

Wells permitted pursuant to District Rule 8.3(j) - November/December, 2016					
Permit #	Permittee	Aquifer	Permitted Amt.	Type of Use	Date
BVOP-0262	Tanos Exploration (Smitherman 1)	Queen City	1.10	Industrial	11/22/2016
BVOP-0269	Hawkwood Energy (McBride Pond 1)	Queen City	150.00	Industrial	12/20/2016
BVOP-0270	Hawkwood Energy (McBride Pond 2)	Sparta	150.00	Industrial	12/20/2016
BVOP-0271	Hawkwood Energy (McBride Pond 3)	Sparta	150.00	Industrial	12/20/2016
BVOP-0272	Hawkwood Energy (McBride Pond 4)	Queen City	150.00	Industrial	12/20/2016
BVOP-0273	Paterson	Yegua-Jackson	1.04	Industrial	12/22/2016
BVDO-0212	Hawkwood Energy (McBride Pond 5)	Sparta	150.00	Industrial	12/30/2016
BVDO-0213	Hawkwood Energy (McBride Pond 6)	Queen City	150.00	Industrial	12/30/2016
			902.14		
Wells - 8					
Queen City - 451.1 ac-ft					
Sparta - 450 ac-ft					
Yegua-Jackson - 1.04 ac-ft					
Total Acre Feet - 902.14 ac-ft					
Board permitted wells - 0					

Permit No. BV-OP-0261

Operating Permit
Issued by the General Manager of the
Brazos Valley Groundwater Conservation District
Pursuant to District Rule 8.3(j)



This **Operating Permit** is granted to **Tanos Exploration** (Permittee) authorizing the Permittee to operate a water well known as **Williams 3** ("Well") at the location specified below within the Brazos Valley Groundwater Conservation District (District) for the beneficial purpose of producing water for **Industrial** use. Permittee is authorized to operate the Well located at **N 30.989184° and W 96.558733°** to produce water from the **Calvert Bluff Aquifer** at an annual maximum capacity not to exceed **62 GPM** and a maximum annual production of **1.55 acre feet/year**.

Operating Permit Term:

- (a) The operating permit is effective for a one-year term. At the end of the one-year term, the permit may be renewed by the General Manager for an additional term, upon submittal of a permit renewal application by the permit holder that provides adequate evidence of continued beneficial use for the permitted amount of water withdrawal. The District shall send notices to permit holders that contain the permit renewal applications, prior to permit expirations.
- (b) The District may amend or revoke an operating permit at any time if there is evidence of:
 - (1) the owner or operator of the well or well system has operated in violation of their permit, District Rules, or Chapter 36 of the Texas Water Code; or
 - (2) a change in the permit is required to prevent waste and achieve water conservation, minimize as far as practicable the drawdown of the water table or reduction of artesian pressure, lessen interference between wells, or control and prevent subsidence; or
 - (3) The permitted well(s) has not been completed, is not significantly under construction; or no significant progress is being made toward construction.

This permit is issued and effective as of August 9, 2016.

Special Provisions/Notes: None

This Permit is granted subject to these Rules, orders of the Board, and the laws of the State of Texas. In addition to any special provisions or other requirements incorporated into the permit issued by the District.

- (1) This Permit is granted in accordance with provisions of the Rules of the District, including amendments, and acceptance of this Permit constitutes an acknowledgment and agreement that Permittee will comply with the Rules of the District.
- (2) This Permit confers only the right to operate the permitted well under the provisions of the District Rules and its terms may be modified or amended pursuant to the provisions of those Rules. To protect the permit holder from the illegal use of a new landowner, within ten (10) days after the date of sale of property containing a well having been issued an operating permit, the operating permit holder must notify the District in writing of the name of the new owner. Any person who becomes the owner of a currently permitted well must, within forty-five (45) calendar days from the date of the change in ownership, file an application for a permit amendment to affect a transfer of the permit.
- (3) The operation of the well for the authorized purposes must be conducted in a non-wasteful manner.
- (4) All groundwater production from non-exempt wells in the District is required to be metered, except for the groundwater produced from wells in the Brazos River Alluvium aquifer. The District maintains the discretion to require meters on wells in the Brazos River Alluvium aquifer. Permittee shall maintain records of withdrawal on the property where the well is located or at its business office, and shall make those records available to the District for inspection. The Permittee shall submit complete, accurate, and timely metered pumpage and transport reports to the District as requested.
- (5) The well site must be accessible to District representatives for inspection, and Permittee agrees to cooperate fully in any reasonable inspection of the well and well site by the District representatives.
- (6) The application pursuant to which this Permit has been issued is incorporated in this Permit, and this Permit is granted on the basis of and contingent upon the accuracy of the information supplied in that application. A finding that false information has been supplied is grounds for immediate revocation of the permit.
- (7) Violation of this Permit's terms, conditions, requirements, or special provisions, including pumping amounts in excess of authorized withdrawal, is punishable by civil penalties as provided by the District Rule 15.3, as well as revocation of the permit.
- (8) Permittee will use reasonable diligence to protect groundwater quality and will follow well-plugging guidelines at the time of well closure.

The issuance of this Permit does not grant to Permittee the right to use any private property, or any public property, for the production or conveyance of water. Neither does this permit authorize the invasion of any personal rights nor the violation of any federal, state, or local laws, rules or regulations. Further, the District makes no representations and shall have no responsibility with respect to the availability or quality of water authorized to be produced under this permit.

Brazos Valley Groundwater Conservation District

By: _____

Alan M. Day, General Manager

8-9-16
Date

Worksheet for Operating Permit

Tanos Exploration – Williams 3

BVOP-0261

Tanos Exploration seeks an Operating Permit for the purpose of:

- **Industrial Use –Water for hydraulic fracturing**

Existing Well: Williams 3

Located at: N 30.989184° W 96.558733° 1.11 miles ESE of the intersection of Jack Brewer Road and FM 1644 in Robertson County.

Beneficial Use: **Industrial** – Use for hydraulic fracturing

Aquifer of Origin: **Calvert Bluff**

Well Column: **6”**

Rate of Production: **62 gpm**

Max. Annual Production: **1.55 acre feet/year**

This application is administratively complete.

The permit was issued by the General Manager on 8-9-16 pursuant to District Rule 8.3(j).

Tanos Exploration - BVOP-0261



August 10, 2016

polygonLayer



Override 1

pointLayer



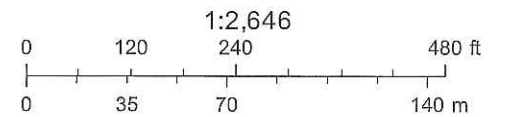
Override 1



Brazos CAD Parcels



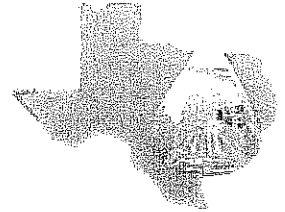
Robertson CAD Parcels



Half Associates Inc.
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

Permit No. BV-OP-0269

**Operating Permit
Issued by the General Manager of the
Brazos Valley Groundwater Conservation District
Pursuant to District Rule 8.3(j)**



This **Operating Permit** is granted to **Hawkwood Energy Operating, LLC** (Permittee) authorizing the Permittee to operate a water well known as **McBride Frac Pond 1** ("Well") at the location specified below within the Brazos Valley Groundwater Conservation District (District) for the beneficial purpose of producing water for **Industrial** use. Permittee is authorized to operate the Well located at **N 30.905833° and W 96.276389°** to produce water from the **Queen City Aquifer** at an annual maximum capacity not to exceed **250 GPM** and a maximum annual production of **150 acre feet/year**.

Operating Permit Term:

- (a) The operating permit is effective for a one-year term. At the end of the one-year term, the permit may be renewed by the General Manager for an additional term, upon submittal of a permit renewal application by the permit holder that provides adequate evidence of continued beneficial use for the permitted amount of water withdrawal. The District shall send notices to permit holders that contain the permit renewal applications, prior to permit expirations.
- (b) The District may amend or revoke an operating permit at any time if there is evidence of:
 - (1) the owner or operator of the well or well system has operated in violation of their permit, District Rules, or Chapter 36 of the Texas Water Code; or
 - (2) a change in the permit is required to prevent waste and achieve water conservation, minimize as far as practicable the drawdown of the water table or reduction of artesian pressure, lessen interference between wells, or control and prevent subsidence; or
 - (3) The permitted well(s) has not been completed, is not significantly under construction; or no significant progress is being made toward construction.

This permit is issued and effective as of December 20, 2016.

Special Provisions/Notes: None

This Permit is granted subject to these Rules, orders of the Board, and the laws of the State of Texas. In addition to any special provisions or other requirements incorporated into the permit issued by the District.

- (1) This Permit is granted in accordance with provisions of the Rules of the District, including amendments, and acceptance of this Permit constitutes an acknowledgment and agreement that Permittee will comply with the Rules of the District.
- (2) This Permit confers only the right to operate the permitted well under the provisions of the District Rules and its terms may be modified or amended pursuant to the provisions of those Rules. To protect the permit holder from the illegal use of a new landowner, within ten (10) days after the date of sale of property containing a well having been issued an operating permit, the operating permit holder must notify the District in writing of the name of the new owner. Any person who becomes the owner of a currently permitted well must, within forty-five (45) calendar days from the date of the change in ownership, file an application for a permit amendment to affect a transfer of the permit.
- (3) The operation of the well for the authorized purposes must be conducted in a non-wasteful manner.
- (4) All groundwater production from non-exempt wells in the District is required to be metered, except for the groundwater produced from wells in the Brazos River Alluvium aquifer. The District maintains the discretion to require meters on wells in the Brazos River Alluvium aquifer. Permittee shall maintain records of withdrawal on the property where the well is located or at its business office, and shall make those records available to the District for inspection. The Permittee shall submit complete, accurate, and timely metered pumpage and transport reports to the District as requested.
- (5) The well site must be accessible to District representatives for inspection, and Permittee agrees to cooperate fully in any reasonable inspection of the well and well site by the District representatives.
- (6) The application pursuant to which this Permit has been issued is incorporated in this Permit, and this Permit is granted on the basis of and contingent upon the accuracy of the information supplied in that application. A finding that false information has been supplied is grounds for immediate revocation of the permit.
- (7) Violation of this Permit's terms, conditions, requirements, or special provisions, including pumping amounts in excess of authorized withdrawal, is punishable by civil penalties as provided by the District Rule 15.3, as well as revocation of the permit.
- (8) Permittee will use reasonable diligence to protect groundwater quality and will follow well-plugging guidelines at the time of well closure.

The issuance of this Permit does not grant to Permittee the right to use any private property, or any public property, for the production or conveyance of water. Neither does this permit authorize the invasion of any personal rights nor the violation of any federal, state, or local laws, rules or regulations. Further, the District makes no representations and shall have no responsibility with respect to the availability or quality of water authorized to be produced under this permit.

Brazos Valley Groundwater Conservation District

By: _____

Alan M. Day, General Manager

Date

Worksheet for Operating Permit
Hawkwood Energy Operating, LLC McBride Frac Pond 1
BVOP-0269

Hawkwood Energy Operating, LLC seeks an Operating Permit for the purpose of:

- **Industrial Use –Water for hydraulic fracturing**

Existing Well - McBride Frac Pond 1

Located at: N 30.905833° W 96.276389° 0.29 miles SSW of the intersection of Macey Road and Old Bundick Road in Brazos County.

Beneficial Use: **Industrial** – Use for hydraulic fracturing

Aquifer of Origin: **Queen City**

Well Column: **6”**

Rate of Production: **250 gpm**

Max. Annual Production: **150 acre feet/year**

This application meets all of the specifications listed in BVGCD Rule 7.1 (c) regarding production based acreage. Below are the calculations verifying the applicant's compliance:

$150 \text{ acre feet/year} \times .62 = 93 \text{ gpm}$ on an average annual basis

$93 \times 2'/\text{gpm}$ for Queen City wells =186' radius from the wellhead

$186' \times 186' \times 3.14 = 108,631$ square feet around the well

$108,631/43,560 = \mathbf{2.494}$ contiguous acres to be assigned to the well.

The footprint of the well lies entirely within the property controlled by the applicant.

This application is administratively complete.

The permit was issued by the General Manager on 12-20-16 pursuant to District Rule 8.3(j).

McBride Frac Pond 1 (Queen City) BVOP-0269 186'



December 20, 2016

pointLayer



Override 1

polygonLayer



Override 1

pointLayer



Override 1



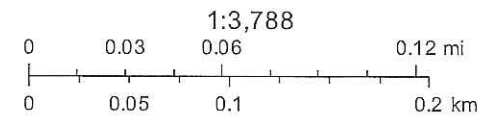
BVGCD Wells



Brazos CAD Parcels



Robertson CAD Parcels



Half Associates Inc.
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

Permit No. BV-OP-0270

**Operating Permit
Issued by the General Manager of the
Brazos Valley Groundwater Conservation District
Pursuant to District Rule 8.3(j)**



This **Operating Permit** is granted to **Hawkwood Energy Operating, LLC** (Permittee) authorizing the Permittee to operate a water well known as **McBride Frac Pond 2** ("Well") at the location specified below within the Brazos Valley Groundwater Conservation District (District) for the beneficial purpose of producing water for **Industrial** use. Permittee is authorized to operate the Well located at **N 30.90649848° and W 96.27641999°** to produce water from the **Sparta Aquifer** at an annual maximum capacity not to exceed **250 GPM** and a maximum annual production of **150 acre feet/year**.

Operating Permit Term:

- (a) The operating permit is effective for a one-year term. At the end of the one-year term, the permit may be renewed by the General Manager for an additional term, upon submittal of a permit renewal application by the permit holder that provides adequate evidence of continued beneficial use for the permitted amount of water withdrawal. The District shall send notices to permit holders that contain the permit renewal applications, prior to permit expirations.
- (b) The District may amend or revoke an operating permit at any time if there is evidence of:
 - (1) the owner or operator of the well or well system has operated in violation of their permit, District Rules, or Chapter 36 of the Texas Water Code; or
 - (2) a change in the permit is required to prevent waste and achieve water conservation, minimize as far as practicable the drawdown of the water table or reduction of artesian pressure, lessen interference between wells, or control and prevent subsidence; or
 - (3) The permitted well(s) has not been completed, is not significantly under construction; or no significant progress is being made toward construction.

This permit is issued and effective as of December 20, 2016.

Special Provisions/Notes: None

This Permit is granted subject to these Rules, orders of the Board, and the laws of the State of Texas. In addition to any special provisions or other requirements incorporated into the permit issued by the District.

- (1) This Permit is granted in accordance with provisions of the Rules of the District, including amendments, and acceptance of this Permit constitutes an acknowledgment and agreement that Permittee will comply with the Rules of the District.
- (2) This Permit confers only the right to operate the permitted well under the provisions of the District Rules and its terms may be modified or amended pursuant to the provisions of those Rules. To protect the permit holder from the illegal use of a new landowner, within ten (10) days after the date of sale of property containing a well having been issued an operating permit, the operating permit holder must notify the District in writing of the name of the new owner. Any person who becomes the owner of a currently permitted well must, within forty-five (45) calendar days from the date of the change in ownership, file an application for a permit amendment to affect a transfer of the permit.
- (3) The operation of the well for the authorized purposes must be conducted in a non-wasteful manner.
- (4) All groundwater production from non-exempt wells in the District is required to be metered, except for the groundwater produced from wells in the Brazos River Alluvium aquifer. The District maintains the discretion to require meters on wells in the Brazos River Alluvium aquifer. Permittee shall maintain records of withdrawal on the property where the well is located or at its business office, and shall make those records available to the District for inspection. The Permittee shall submit complete, accurate, and timely metered pumpage and transport reports to the District as requested.
- (5) The well site must be accessible to District representatives for inspection, and Permittee agrees to cooperate fully in any reasonable inspection of the well and well site by the District representatives.
- (6) The application pursuant to which this Permit has been issued is incorporated in this Permit, and this Permit is granted on the basis of and contingent upon the accuracy of the information supplied in that application. A finding that false information has been supplied is grounds for immediate revocation of the permit.
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- (8) Permittee will use reasonable diligence to protect groundwater quality and will follow well-plugging guidelines at the time of well closure.

The issuance of this Permit does not grant to Permittee the right to use any private property, or any public property, for the production or conveyance of water. Neither does this permit authorize the invasion of any personal rights nor the violation of any federal, state, or local laws, rules or regulations. Further, the District makes no representations and shall have no responsibility with respect to the availability or quality of water authorized to be produced under this permit.

Brazos Valley Groundwater Conservation District

By: _____

Alan M. Day, General Manager

12-20-16

Date

Worksheet for Operating Permit
Hawkwood Energy Operating, LLC McBride Frac Pond 2
BVOP-0270

Hawkwood Energy Operating, LLC seeks an Operating Permit for the purpose of:

- **Industrial Use –Water for hydraulic fracturing**

Existing Well - McBride Frac Pond 2

Located at: N 30.90649848° W 96.27641999° 0.25 miles SSW of the intersection of Macey Road and Old Bundick Road in Brazos County.

Beneficial Use: **Industrial** – Use for hydraulic fracturing

Aquifer of Origin: **Sparta**

Well Column: **6”**

Rate of Production: **250 gpm**

Max. Annual Production: **150 acre feet/year**

This application meets all of the specifications listed in BVGCD Rule 7.1 (c) regarding production based acreage. Below are the calculations verifying the applicant's compliance:

$150 \text{ acre feet/year} \times .62 = 93 \text{ gpm}$ on an average annual basis

$93 \times 2'/\text{gpm}$ for Sparta wells = 186' radius from the wellhead

$186' \times 186' \times 3.14 = 108,631$ square feet around the well

$108,631/43,560 = \mathbf{2.494}$ contiguous acres to be assigned to the well.

The footprint of the well lies entirely within the property controlled by the applicant.

This application is administratively complete.

The permit was issued by the General Manager on 12-20-16 pursuant to District Rule 8.3(j).

McBride Frac Pond 2 (Sparta) BVOP-0270 186'



December 20, 2016

pointLayer



Override 1

polygonLayer



Override 1

pointLayer



Override 1



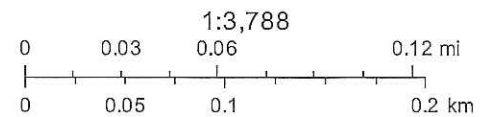
BVGCD Wells



Brazos CAD Parcels



Robertson CAD Parcels



Half Associates Inc.
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

Permit No. BV-OP-0271

**Operating Permit
Issued by the General Manager of the
Brazos Valley Groundwater Conservation District
Pursuant to District Rule 8.3(j)**



This **Operating Permit** is granted to **Hawkwood Energy Operating, LLC** (Permittee) authorizing the Permittee to operate a water well known as **McBride Frac Pond 3** ("Well") at the location specified below within the Brazos Valley Groundwater Conservation District (District) for the beneficial purpose of producing water for **Industrial** use. Permittee is authorized to operate the Well located at **N 30.90476991° and W 96.27330960°** to produce water from the **Sparta Aquifer** at an annual maximum capacity not to exceed **250 GPM** and a maximum annual production of **150 acre feet/year**.

Operating Permit Term:

- (a) The operating permit is effective for a one-year term. At the end of the one-year term, the permit may be renewed by the General Manager for an additional term, upon submittal of a permit renewal application by the permit holder that provides adequate evidence of continued beneficial use for the permitted amount of water withdrawal. The District shall send notices to permit holders that contain the permit renewal applications, prior to permit expirations.
- (b) The District may amend or revoke an operating permit at any time if there is evidence of:
 - (1) the owner or operator of the well or well system has operated in violation of their permit, District Rules, or Chapter 36 of the Texas Water Code; or
 - (2) a change in the permit is required to prevent waste and achieve water conservation, minimize as far as practicable the drawdown of the water table or reduction of artesian pressure, lessen interference between wells, or control and prevent subsidence; or
 - (3) The permitted well(s) has not been completed, is not significantly under construction; or no significant progress is being made toward construction.

This permit is issued and effective as of December 20, 2016.

Special Provisions/Notes: None

This Permit is granted subject to these Rules, orders of the Board, and the laws of the State of Texas. In addition to any special provisions or other requirements incorporated into the permit issued by the District.

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- (3) The operation of the well for the authorized purposes must be conducted in a non-wasteful manner.
- (4) All groundwater production from non-exempt wells in the District is required to be metered, except for the groundwater produced from wells in the Brazos River Alluvium aquifer. The District maintains the discretion to require meters on wells in the Brazos River Alluvium aquifer. Permittee shall maintain records of withdrawal on the property where the well is located or at its business office, and shall make those records available to the District for inspection. The Permittee shall submit complete, accurate, and timely metered pumpage and transport reports to the District as requested.
- (5) The well site must be accessible to District representatives for inspection, and Permittee agrees to cooperate fully in any reasonable inspection of the well and well site by the District representatives.
- (6) The application pursuant to which this Permit has been issued is incorporated in this Permit, and this Permit is granted on the basis of and contingent upon the accuracy of the information supplied in that application. A finding that false information has been supplied is grounds for immediate revocation of the permit.
- (7) Violation of this Permit's terms, conditions, requirements, or special provisions, including pumping amounts in excess of authorized withdrawal, is punishable by civil penalties as provided by the District Rule 15.3, as well as revocation of the permit.
- (8) Permittee will use reasonable diligence to protect groundwater quality and will follow well-plugging guidelines at the time of well closure.

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Brazos Valley Groundwater Conservation District

By: _____

Alan M. Day, General Manager

12-20-16

Date

Worksheet for Operating Permit
Hawkwood Energy Operating, LLC McBride Frac Pond 3
BVOP-0271

Hawkwood Energy Operating, LLC seeks an Operating Permit for the purpose of:

- **Industrial Use –Water for hydraulic fracturing**

Existing Well - McBride Frac Pond 3

Located at: N 30.90476991° W 96.27330960° 0.37 miles SSE of the intersection of Macey Road and Old Bundick Road in Brazos County.

Beneficial Use: **Industrial** – Use for hydraulic fracturing

Aquifer of Origin: **Sparta**

Well Column: **6"**

Rate of Production: **250 gpm**

Max. Annual Production: **150 acre feet/year**

This application meets all of the specifications listed in BVGCD Rule 7.1 (c) regarding production based acreage. Below are the calculations verifying the applicant's compliance:

$150 \text{ acre feet/year} \times .62 = 93 \text{ gpm}$ on an average annual basis

$93 \times 2'/\text{gpm}$ for Sparta wells =186' radius from the wellhead

$186' \times 186' \times 3.14 = 108,631$ square feet around the well

$108,631/43,560 = 2.494$ **contiguous acres to be assigned to the well.**

The footprint of the well lies entirely within the property controlled by the applicant.

This application is administratively complete.

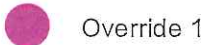
The permit was issued by the General Manager on 12-20-16 pursuant to District Rule 8.3(j).

McBride Frac Pond 3 (Sparta) BVOP-0271 186'



December 20, 2016

pointLayer



Override 1

polygonLayer



Override 1

pointLayer



Override 1



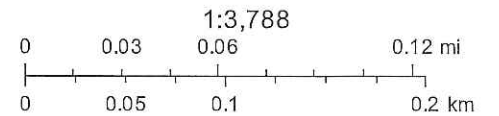
BVGCD Wells



Brazos CAD Parcels



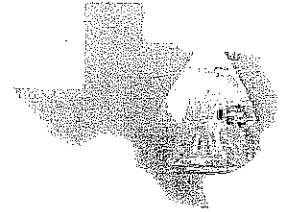
Robertson CAD Parcels



Half Associates Inc.
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

Permit No. BV-OP-0272

**Operating Permit
Issued by the General Manager of the
Brazos Valley Groundwater Conservation District
Pursuant to District Rule 8.3(j)**



This **Operating Permit** is granted to **Hawkwood Energy Operating, LLC** (Permittee) authorizing the Permittee to operate a water well known as **McBride Frac Pond 4** ("Well") at the location specified below within the Brazos Valley Groundwater Conservation District (District) for the beneficial purpose of producing water for **Industrial** use. Permittee is authorized to operate the Well located at **N 30.90478734° and W 96.27328206°** to produce water from the **Queen City Aquifer** at an annual maximum capacity not to exceed **250 GPM** and a maximum annual production of **150 acre feet/year**.

Operating Permit Term:

- (a) The operating permit is effective for a one-year term. At the end of the one-year term, the permit may be renewed by the General Manager for an additional term, upon submittal of a permit renewal application by the permit holder that provides adequate evidence of continued beneficial use for the permitted amount of water withdrawal. The District shall send notices to permit holders that contain the permit renewal applications, prior to permit expirations.
- (b) The District may amend or revoke an operating permit at any time if there is evidence of:
 - (1) the owner or operator of the well or well system has operated in violation of their permit, District Rules, or Chapter 36 of the Texas Water Code; or
 - (2) a change in the permit is required to prevent waste and achieve water conservation, minimize as far as practicable the drawdown of the water table or reduction of artesian pressure, lessen interference between wells, or control and prevent subsidence; or
 - (3) The permitted well(s) has not been completed, is not significantly under construction; or no significant progress is being made toward construction.

This permit is issued and effective as of December 20, 2016.

Special Provisions/Notes: None

This Permit is granted subject to these Rules, orders of the Board, and the laws of the State of Texas. In addition to any special provisions or other requirements incorporated into the permit issued by the District.

- (1) This Permit is granted in accordance with provisions of the Rules of the District, including amendments, and acceptance of this Permit constitutes an acknowledgment and agreement that Permittee will comply with the Rules of the District.
- (2) This Permit confers only the right to operate the permitted well under the provisions of the District Rules and its terms may be modified or amended pursuant to the provisions of those Rules. To protect the permit holder from the illegal use of a new landowner, within ten (10) days after the date of sale of property containing a well having been issued an operating permit, the operating permit holder must notify the District in writing of the name of the new owner. Any person who becomes the owner of a currently permitted well must, within forty-five (45) calendar days from the date of the change in ownership, file an application for a permit amendment to affect a transfer of the permit.
- (3) The operation of the well for the authorized purposes must be conducted in a non-wasteful manner.
- (4) All groundwater production from non-exempt wells in the District is required to be metered, except for the groundwater produced from wells in the Brazos River Alluvium aquifer. The District maintains the discretion to require meters on wells in the Brazos River Alluvium aquifer. Permittee shall maintain records of withdrawal on the property where the well is located or at its business office, and shall make those records available to the District for inspection. The Permittee shall submit complete, accurate, and timely metered pumpage and transport reports to the District as requested.
- (5) The well site must be accessible to District representatives for inspection, and Permittee agrees to cooperate fully in any reasonable inspection of the well and well site by the District representatives.
- (6) The application pursuant to which this Permit has been issued is incorporated in this Permit, and this Permit is granted on the basis of and contingent upon the accuracy of the information supplied in that application. A finding that false information has been supplied is grounds for immediate revocation of the permit.
- (7) Violation of this Permit's terms, conditions, requirements, or special provisions, including pumping amounts in excess of authorized withdrawal, is punishable by civil penalties as provided by the District Rule 15.3, as well as revocation of the permit.
- (8) Permittee will use reasonable diligence to protect groundwater quality and will follow well-plugging guidelines at the time of well closure.

The issuance of this Permit does not grant to Permittee the right to use any private property, or any public property, for the production or conveyance of water. Neither does this permit authorize the invasion of any personal rights nor the violation of any federal, state, or local laws, rules or regulations. Further, the District makes no representations and shall have no responsibility with respect to the availability or quality of water authorized to be produced under this permit.

Brazos Valley Groundwater Conservation District

By: _____

Alan M. Day, General Manager

12-20-16
Date

Worksheet for Operating Permit
Hawkwood Energy Operating, LLC McBride Frac Pond 4
BVOP-0272

Hawkwood Energy Operating, LLC seeks an Operating Permit for the purpose of:

- **Industrial Use –Water for hydraulic fracturing**

Existing Well - McBride Frac Pond 4

Located at: N 30.90478734° W 96.27328206° 0.37 miles SSE of the intersection of Macey Road and Old Bundick Road in Brazos County.

Beneficial Use: **Industrial** – Use for hydraulic fracturing

Aquifer of Origin: **Queen City**

Well Column: **6”**

Rate of Production: **250 gpm**

Max. Annual Production: **150 acre feet/year**

This application meets all of the specifications listed in BVGCD Rule 7.1 (c) regarding production based acreage. Below are the calculations verifying the applicant's compliance:

$150 \text{ acre feet/year} \times .62 = 93 \text{ gpm}$ on an average annual basis

$93 \times 2'/\text{gpm}$ for Queen City wells = 186' radius from the wellhead

$186' \times 186' \times 3.14 = 108,631$ square feet around the well

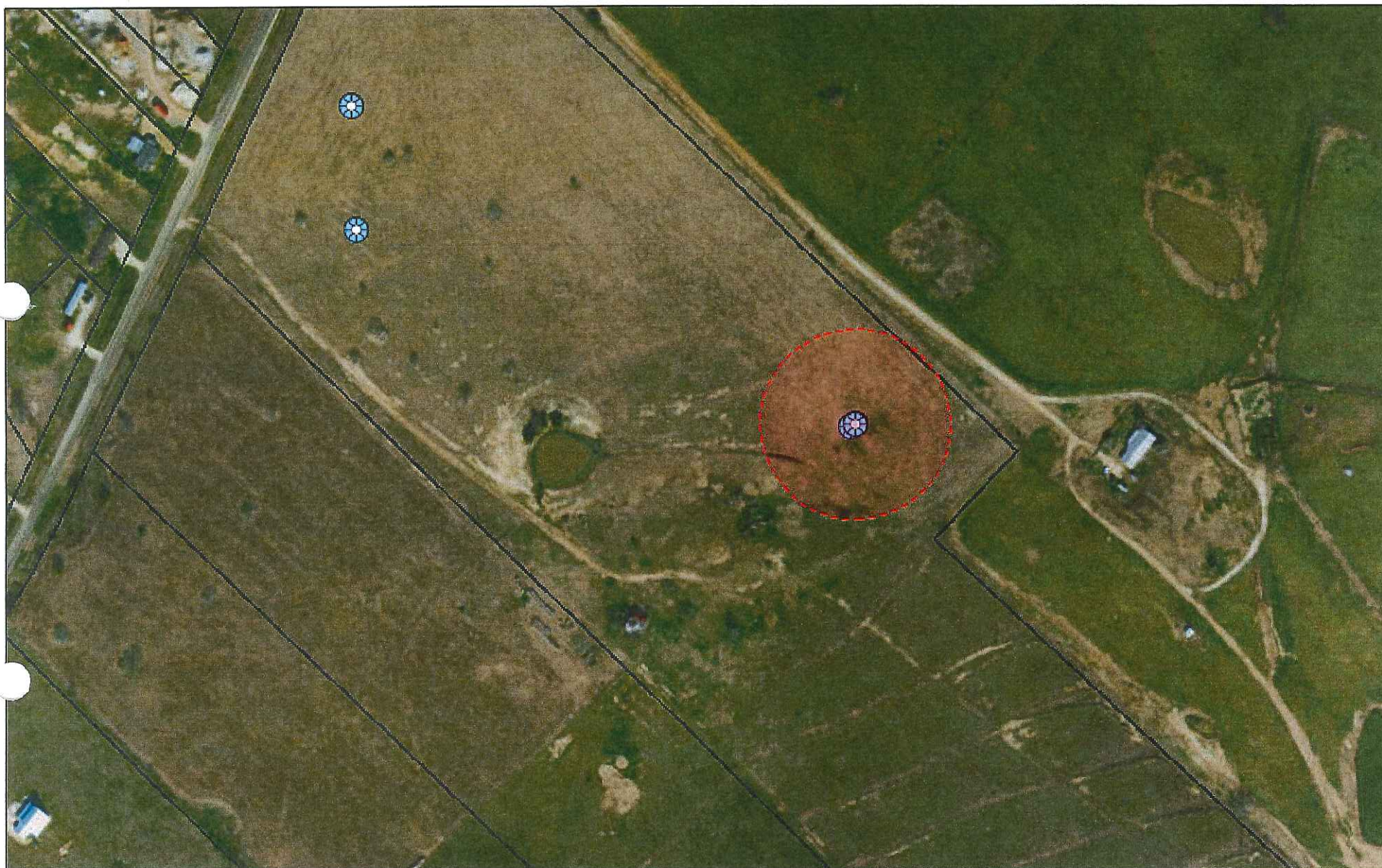
$108,631/43,560 = \mathbf{2.494}$ contiguous acres to be assigned to the well.

The footprint of the well lies entirely within the property controlled by the applicant.

This application is administratively complete.

The permit was issued by the General Manager on 12-20-16 pursuant to District Rule 8.3(j).

McBride Frac Pond 4 (Queen City) BVOP-0272 186'



December 20, 2016

pointLayer



Override 1

polygonLayer



Override 1

pointLayer



Override 1



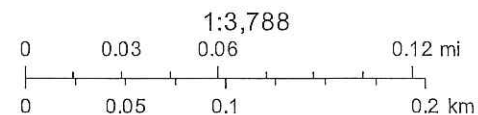
BVGCD Wells



Brazos CAD Parcels



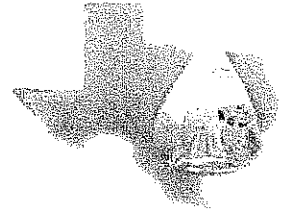
Robertson CAD Parcels



Half Associates Inc.
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

Permit No. BV-OP-0273

Operating Permit
Issued by the General Manager of the
Brazos Valley Groundwater Conservation District
Pursuant to District Rule 8.3(j)



This **Operating Permit** is granted to **George & Candy Paterson** (Permittee) authorizing the Permittee to operate a water well known as **Well #1** ("Well") at the location specified below within the Brazos Valley Groundwater Conservation District (District) for the beneficial purpose of producing water for **Industrial** use. Permittee is authorized to operate the Well located at **N 30.58875° and W 96.247739°** to produce water from the **Yegua-Jacson Aquifer** at an annual maximum capacity not to exceed **75 GPM** and a maximum annual production of **1.04 acre feet/year**.

Operating Permit Term:

- (a) The operating permit is effective for a one-year term. At the end of the one-year term, the permit may be renewed by the General Manager for an additional term, upon submittal of a permit renewal application by the permit holder that provides adequate evidence of continued beneficial use for the permitted amount of water withdrawal. The District shall send notices to permit holders that contain the permit renewal applications, prior to permit expirations.
- (b) The District may amend or revoke an operating permit at any time if there is evidence of:
 - (1) the owner or operator of the well or well system has operated in violation of their permit, District Rules, or Chapter 36 of the Texas Water Code; or
 - (2) a change in the permit is required to prevent waste and achieve water conservation, minimize as far as practicable the drawdown of the water table or reduction of artesian pressure, lessen interference between wells, or control and prevent subsidence; or
 - (3) The permitted well(s) has not been completed, is not significantly under construction; or no significant progress is being made toward construction.

This permit is issued and effective as of December 22, 2016.

Special Provisions/Notes: None

This Permit is granted subject to these Rules, orders of the Board, and the laws of the State of Texas. In addition to any special provisions or other requirements incorporated into the permit issued by the District.

- (1) This Permit is granted in accordance with provisions of the Rules of the District, including amendments, and acceptance of this Permit constitutes an acknowledgment and agreement that Permittee will comply with the Rules of the District.
- (2) This Permit confers only the right to operate the permitted well under the provisions of the District Rules and its terms may be modified or amended pursuant to the provisions of those Rules. To protect the permit holder from the illegal use of a new landowner, within ten (10) days after the date of sale of property containing a well having been issued an operating permit, the operating permit holder must notify the District in writing of the name of the new owner. Any person who becomes the owner of a currently permitted well must, within forty-five (45) calendar days from the date of the change in ownership, file an application for a permit amendment to affect a transfer of the permit.
- (3) The operation of the well for the authorized purposes must be conducted in a non-wasteful manner.
- (4) All groundwater production from non-exempt wells in the District is required to be metered, except for the groundwater produced from wells in the Brazos River Alluvium aquifer. The District maintains the discretion to require meters on wells in the Brazos River Alluvium aquifer. Permittee shall maintain records of withdrawal on the property where the well is located or at its business office, and shall make those records available to the District for inspection. The Permittee shall submit complete, accurate, and timely metered pumpage and transport reports to the District as requested.
- (5) The well site must be accessible to District representatives for inspection, and Permittee agrees to cooperate fully in any reasonable inspection of the well and well site by the District representatives.
- (6) The application pursuant to which this Permit has been issued is incorporated in this Permit, and this Permit is granted on the basis of and contingent upon the accuracy of the information supplied in that application. A finding that false information has been supplied is grounds for immediate revocation of the permit.
- (7) Violation of this Permit's terms, conditions, requirements, or special provisions, including pumping amounts in excess of authorized withdrawal, is punishable by civil penalties as provided by the District Rule 15.3, as well as revocation of the permit.
- (8) Permittee will use reasonable diligence to protect groundwater quality and will follow well-plugging guidelines at the time of well closure.

The issuance of this Permit does not grant to Permittee the right to use any private property, or any public property, for the production or conveyance of water. Neither does this permit authorize the invasion of any personal rights nor the violation of any federal, state, or local laws, rules or regulations. Further, the District makes no representations and shall have no responsibility with respect to the availability or quality of water authorized to be produced under this permit.

Brazos Valley Groundwater Conservation District

By:


Alan M. Day, General Manager

12-27-16
Date

Worksheet for Operating Permit

George & Candy Paterson

BVOP-0273

George & Candy Paterson seek an Operating Permit for the purpose of:

- **Industrial Use –Water for rig supply**

Existing Well BVR-1470

Located at: N 30.58875785° W 96.24756599° 0.65 miles NE of the intersection of Rock Prairie Road and Bradley Road in Brazos County.

Beneficial Use: **Industrial** – Use for rig supply

Aquifer of Origin: **Yegua-Jackson**

Well Column: **4”**

Rate of Production: **75 gpm**

Max. Annual Production: **1.04 acre feet/year**

This application meets all of the specifications listed in BVGCD Rule 7.1 (c) regarding production based acreage. Below are the calculations verifying the applicant's compliance:

$1.04 \text{ acre feet/year} \times .62 = 0.6448 \text{ gpm}$ on an average annual basis

$0.6448 \times 2'/\text{gpm}$ for Yegua-Jackson wells = 1.29' radius from the wellhead

$1.29' \times 1.29' \times 3.14 = 5.23$ square feet around the well

$5.23/43,560 = .00012$ contiguous acres to be assigned to the well.

The footprint of the well lies entirely within the property controlled by the applicant.

This application is administratively complete.

The permit was issued by the General Manager on 12-22-16 pursuant to District Rule 8.3(j).

George & Candy Paterson, BVOP-0273 (1.2896')





December 22, 2016

polygonLayer

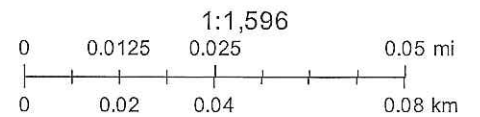
 Override 1

pointLayer

 Override 1

 Robertson CAD Parcels

 Brazos CAD Parcels



Half Associates Inc.
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors

Permit No. BV-DO-0212

Operating Permit
Issued by the General Manager of the
Brazos Valley Groundwater Conservation District
Pursuant to District Rule 8.3(j)



This **Operating Permit** is granted to **Hawkwood Energy Operating, LLC** (Permittee) authorizing the Permittee to operate a water well known as **McBride Frac Pond 5** ("Well") at the location specified below within the Brazos Valley Groundwater Conservation District (District) for the beneficial purpose of producing water for **Industrial** use. Permittee is authorized to operate the Well located at **N 30.901723° and W 96.270845°** to produce water from the **Sparta Aquifer** at an annual maximum capacity not to exceed **250 GPM** and a maximum annual production of **150 acre feet/year**.

Operating Permit Term:

- (a) The operating permit is effective for a one-year term. At the end of the one-year term, the permit may be renewed by the General Manager for an additional term, upon submittal of a permit renewal application by the permit holder that provides adequate evidence of continued beneficial use for the permitted amount of water withdrawal. The District shall send notices to permit holders that contain the permit renewal applications, prior to permit expirations.
- (b) The District may amend or revoke an operating permit at any time if there is evidence of:
 - (1) the owner or operator of the well or well system has operated in violation of their permit, District Rules, or Chapter 36 of the Texas Water Code; or
 - (2) a change in the permit is required to prevent waste and achieve water conservation, minimize as far as practicable the drawdown of the water table or reduction of artesian pressure, lessen interference between wells, or control and prevent subsidence; or
 - (3) The permitted well(s) has not been completed, is not significantly under construction; or no significant progress is being made toward construction.

This permit is issued and effective as of December 30, 2016.

Special Provisions/Notes: None

This Permit is granted subject to these Rules, orders of the Board, and the laws of the State of Texas. In addition to any special provisions or other requirements incorporated into the permit issued by the District.

- (1) This Permit is granted in accordance with provisions of the Rules of the District, including amendments, and acceptance of this Permit constitutes an acknowledgment and agreement that Permittee will comply with the Rules of the District.
- (2) This Permit confers only the right to operate the permitted well under the provisions of the District Rules and its terms may be modified or amended pursuant to the provisions of those Rules. To protect the permit holder from the illegal use of a new landowner, within ten (10) days after the date of sale of property containing a well having been issued an operating permit, the operating permit holder must notify the District in writing of the name of the new owner. Any person who becomes the owner of a currently permitted well must, within forty-five (45) calendar days from the date of the change in ownership, file an application for a permit amendment to affect a transfer of the permit.
- (3) The operation of the well for the authorized purposes must be conducted in a non-wasteful manner.
- (4) All groundwater production from non-exempt wells in the District is required to be metered, except for the groundwater produced from wells in the Brazos River Alluvium aquifer. The District maintains the discretion to require meters on wells in the Brazos River Alluvium aquifer. Permittee shall maintain records of withdrawal on the property where the well is located or at its business office, and shall make those records available to the District for inspection. The Permittee shall submit complete, accurate, and timely metered pumpage and transport reports to the District as requested.
- (5) The well site must be accessible to District representatives for inspection, and Permittee agrees to cooperate fully in any reasonable inspection of the well and well site by the District representatives.
- (6) The application pursuant to which this Permit has been issued is incorporated in this Permit, and this Permit is granted on the basis of and contingent upon the accuracy of the information supplied in that application. A finding that false information has been supplied is grounds for immediate revocation of the permit.
- (7) Violation of this Permit's terms, conditions, requirements, or special provisions, including pumping amounts in excess of authorized withdrawal, is punishable by civil penalties as provided by the District Rule 15.3, as well as revocation of the permit.
- (8) Permittee will use reasonable diligence to protect groundwater quality and will follow well-plugging guidelines at the time of well closure.

The issuance of this Permit does not grant to Permittee the right to use any private property, or any public property, for the production or conveyance of water. Neither does this permit authorize the invasion of any personal rights nor the violation of any federal, state, or local laws, rules or regulations. Further, the District makes no representations and shall have no responsibility with respect to the availability or quality of water authorized to be produced under this permit.

Brazos Valley Groundwater Conservation District

By: _____

Alan M. Day, General Manager

12-30-16

Date

Worksheet for Operating Permit
Hawkwood Energy Operating, LLC McBride Frac Pond 5
BVDO-0212

Hawkwood Energy Operating, LLC seeks an Operating Permit for the purpose of:

- **Industrial Use –Water for hydraulic fracturing**

Existing Well - McBride Frac Pond 5

Located at: N 30.901723° W 96.270845° 0.62 miles SSE of the intersection of Macey Road and Old Bundick Road in Brazos County.

Beneficial Use: **Industrial** – Use for hydraulic fracturing

Aquifer of Origin: **Sparta**

Well Column: **6”**

Rate of Production: **250 gpm**

Max. Annual Production: **150 acre feet/year**

This application meets all of the specifications listed in BVGCD Rule 7.1 (c) regarding production based acreage. Below are the calculations verifying the applicant's compliance:

$150 \text{ acre feet/year} \times .62 = 93 \text{ gpm}$ on an average annual basis

$93 \times 2'/\text{gpm}$ for Sparta wells = 186' radius from the wellhead

$186' \times 186' \times 3.14 = 108,631$ square feet around the well

$108,631/43,560 = \mathbf{2.494}$ contiguous acres to be assigned to the well.

The footprint of the well lies entirely within the property controlled by the applicant.

This application is administratively complete.

The permit was issued by the General Manager on 12-30-16 pursuant to District Rule 8.3(j).

McBride Pond 5 - BVDO-0212 - Sparta - 186'



December 30, 2016

polygonLayer



Override 1

pointLayer



Override 1



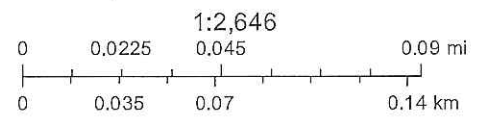
BVGCD Wells



Brazos CAD Parcels



Robertson CAD Parcels



Half Associates Inc.
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Permit No. BV-DO-0213

Operating Permit
Issued by the General Manager of the
Brazos Valley Groundwater Conservation District
Pursuant to District Rule 8.3(j)



This **Operating Permit** is granted to **Hawkwood Energy Operating, LLC** (Permittee) authorizing the Permittee to operate a water well known as **McBride Frac Pond 6** ("Well") at the location specified below within the Brazos Valley Groundwater Conservation District (District) for the beneficial purpose of producing water for **Industrial** use. Permittee is authorized to operate the Well located at **N 30.901517° and W 96.271058°** to produce water from the **Queen City Aquifer** at an annual maximum capacity not to exceed **250 GPM** and a maximum annual production of **150 acre feet/year**.

Operating Permit Term:

- (a) The operating permit is effective for a one-year term. At the end of the one-year term, the permit may be renewed by the General Manager for an additional term, upon submittal of a permit renewal application by the permit holder that provides adequate evidence of continued beneficial use for the permitted amount of water withdrawal. The District shall send notices to permit holders that contain the permit renewal applications, prior to permit expirations.
- (b) The District may amend or revoke an operating permit at any time if there is evidence of:
 - (1) the owner or operator of the well or well system has operated in violation of their permit, District Rules, or Chapter 36 of the Texas Water Code; or
 - (2) a change in the permit is required to prevent waste and achieve water conservation, minimize as far as practicable the drawdown of the water table or reduction of artesian pressure, lessen interference between wells, or control and prevent subsidence; or
 - (3) The permitted well(s) has not been completed, is not significantly under construction; or no significant progress is being made toward construction.

This permit is issued and effective as of December 30, 2016.

Special Provisions/Notes: None

This Permit is granted subject to these Rules, orders of the Board, and the laws of the State of Texas. In addition to any special provisions or other requirements incorporated into the permit issued by the District.

- (1) This Permit is granted in accordance with provisions of the Rules of the District, including amendments, and acceptance of this Permit constitutes an acknowledgment and agreement that Permittee will comply with the Rules of the District.
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- (3) The operation of the well for the authorized purposes must be conducted in a non-wasteful manner.
- (4) All groundwater production from non-exempt wells in the District is required to be metered, except for the groundwater produced from wells in the Brazos River Alluvium aquifer. The District maintains the discretion to require meters on wells in the Brazos River Alluvium aquifer. Permittee shall maintain records of withdrawal on the property where the well is located or at its business office, and shall make those records available to the District for inspection. The Permittee shall submit complete, accurate, and timely metered pumpage and transport reports to the District as requested.
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The issuance of this Permit does not grant to Permittee the right to use any private property, or any public property, for the production or conveyance of water. Neither does this permit authorize the invasion of any personal rights nor the violation of any federal, state, or local laws, rules or regulations. Further, the District makes no representations and shall have no responsibility with respect to the availability or quality of water authorized to be produced under this permit.

Brazos Valley Groundwater Conservation District

By: _____

Alan M. Day, General Manager

12-30-16
Date

Worksheet for Operating Permit
Hawkwood Energy Operating, LLC McBride Frac Pond 6
BVDO-0213

Hawkwood Energy Operating, LLC seeks an Operating Permit for the purpose of:

- **Industrial Use –Water for hydraulic fracturing**

Existing Well - McBride Frac Pond 6

Located at: N 30.901723° W 96.270845° 0.63 miles SSE of the intersection of Macey Road and Old Bundick Road in Brazos County.

Beneficial Use: **Industrial** – Use for hydraulic fracturing

Aquifer of Origin: **Queen City**

Well Column: **6”**

Rate of Production: **250 gpm**

Max. Annual Production: **150 acre feet/year**

This application meets all of the specifications listed in BVGCD Rule 7.1 (c) regarding production based acreage. Below are the calculations verifying the applicant's compliance:

$150 \text{ acre feet/year} \times .62 = 93 \text{ gpm}$ on an average annual basis

$93 \times 2'/\text{gpm}$ for Queen City wells =186' radius from the wellhead

$186' \times 186' \times 3.14 = 108,631$ square feet around the well

$108,631/43,560 = \mathbf{2.494}$ contiguous acres to be assigned to the well.

The footprint of the well lies entirely within the property controlled by the applicant.

This application is administratively complete.

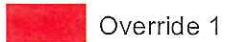
The permit was issued by the General Manager on 12-30-16 pursuant to District Rule 8.3(j).

McBride Pond 6 - BVDO-0213 - Queen City - 186'



December 30, 2016

polygonLayer



Override 1

pointLayer



Override 1



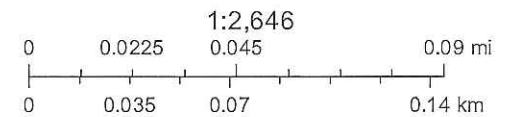
BVGCD Wells



Brazos CAD Parcels



Robertson CAD Parcels



Half Associates Inc.
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