILCO OIL & GAS, INC  
P.O. Box 385,  
Grantsville, West Virginia, 26147

KNOW ALL MEN BY THESE PRESENTS THAT, the undersigned, **DRILCO OIL & GAS INCORPORATED** a West Virginia corporation, whose chief executive offices are located at 2021 Calhoun Hwy, Grantsville, West Virginia 26147, hereinafter referred to as "**Assignor**", for and in consideration of Ten Dollars (\$10.00) in hand paid and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, does hereby grant, convey, sell, assign, transfer and set over unto Drilco 2018 1H Drilling Program LLC, a West Virginia limited liability corporation, with its offices located at 2021 Calhoun Hwy, Grantsville, West Virginia 26147, ("**Assignee**"), the Property as defined below, as the Property covers and pertains directly to the WELLBORE, AS DEFINED BELOW, AND LAID OUT IN **DRILCO OIL & GAS INCORPORATED**, ONLY OF THE [INSERT WELL NAME] HARDMAN DRILLING (PURCHASED BY DRILCO OIL & GAS) Well, (the "**Well**") from a surface locatn on [INSERT SURFACE LOCATION] DRILCO OIL & GAS leased to Assignor by [INSERT MINERAL NAME] HARDMAN DRILLING (PURCHASED BY DRILCO OIL & GAS) under the lease(s) described below (collectively, the "**Lease(s)**"), and all production of oil, gas, and other minerals from the Wellbore, penetrated by the drill bit for this program, EXCEPTING AND RESERVING unto Assignor all of Assignor's right, title, and interest in the property otherwise relating to or in any manner pertaining to the lands which are the subject of the oil and gas Leases.

The term "**Property**" means all rights, title, and oil and gas leaseholds and interests in and to: (a) the wellbore of the well from the surface to its actual depth, *provided that*, such total depth shall not be deeper than 6,000 feet from the surface (the "**Wellbore**"); and (b) the exclusive right to penetrate into the subsurface with the wellbore in search of oil, natural gas, and other petroleum hydrocarbons; (c) all of the oil, gas, and/or minerals produced from the well so long as its total depth is no deeper than 6,000 feet from the surface including with limitation presently existing oil, and casinghead gas, natural gas and /or other hydrocarbons in the wellbore; TO HAVE AND TO HOLD the same unto the same terms and provisions contained in said leases, contracts and assignments relating thereto and to all laws, rules, and regulations of all governmental bodies and agencies having jurisdiction thereof, all of which Assignees herby assume insofar as same are applicable to the interest herby assigned, The term "**Leases(s)**" means DRILCO OIL & GAS CORP/ADA HALL LEASE.

This Assignment is being entered into and pursuant to and is subject to the terms, conditions, and reservations set forth in that certain **DRILCO OIL & GAS INCORPORATED** by and between Assignor and Assignee dated as of [INSERT AGREEMENT DATE] MARCH 1995. This Assignment is made without warranty of title. The provisions hereof shall be construed as covenants running with the respective Leases and rights assigned hereunder, and shall be binding upon the respective successors and assigns of Assignor and Assignee.

ASSIGNOR: **DRILCO OIL & GAS, INC**  
Federal ID #: 83-2371247

Physical Address: 2021 Calhoun Hwy, Grantsville WV 26147

By: [Signature]  
Hugh D. Dale, Managing Partner

ASSIGNEE:

Address:

DD OIL COMPANY  
PO BOX 406  
SPENCER, WV 25276

NOTARY ACKNOWLEDGEMENT

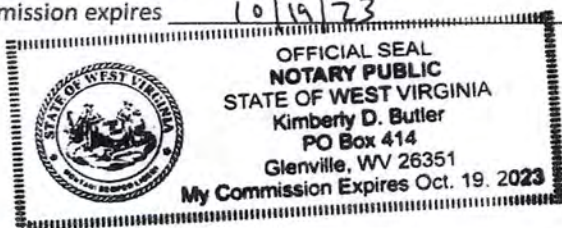
State of WV, COUNTY OF Calhoun

The foregoing instrument was acknowledged before me on 5-15-19 (date)

by Kimberly D Butler (name Notary Public)

Printed name Kimberly D. Butler

My commission expires 10/19/23



Federal ID/SSN : 55-0765849

By: [Signature]

DAVID DALE  
Name (please print)

# DRILCO 2018 #1H PAD 1

RECEIVED  
Office of Oil and Gas

39°07'30"

MAY 17 2019

WV Department of  
Environmental Protection



05/17/2019

**DRILCO 2018 #1H PAD 1 SURFACE HOLE**

STATE PLANE COORDINATES (NORTH ZONE-NAD 27)  
(N) 216263  
(E) 1609283

L & L DECIMAL (NAD 27)  
39.08555  
80.87646

UTM (NAD 83) METERS  
4326287  
510699

**DRILCO 2018 #1H PAD 1 LANDING POINT**

STATE PLANE COORDINATES (NORTH ZONE-NAD 27)  
(N) 215863  
(E) 1609730

L & L DECIMAL (NAD 27)  
39.08447  
80.87486

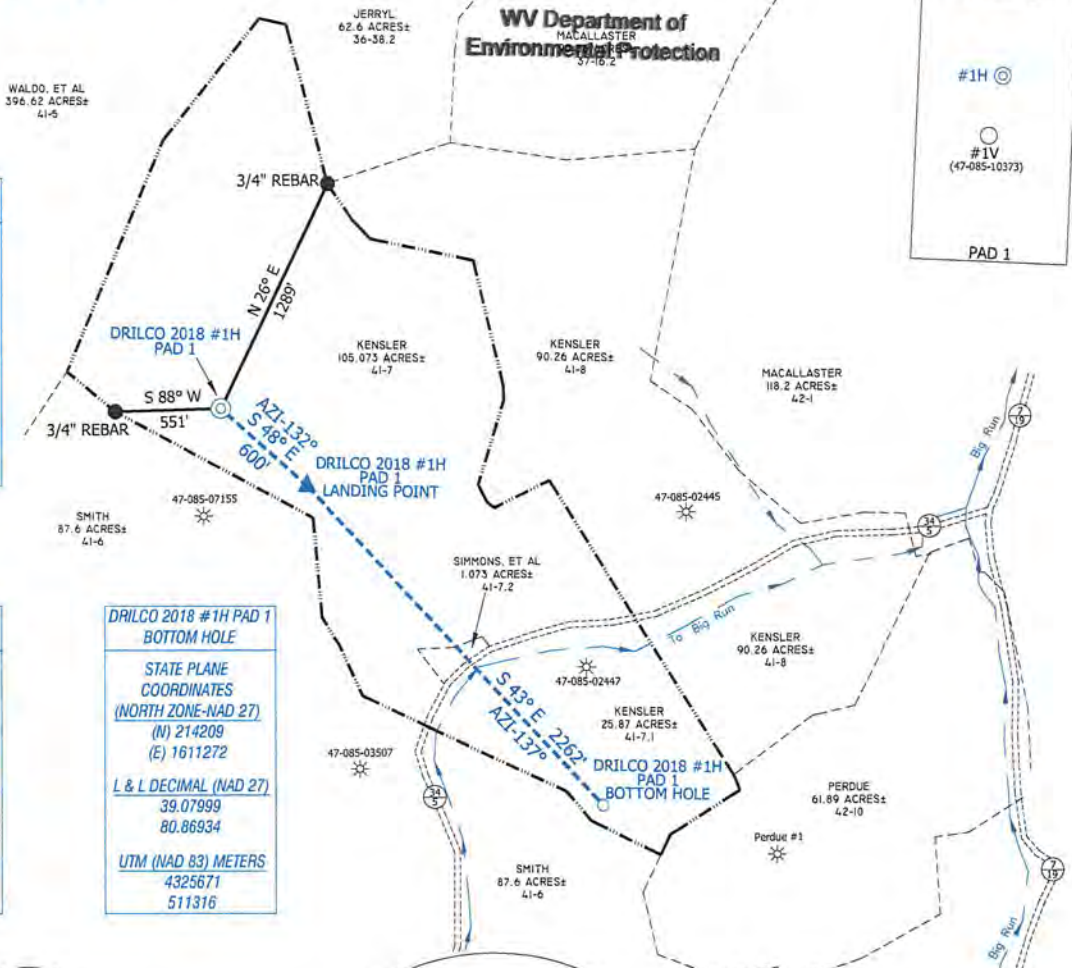
UTM (NAD 83) METERS  
4326167  
510838

**DRILCO 2018 #1H PAD 1 BOTTOM HOLE**

STATE PLANE COORDINATES (NORTH ZONE-NAD 27)  
(N) 214209  
(E) 1611272

L & L DECIMAL (NAD 27)  
39.07999  
80.86934

UTM (NAD 83) METERS  
4325671  
511316

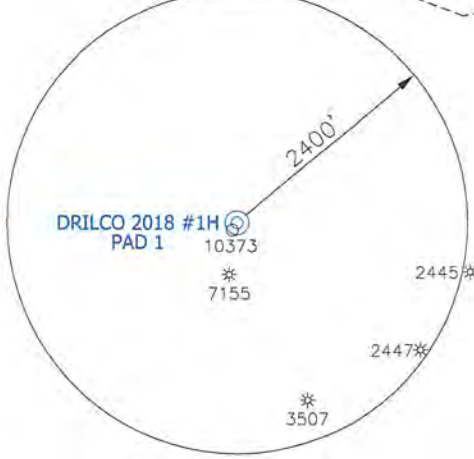
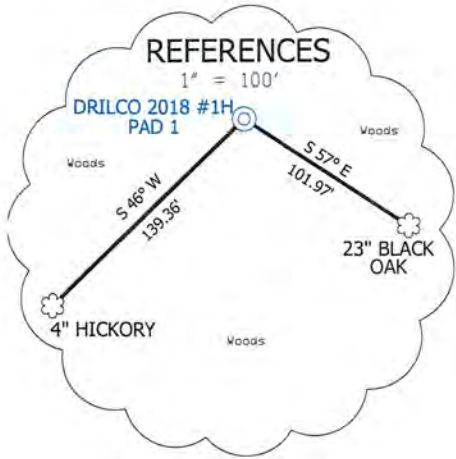


NORTH

LONGITUDE 80°52'30"

14,320'

LAT. 39°05'08.0"



### NOTES ON SURVEY

1. NO DWELLINGS WITHIN 625' WERE FOUND.
2. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV NORTH ZONE NAD '27.
3. WELL LAT./LONG. ESTABLISHED BY DGPS(SUB-METER GRADE).
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF RITCHIE COUNTY IN JUNE, 2018 AND INFORMATION PROVIDED BY D D OIL COMPANY.
5. 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



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

DATE MAY 14, 20 19  
 OPERATORS WELL NO. DRILCO 2018 #1H PAD 1  
 API WELL NO. 47-085-10386H  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. W2606 (BK91-13)  
 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  GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_ IF "GAS" PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW

LOCATION :  
 ELEVATION 1,245' WATERSHED BIG RUN  
 DISTRICT UNION COUNTY RITCHIE QUADRANGLE BURNT HOUSE 7.5'

SURFACE OWNER SAMUEL & BARBARA KENSLER ACREAGE 105.073±  
 ROYALTY OWNER J.A. HALL HEIRS, et al LEASE ACREAGE 133±  
 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 WEIR  
 ESTIMATED DEPTH TVD-2,450' MD-5,320'

WELL OPERATOR D D OIL COMPANY DESIGNATED AGENT HUGH DALE  
 ADDRESS P.O. BOX 385 GRANTSVILLE, WV 26147 ADDRESS P.O. BOX 385 GRANTSVILLE, WV 26147

COUNTY NAME

PERMIT

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: DD OIL CO.

1H	RITCHIE	UNION	BURNT HOUSE
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DALE, DAVID DD OIL CO. Operator ID County District Quadrangle

2) Operator's Well Number: DRILCO 2018 1H 3) Elevation: 1245

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

5) Proposed Target Formation(s): BIG INJUN SAND Proposed Target Depth: 2200

6) Proposed Total Depth: 5200 (2200V + 3000H) Feet Formation at Proposed Total Depth: INJUN SAND 2200

7) Approximate fresh water strata depths: NONE

8) Approximate salt water depths: NONE

9) Approximate coal seam depths: NONE

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)

BUILD WELL LOCATION AND DRILL 2,200 FT TO INJUN SAND.

*SEE ADDENDUM 1(12A)*

STARTING AT 1600 FT, EMPLOY A 10-DEGREE HORIZONTAL CURVE, TO 65 DEGREES.

RECEIVED  
Office of Oil and Gas

THEN DRILL HORIZONTAL IN INJUN SAND FOR UP TO 3,000 WITH A 10-STAGE FRAC.

JAN 16 2019

13) **CASING AND TUBING PROGRAM**

WV Department of  
Environmental Protection

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	20	H40	94 LB	40 FT	40 FT	CTS
Fresh Water	13 3/8	J55	54.5 LB	400 FT	400 FT	CTS
Coal	NONE					
Intermediate	9 5/8	H40	36 LB	1600 FT	1600 FT	CTS
Production	4 1/2	N80	13.3 LB	5200 FT	5200 FT	CTS
Tubing	NONE					
Liners	NONE					

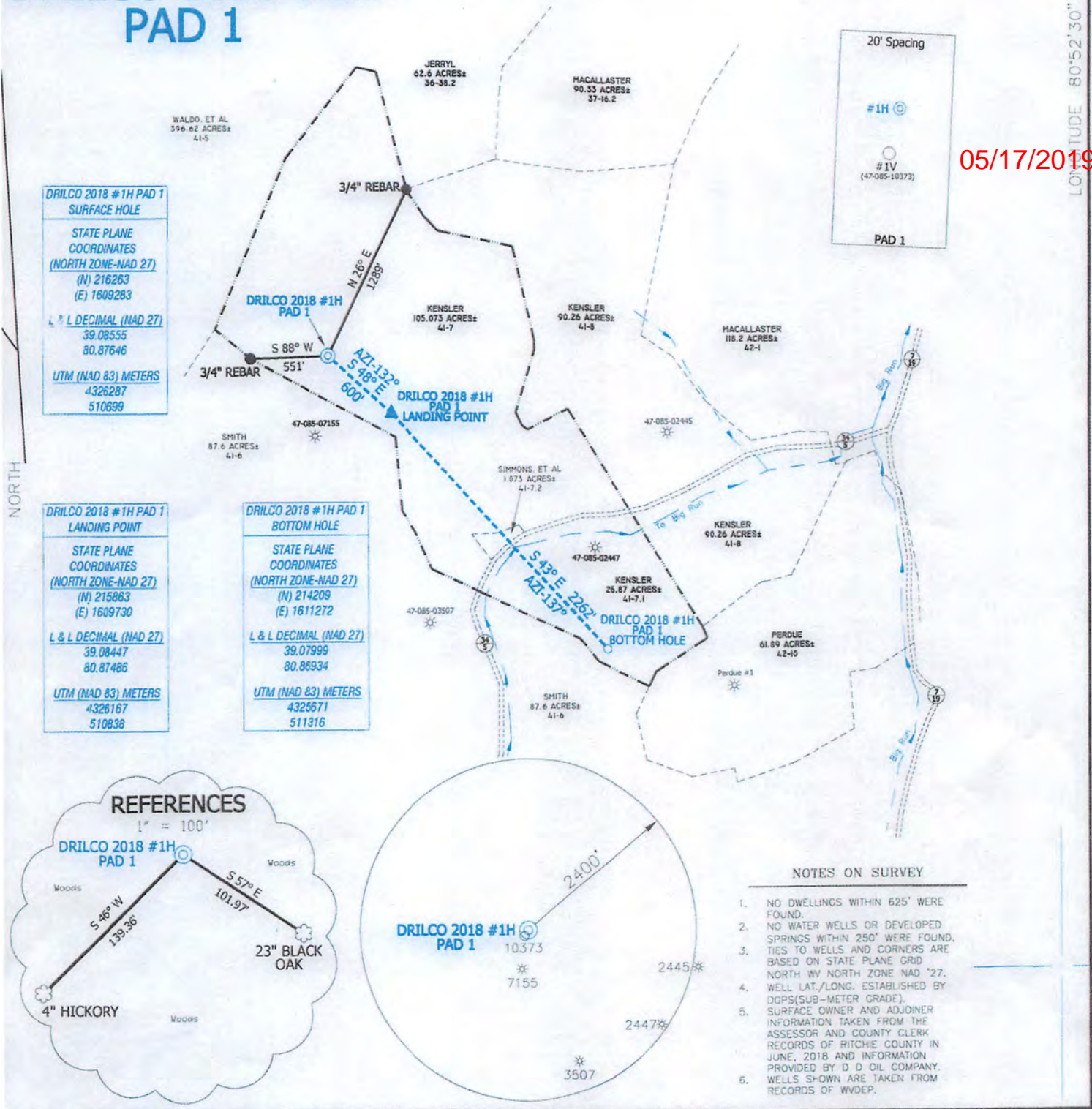
Packers: Kind: NONE  
Sizes: NONE  
Depths Set NONE

# DRILCO 2018 #1H PAD 1

LONGITUDE 80°52'30"

14,320

LAT. 39°05'08.0"



05/17/2019

**DRILCO 2018 #1H PAD 1 SURFACE HOLE**

STATE PLANE COORDINATES (NORTH ZONE-NAD 27)  
(N) 216263  
(E) 1609283

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39.08555  
80.87646

UTM (NAD 83) METERS  
4326287  
510699

**DRILCO 2018 #1H PAD 1 LANDING POINT**

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(N) 215883  
(E) 1609730

L & L DECIMAL (NAD 27)  
39.08447  
80.87486

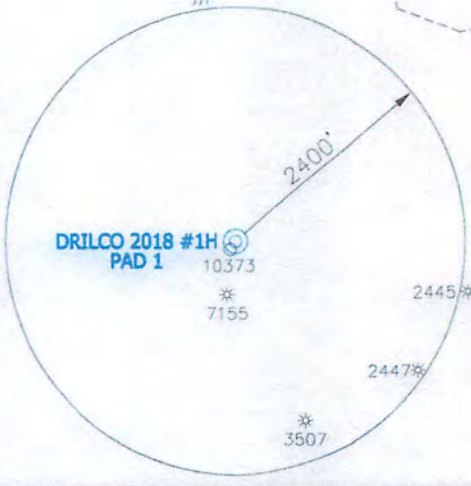
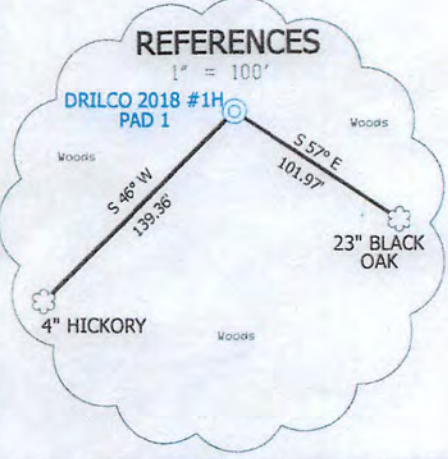
UTM (NAD 83) METERS  
4326167  
510838

**DRILCO 2018 #1H PAD 1 BOTTOM HOLE**

STATE PLANE COORDINATES (NORTH ZONE-NAD 27)  
(N) 214209  
(E) 1611272

L & L DECIMAL (NAD 27)  
39.07999  
80.86934

UTM (NAD 83) METERS  
4325671  
511316



- NOTES ON SURVEY**
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  2. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WY NORTH ZONE NAD '27.
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  4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF RITCHIE COUNTY IN JUNE, 2018 AND INFORMATION PROVIDED BY D D OIL COMPANY.
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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE DECEMBER 26, 20 18

OPERATORS WELL NO. DRILCO 2018 #1H PAD 1

API WELL NO. 47-085-16386H

STATE COUNTY PERMIT

P.S. 834

*Doyle Hupp, Jr.*

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

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. W2606 (BK91-13)

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 1,245' WATERSHED BIG RUN

DISTRICT UNION COUNTY RITCHIE QUADRANGLE BURNT HOUSE 7.5'

SURFACE OWNER SAMUEL & BARBARA KENSLE ACREAGE 105.073±

ROYALTY OWNER J.A. HALL HEIRS, et al LEASE ACREAGE 133±

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-2000' MD-4,870'

WELL OPERATOR D. D OIL COMPANY DESIGNATED AGENT HUGH DALE

ADDRESS P.O. BOX 385 GRANTSVILLE, WV 26147 ADDRESS P.O. BOX 385 GRANTSVILLE, WV 26147

COUNTY NAME PERMIT