

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL & GAS MANAGEMENT**

**PERMIT APPLICATION TO DRILL AND OPERATE AN UNCONVENTIONAL WELL**

| APPLICANT INFORMATION                                 |   |                          |                       |                     |
|---|---|--------------------------|-----------------------|---------------------|
| Applicant (Operator) Name<br>RICE DRILLING B LLC      | Legal Name<br>RICE DRILLING B LLC                                     | DEP Client ID#<br>268470 | Phone<br>724-271-7200 | FAX<br>724-749-5581 |
| Mailing Address (Street or PO Box)<br>2200 RICE DRIVE | Address 2   |                          |                       |                     |
| City<br>CANONSBURG                                    | State<br>PA   | Zip +4<br>15317          |                       |                     |
| Email Address<br>erin.spine@riceenergy.com            | 24/7 Emergency Contact Name / Number<br>MIKE LAUDERBAUGH 724-809-9897 |                          |                       |                     |

| WELL INFORMATION                     |                                |  |                                  |
|--------------------------------------|--------------------------------|--|----------------------------------|
| (Well) Farm Name<br>DRAGON CHAN      |                                |  |                                  |
| Well #<br>4                          | Serial #                       | Project # (from DEP)   |                                  |
| County<br>GREENE                     | Municipality<br>SPRINGHILL TWP | 911 Address of Well site (or nearest intersection)<br>641 MORFORD ROAD ALEPPO PA 15310 |                                  |
| Is this an Unconventional well?<br>Y | Is this a Coal well?<br>Y      | Bond Agreement ID<br>11936 - BLANKET (\$459,000)                                       | Well Deepest Point (TVD)<br>7680 |

| WELLBORE INFORMATION |  |                         |   |
|----------------------|--|-------------------------|---|
| Wellbore Number<br>1 | Wellbore Name<br>WELLBORE SURFACE HOLE<br>LOCATION | Type of Wellbore<br>GAS | Wellbore Configuration<br>Horizontal Well |

| WELL PAD INFORMATION                      |                         |   |                                |
|---|-------------------------|---|--------------------------------|
| Well Pad Name<br>DRAGON CHAN              |                         |   |                                |
| Is this well covered under an ESCGP?<br>Y | ESCGP Number<br>1162505 | Will this well be built on a well pad?<br>Y | Well Pad<br>154227-DRAGON CHAN |

| COORDINATION QUESTIONS  |   |
|---|---|
| Will the well be subject to the Oil and Gas Conservation Law?   | N |
| Will either the edge of the disturbed area of any portion of the well site of the unconventional well be within 100 feet, or the vertical well bore be within 300 feet, from the edge of any solid blue lined stream, spring or body of water identified on the most current 7 1/2 topographic quadrangle map or wetland greater than one acre in size or in a wetland? | N |
| Will the well penetrate or be within 3,000 feet of an active gas storage reservoir boundary?  | N |
| Is the proposed well location within the permitted perimeter of an active, abandoned or proposed landfill?  | N |
| Will the vertical well bore of the unconventional well be drilled within 500 feet from any existing building or an existing water supply?"  | N |
| Will the vertical well bore of the unconventional well be drilled within 1,000 feet from any existing water well, surface water intake, reservoir or other water supply extraction point used by the water purveyor?  | N |
| Is this permit application for a well that will be drilled on an existing well site that has an active permitted well, or currently valid permit on this well site, for a well that was permitted on or before April 16, 2012?  | N |
| Will the well be located where it may impact a public resource as outlined in the 'Coordination of a Well Location with Public Resources' form 5500 PM-OG0076?  | N |
| Will any portion of the well site be located within a Special Protection watershed?   | N |
| Is this well part of a development which disturbs more than 5 acres?  | Y |
| Will the well or well site be located within a defined 100 year floodplain or where the floodplain is undefined, within 100 feet of the top of the bank of a perennial stream or within 50 feet of the top of the bank of an intermittent stream?   | N |
| Is the well to be located within a 1-mile radius of a well drilled to or through the same formation where hydrogen sulfide (H2S) has been found while drilling?   | N |
| Did you have a PNDI hit for the PA Department of Conservation and Natural Resources Bureaus of Forestry and Topographic and Geologic Survey?  | N |
| Did you have a PNDI hit for the PA Fish and Boat Commission?  | N |
| Did you have a PNDI hit for the PA Game Commission?   | N |
| Did you have a PNDI hit for the U.S. Fish and Wildlife Service?   | N |

| COAL MODULE  |   |
|--|---|
| Will the well penetrate a workable coal seam?              | Y |
| Have any coal rights been severed from the surface estate? | Y |



**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL & GAS MANAGEMENT

**PERMIT APPLICATION TO DRILL AND OPERATE AN UNCONVENTIONAL WELL**

|   |    |
|---|----|
| If the coal rights been severed from the surface estate, have the owners of the workable and unworkable coal seams been notified?   | Y  |
| Is this a "non-conservation" gas well?  | Y  |
| If the well will penetrate a workable coal seam, and the well is a 'non-conservation' gas well, does the location comply with the distance requirements of Section 7 of the Coal and Gas Resource Coordination Act (at least 1,000 feet from all existing wells) and, if part of a well cluster, at least 2,000 feet from any other existing cluster, as measured from the center of the well bore of the nearest well? | Y  |
| Will the well be part of a Well Cluster which is an area within a well pad intended to host multiple horizontal wells and which comprises an area no greater than 5,000 square feet?  | Y  |
| Will this well be part of a Well Cluster that already has an approved OG-57 waiver?   | N  |
| Will this well be drilled into solid coal or into an open underground void?   | SC |
| Will the well be drilled through an operating coal mine, or within 1,000 feet of the boundary?  | N  |
| Has the surface landowner been notified and provided a copy of the Landowner Notification of Right to Participate in Alternative Dispute Resolution to Coal Bed Methane Wells (form 5500-FM-OG0053)?  | N  |

PERMIT APPLICATION TO DRILL AND OPERATE AN UNCONVENTIONAL WELL

| WELLBORE SURFACE-HOLE LOCATION |   |
|--------------------------------|---|
| Surface elevation (in ft.)     | 1485  |
| Latitude/Longitude             | 39 47 14.1800 -80 30 34.8100                  |
| Metadata Method                | GPS CARRIER PHASE KINEMATIC RELATIVE POSITION |
| Accuracy (in ft.)              | 3   |
| Datum                          | North American Datum of 1983                  |
| Reference Elevation            | 1485  |
| USGS Map Name                  | CAMERON WV                                    |
| USGS Map Section #             | 9   |
| Offset South (in feet)         | 1636  |
| Offset West (in feet)          | 2766  |

| WELLBORE LOCATION INFORMATION                        |                              |
|--|------------------------------|
| WELLBORE SURFACE HOLE LOCATION                       |                              |
| Type of Wellbore                                     | GAS                          |
| Wellbore Configuration                               | Horizontal Well              |
| Target Formation                                     | MARCELLUS FORMATION(MARCF)   |
| Producing Formation                                  | MARCELLUS FORMATION(MARCF)   |
| Oldest Formation Penetrated                          | MARCELLUS FORMATION(MARCF)   |
| Wellbore Origin Point Lat/Long                       | 39 47 14.1800 -80 30 34.8100 |
| Wellbore Origin Point True Vertical Depth (TVD)      | 0                            |
| Wellbore Origin Point Total Measured Distance (TMD)  | 0                            |
| Wellbore Deepest Point Lat/Long                      | 39 46 00.5700 -80 30 12.8000 |
| Wellbore Deepest Point True Vertical Depth (TVD)     | 7680                         |
| Wellbore Deepest Point Total Measured Distance (TMD) | 16096                        |
| Bottom Hole Lat/Long                                 | 39 46 00.5700 -80 30 12.8000 |
| Bottom Hole True Vertical Depth (TVD)                | 7680                         |
| Bottom Hole Total Measured Distance (TMD)            | 16096                        |

| WELL PAD LOCATION INFORMATION                                    |                              |                                       |
|--|------------------------------|---------------------------------------|
| Well Pad Corner 1 Lat/Long                                       | 39 47 15.5375 -80 30 31.0823 |                                       |
| Well Pad Corner 2 Lat/Long                                       | 39 47 17.0715 -80 30 32.8816 |                                       |
| Well Pad Corner 3 Lat/Long                                       | 39 47 12.5222 -80 30 38.5249 |                                       |
| Well Pad Corner 4 Lat/Long                                       | 39 47 11.5585 -80 30 34.2701 |                                       |
| Well Site GPS Location Lat/Long                                  | 39 47 33.3900 -80 30 09.2800 |                                       |
| Well Site Access Road GPS Lat/Long                               | 39 47 43.3600 -80 29 08.5800 |                                       |
| Metadata Method<br>GPS CARRIER PHASE KINEMATIC RELATIVE POSITION | Accuracy (in ft.)<br>±5      | Datum<br>North American Datum of 1983 |

| SUBMISSION INFORMATION   |                        |
|--|------------------------|
| Pursuant to the Pennsylvania Electronic Transactions Act - Act 69, you are about to engage in an electronic transaction with the Commonwealth of Pennsylvania. You are submitting official information. Any false statement is subject to substantial civil and criminal penalties, including 18 P.S. section 4904 (relating to unsworn falsification to authorities). |                        |
| I hereby certify that, for all interested parties identified in this application for which written consent or an "Affidavit of Non-Delivery of Certified Mail" has not been uploaded, copies of the well plat have been sent via certified mail and I have received a return receipt verifying delivery.   |                        |
| Submitted By   | ERIN SPINE             |
| Document Generated   | 07/11/2017 10:07:47 AM |

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL & GAS MANAGEMENT**

**PERMIT APPLICATION TO DRILL AND OPERATE AN UNCONVENTIONAL WELL**

| INTERESTED PARTIES   |   |   |  |
|--|---|---|--|
| Interested Party<br><b>ALEPPO TOWNSHIP</b>   | Address<br>815 ALEPPO ROAD<br>NEW<br>FREEPORT, PA 15352           | Notifications<br>MU - Municipalities  |  |
| Municipality<br><b>ALEPPO TOWNSHIP</b>   | Notified<br>MAIL  | Certified Mail Sent Date<br>01/30/2017  | Certified Mail Delivery Date<br>02/09/2017 |
| Address Affidavit<br>N   | Written Consent<br>N  | Notification Acknowledgement Date   | Uploaded Files                             |
| Water Source Locations   |   |   |  |
| Interested Party<br><b>CONTURA COAL RESOURCES LLC</b>  | Address<br>158 PORTAL ROAD<br>PO BOX 1020<br>WAYNESBURG, PA 15370 | Notifications<br>CO - Coal Owner  |  |
| Municipality   | Notified<br>MAIL  | Certified Mail Sent Date<br>01/30/2017  | Certified Mail Delivery Date<br>02/02/2017 |
| Address Affidavit<br>N   | Written Consent<br>N  | Notification Acknowledgement Date   | Uploaded Files                             |
| Water Source Locations   |   |   |  |
| Interested Party<br><b>DANIEL E. WEYRICK</b>   | Address<br>RD 3 BOX 161-D<br>CAMERON, WV 26033                    | Notifications<br>WPU - Surface Landowners and Water Purveyors with water supplies less than 3000 ft |  |
| Municipality   | Notified<br>MAIL  | Certified Mail Sent Date<br>01/30/2017  | Certified Mail Delivery Date<br>02/02/2017 |
| Address Affidavit<br>N   | Written Consent<br>N  | Notification Acknowledgement Date   | Uploaded Files                             |
| Water Source Locations<br>39 47 09.0000 -80 31 10.9900 Water Well - Private Supply   |   |   |  |
| Interested Party<br><b>FREEPORT TOWNSHIP</b>   | Address<br>773 GOLDEN OAKS<br>ROAD<br>NEW<br>FREEPORT, PA 15352   | Notifications<br>MU - Municipalities  |  |
| Municipality<br><b>FREEPORT TOWNSHIP</b>   | Notified<br>MAIL  | Certified Mail Sent Date<br>01/30/2017  | Certified Mail Delivery Date<br>02/02/2017 |
| Address Affidavit<br>N   | Written Consent<br>N  | Notification Acknowledgement Date   | Uploaded Files                             |
| Water Source Locations   |   |   |  |
| Interested Party<br><b>GILMORE TOWNSHIP</b>  | Address<br>181 HERO ROAD<br>NEW<br>FREEPORT, PA 15352             | Notifications<br>MU - Municipalities  |  |
| Municipality<br><b>GILMORE TOWNSHIP</b>  | Notified<br>MAIL  | Certified Mail Sent Date<br>01/30/2017  | Certified Mail Delivery Date<br>02/02/2017 |
| Address Affidavit<br>N   | Written Consent<br>N  | Notification Acknowledgement Date   | Uploaded Files                             |
| Water Source Locations   |   |   |  |
| Interested Party<br><b>GREG MEREDITH ET UX</b>   | Address<br>11 MILWEED PLACE<br>PATASKALA, OH 43062                | Notifications<br>WPU - Surface Landowners and Water Purveyors with water supplies less than 3000 ft |  |
| Municipality   | Notified<br>MAIL  | Certified Mail Sent Date<br>01/30/2017  | Certified Mail Delivery Date<br>02/03/2017 |
| Address Affidavit<br>N   | Written Consent<br>N  | Notification Acknowledgement Date   | Uploaded Files                             |
| Water Source Locations<br>39 47 02.5000 -80 30 13.8800 Water Well - Private Supply<br>39 47 03.8000 -80 30 11.0600 Water Well - Private Supply |   |   |  |
| Interested Party<br><b>HELEN SIMMS</b>   | Address<br>39325 FRENCH CREEK<br>ROAD<br>AVON, OH 44011           | Notifications<br>WPU - Surface Landowners and Water Purveyors with water supplies less than 3000 ft |  |
| Municipality   | Notified<br>MAIL  | Certified Mail Sent Date<br>01/30/2017  | Certified Mail Delivery Date<br>02/03/2017 |
| Address Affidavit<br>N   | Written Consent<br>N  | Notification Acknowledgement Date   | Uploaded Files                             |
| Water Source Locations<br>39 47 44.7100 -80 30 36.7300 Surface Water Body - Private Supply   |   |   |  |
| Interested Party<br><b>JACK L. BEUTH JR ET</b>   | Address<br>1000 W INGOMAR ROAD                                    | Notifications<br>WPU - Surface Landowners and Water Purveyors with water supplies less than 3000 ft |  |

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL & GAS MANAGEMENT**

**PERMIT APPLICATION TO DRILL AND OPERATE AN UNCONVENTIONAL WELL**

|  |   |   |  |
|--|---|---|--|
| UX   | PITTSBURGH, PA 15237  |   |  |
| Municipality   | Notified<br>MAIL  | Certified Mail Sent Date<br>01/30/2017  | Certified Mail Delivery Date<br>02/04/2017 |
| Address Affidavit<br>N   | Written Consent<br>N  | Notification Acknowledgement Date   | Uploaded Files                             |
| Water Source Locations<br>39 47 35.5900 -80 30 42.5800 Water Well - Private Supply   |   |   |  |
| Interested Party<br>JACKSON TOWNSHIP   | Address<br>104 TUNNEL ROAD<br>HOLBROOK, PA 15341                  | Notifications<br>MU - Municipalities  |  |
| Municipality<br>JACKSON TOWNSHIP   | Notified<br>MAIL  | Certified Mail Sent Date<br>01/30/2017  | Certified Mail Delivery Date<br>02/02/2017 |
| Address Affidavit<br>N   | Written Consent<br>N  | Notification Acknowledgement Date   | Uploaded Files                             |
| Water Source Locations   |   |   |  |
| Interested Party<br>JERRY L. NEELY   | Address<br>125 HARTS RUN ROAD<br>ALEPPO, PA 15310                 | Notifications<br>WPU - Surface Landowners and Water Purveyors with water supplies less than 3000 ft |  |
| Municipality   | Notified<br>MAIL  | Certified Mail Sent Date<br>01/30/2017  | Certified Mail Delivery Date<br>02/03/2017 |
| Address Affidavit<br>N   | Written Consent<br>N  | Notification Acknowledgement Date   | Uploaded Files                             |
| Water Source Locations<br>39 47 15.7300 -80 31 06.9500 Surface Water Body - Private Supply<br>39 47 16.5900 -80 31 07.3200 Water Well - Private Supply<br>39 47 17.0400 -80 31 07.3600 Water Well - Private Supply<br>39 47 24.5000 -80 31 01.1800 Surface Water Body - Private Supply |   |   |  |
| Interested Party<br>PHILIP A. EVANS  | Address<br>462 WAYNE BROWN<br>ROAD<br>BRUCETON<br>MILLS, WV 26525 | Notifications<br>WPU - Surface Landowners and Water Purveyors with water supplies less than 3000 ft |  |
| Municipality   | Notified<br>MAIL  | Certified Mail Sent Date<br>01/30/2017  | Certified Mail Delivery Date<br>02/02/2017 |
| Address Affidavit<br>N   | Written Consent<br>N  | Notification Acknowledgement Date   | Uploaded Files                             |
| Water Source Locations<br>39 46 43.1800 -80 30 38.7400 Water Well - Private Supply   |   |   |  |
| Interested Party<br>ROBERT C. EVANS JR &<br>PHILIP A EVANS   | Address<br>80 WILLOW DRIVE<br>WASHINGTON, PA 15301                | Notifications<br>SL - Surface Landowner<br>CO - Coal Owner<br>WPWCU - Water Purveyor within 1000 ft |  |
| Municipality   | Notified<br>MAIL  | Certified Mail Sent Date<br>01/30/2017  | Certified Mail Delivery Date<br>02/03/2017 |
| Address Affidavit<br>N   | Written Consent<br>N  | Notification Acknowledgement Date   | Uploaded Files                             |
| Water Source Locations<br>39 46 47.8600 -80 30 51.9700 Water Well - Private Supply<br>39 46 51.6400 -80 31 01.4500 Water Well - Private Supply<br>39 47 17.9900 -80 30 42.3900 Surface Water Body - Private Supply<br>39 47 20.2800 -80 30 42.6700 Water Well - Private Supply         |   |   |  |
| Interested Party<br>SPRINGHILL TOWNSHIP  | Address<br>268 WINDY GAP ROAD<br>ALEPPO, PA 15310                 | Notifications<br>MU - Municipalities  |  |
| Municipality<br>SPRINGHILL TOWNSHIP  | Notified<br>MAIL  | Certified Mail Sent Date<br>01/30/2017  | Certified Mail Delivery Date<br>02/02/2017 |
| Address Affidavit<br>N   | Written Consent<br>N  | Notification Acknowledgement Date   | Uploaded Files                             |
| Water Source Locations   |   |   |  |

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL & GAS MANAGEMENT**

**PERMIT APPLICATION TO DRILL AND OPERATE AN UNCONVENTIONAL WELL**

| UPLOADED FILES   |   |                                |
|--|---|--------------------------------|
| Attachment<br>Location Plat  | File Name<br>Dragon Chan 4_Final Sealed Dwg<br>7.10.2017.dwg  | File Upload Date<br>07/10/2017 |
| Cryptographic Hash Value of File (SHA-512)<br>0C72A1E4C3F639CE66717308D7D61BFC86CBAC39C1775678303D16B596086AB9DD294B7DF1A9B685DAAD220C0970940B4A9A27B5681E71792D339B3DCC38FF82 |   |                                |
| Attachment<br>Pennsylvania Natural Diversity Inventory Form  | File Name<br>Dragon Chan PNDI 10.20.2016.pdf  | File Upload Date<br>02/08/2017 |
| Cryptographic Hash Value of File (SHA-512)<br>B2948DFB0E970D6021DF53F463CD4E46CCE0A6F18DE3D56AA3ACADD221963D6F7AACC780C67F5D05B9B06D19913521F38B0F8417237379E5ED184A7B4F65E726 |   |                                |
| Attachment<br>Operator Ownership and Control Information   | File Name<br>SIGNED RDB Oil and Gas Operator<br>Ownership and Control<br>Information_8000-FM-OOGM0118.pdf | File Upload Date<br>02/10/2017 |
| Cryptographic Hash Value of File (SHA-512)<br>7AA470855838797ACAA716F7AE61AD34A7C1B4C0CD6BD3833BA8B9B9AF94B533F6A0B201E5B9C885070BAFB40044D035BFFB1E1B65575A59565F4EFDAC2D8C95 |   |                                |
| Attachment<br>Well Cross-Section Diagram   | File Name<br>Dragon Chan 4_Cross Section Diagram.pdf  | File Upload Date<br>02/10/2017 |
| Cryptographic Hash Value of File (SHA-512)<br>3B8E8A367E84F2F93140503271409A6E1A53F1440BACA027312E87EFD58352F1F6DAA1638CE670ECD6057F6CEC8DED7339139CD498C837BC7204858FAC0FACAD |   |                                |