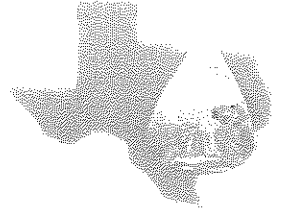


<b>As of 3-8-18</b>	<b>Hooper</b>	<b>Simsboro</b>	<b>Calvert Bluff</b>	<b>Carrizo</b>	<b>Queen City</b>	<b>Sparta</b>	<b>Yegua-Jackson</b>	<b>BRA</b>
2010 MAG	316.00	96,185.00	1,755.00	5,496.00	529.00	7,923.00	7,071.00	0.00
2017 MAG	<b>2,000.00</b>	<b>96,198.00</b>	<b>1,757.00</b>	<b>5,494.00</b>	<b>1,200.00</b>	<b>9,019.00</b>	<b>6,854.00</b>	<b>137,351.00</b>
<b>Acre Feet Permitted</b>	2,123.60	113,436.92	949.53	3,575.88	998.30	12,335.55	3,640.41	104,859.88
Acre Feet Used 2017	756.18	53,325.82	271.98	630.11	237.46	4,241.37	1,509.54	N/A
Acre Feet Used 2016	909.16	54,237.29	132.32	761.72	99.62	4,152.91	1,565.41	N/A
Acre Feet Used 2015	1,084.25	56,638.46	160.07	665.50	189.78	4,122.06	1,664.27	N/A
Acre Feet Used 2014	1,065.07	62,946.34	183.50	852.28	496.57	5,358.33	2,533.23	N/A
Acre Feet Used 2013	794.24	64,106.92	81.77	806.43	64.40	3,402.06	1,438.37	N/A
Acre Feet Used 2012	955.67	53,327.02	72.35	848.67	69.00	3,176.87	1,418.78	N/A
Acre Feet Used 2011	621.47	69,377.78	152.91	1,562.36	581.76	4,336.69	1,658.95	N/A
Acre Feet Used 2010	914.01	63,984.53	58.36	745.62	0.45	3,279.09	1,396.34	N/A
Acre Feet Used 2009	611.06	68,586.31	13.14	730.41	31.56	3,432.25	1,599.18	N/A
<b>Permitted Wells by Aquifer (951)</b>	<b>16</b>	<b>103</b>	<b>32</b>	<b>13</b>	<b>16</b>	<b>69</b>	<b>48</b>	<b>654</b>
<b>Permits by Aquifer (970)</b>	<b>22</b>	<b>110</b>	<b>32</b>	<b>13</b>	<b>19</b>	<b>72</b>	<b>48</b>	<b>654</b>
<b>Robertson Permitted Wells (591)</b>	<b>16</b>	<b>79</b>	<b>32</b>	<b>10</b>	<b>5</b>	<b>7</b>	<b>0</b>	<b>442</b>
<b>Robertson Permits (605)</b>	<b>22</b>	<b>86</b>	<b>32</b>	<b>10</b>	<b>5</b>	<b>8</b>	<b>0</b>	<b>442</b>
<b>Brazos Permitted Wells (360)</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>3</b>	<b>11</b>	<b>62</b>	<b>48</b>	<b>212</b>
<b>Brazos Permits (365)</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>3</b>	<b>14</b>	<b>64</b>	<b>48</b>	<b>212</b>

<b>Wells permitted pursuant to District Rule 8.3(j) - February 2018</b>					
<u>Permit #</u>	<u>Permittee</u>	<u>Aquifer</u>	<u>Permitted Amt.</u>	<u>Type of Use</u>	<u>Date</u>
BVOP-0291	Hawkwood (Goanna FW #1)	Sparta	120.00	Industrial	2/5/2018
BVOP-0292	Hawkwood (Goanna FW #1)	Yegua-Jackson	120.00	Industrial	2/5/2018
			240.00		
Wells - 2					
Yegua-Jackson - 120 ac-ft					
Sparta - 120 ac-ft					
Total Acre Feet - 240 ac-ft					
<b>Board permitted wells -1</b>					

Permit No. BV-OP-0291

**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 **Goanna FW #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 30.69879905° and W 96.31230313°** to produce water from the **Sparta Aquifer** at an annual maximum capacity not to exceed **150 GPM** and a maximum annual production of **120 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 February 5, 2018.

**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

2-5-18  
Date

**Worksheet for Operating Permit**  
**Hawkwood Energy Operating, LLC Goanna FW #2**  
**BVOP-0292**

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

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

Existing Well – Goanna FW #2

Located at: N 30.69879905° W 96.31230313° 0.74 miles SE of the intersection of Old Reliance Road and Austin's Estate Drive in Brazos County.

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

Aquifer of Origin: **Yegua-Jackson**

Well Column: **5"**

Rate of Production: **150 gpm**

Max. Annual Production: **120 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:

$150 \text{ acre feet/year} \times .62 = 74.4 \text{ gpm}$  on an average annual basis

$74.4 \times 2'/\text{gpm}$  for Yegua-Jackson wells =148.8' radius from the wellhead

$148.8' \times 148.8' \times 3.14 = 69,524$  square feet around the well

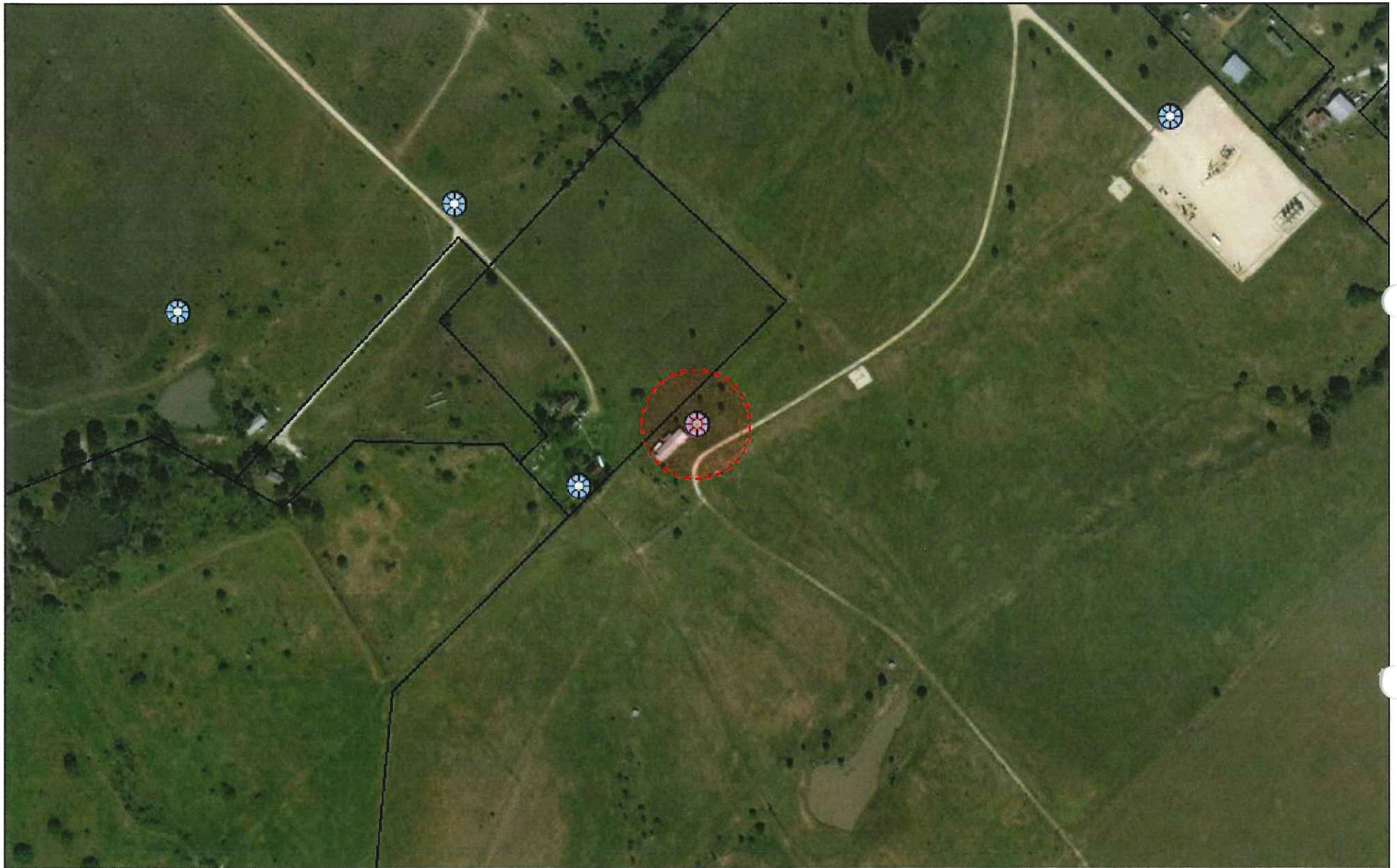
$69524/43,560 = 1.596$  **contiguous acres to be assigned to the well.**

**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 2-5-18 pursuant to District Rule 8.3(j).**

# Hawkwood Energy - BVOP-0291 - Goanna FW #1 - Sparta - 120 ac-ft/yr - 148.8' radius



February 5, 2018

**pointLayer**

● Override 1

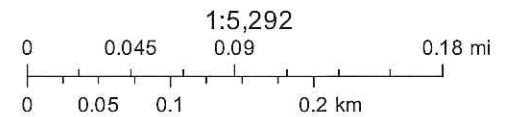
**polygonLayer**

■ Override 1

⊗ BVGCD Wells

□ Brazos CAD Parcels

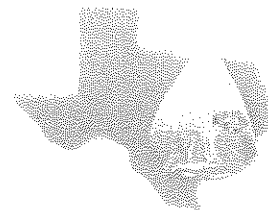
□ Robertson CAD Parcels



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

**Permit No. BV-OP-0292**

**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 **Goanna FW #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 30.69507678° and W 96.31425752°** to produce water from the **Yegua-Jackson Aquifer** at an annual maximum capacity not to exceed **150 GPM** and a maximum annual production of **120 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 February 5, 2018.

**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**

2-5-18

Date



**Worksheet for Operating Permit**  
**Hawkwood Energy Operating, LLC Goanna FW #1**  
**BVOP-0291**

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

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

Existing Well – Goanna FW #1

Located at: N 30.69879905° W 96.31230313° 0.75 miles ESE of the intersection of Old Reliance Road and Austin's Estate Drive in Brazos County.

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

Aquifer of Origin: **Sparta**

Well Column: **6"**

Rate of Production: **150 gpm**

Max. Annual Production: **120 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:

$150 \text{ acre feet/year} \times .62 = 74.4 \text{ gpm}$  on an average annual basis

$74.4 \times 2'/\text{gpm}$  for Sparta wells =148.8' radius from the wellhead

$148.8' \times 148.8' \times 3.14 = 69,524$  square feet around the well

$69524/43,560 = 1.596$  **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 2-5-18 pursuant to District Rule 8.3(j).**

# Hawkwood Energy - BVOP-0292 - Goanna FW #2 - Yegua-Jackson - 120 ac-ft/yr - 148.8' radius



February 5, 2018

pointLayer

● Override 1

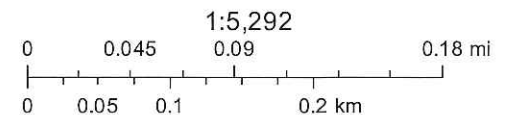
polygonLayer

■ Override 1

⊙ BVGCD Wells

□ Brazos CAD Parcels

□ Robertson CAD Parcels



Half Associates Inc.  
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