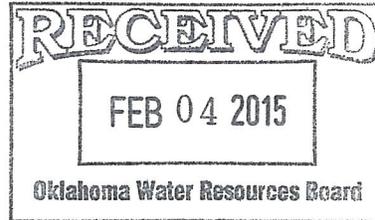




2 February 2015  
15-ED-043

Mr. Kent Wilkins, Assistant Chief  
Planning and Management Division  
Oklahoma Water Resources Board  
3800 North Classen Boulevard  
Oklahoma City, OK 73118



CONCRETE  
SAND & GRAVEL  
STONE  
BLOCK  
MASONRY

**RE: Water Monitoring Plan Report, 4th Quarter and 2014 Annual Summary, for Dolese Bros. Co. Davis Quarry, Murray County, Oklahoma**

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Dear Mr. Wilkins:

According to the Oklahoma Water Resources Board's Title 785, Chapter 30, Subchapter 15, Part 4, *Mines with Preexisting Exemptions*, Dolese Bros. Co. Davis Quarry qualifies as a mine with a preexisting exemption. As part of maintaining this exemption status, the regulations require us to do the following:

1. Adopt and implement a plan to monitor and report to the Board the accumulation and disposition of pit water during the previous calendar year;
  - The Davis Quarry has adopted and implemented such a plan, and the tables below serve to report to the Board the accumulation and disposition of pit water during the 4th quarter and for Year 2014.
2. Make quarterly and annual reports of the measured or reasonably estimated groundwater and surface water volumes, separately stated, entering the pit, of the water that is diverted from the pit, of the disposition of the water from the pit, and of the consumptive use of the water from the pit on or before the deadlines provided by Title 82 of Oklahoma Statutes, § 1020.2(E)(1);
  - The Davis Quarry has continued to fulfill this obligation by compiling and submitting this 4th Quarter 2014 Report and 2014 Annual Summary. The specific information requested in this section is outlined in the tables shown below.
3. At any time after March 31, 2015, demonstrate to the satisfaction of the Board within the pertinent report or reports that the mine has not consumptively used during the previous twelve-month period, from the mining site, an amount of groundwater which combined with any amounts used from permitted groundwater wells exceeds the MEPS<sup>1</sup>. Such demonstration may require providing to the Board a copy of the mine's monitoring plan and all of the data collected and procedures used to support the calculations and results reported.
  - After 31 March 2015, the Davis Quarry will be willing to demonstrate to the Board that the mine site has not consumptively used during the previous twelve-month period from the mining site, an amount of groundwater which combined with any amounts used from permitted groundwater wells exceeds the MEPS. Additionally, example calculations used in the First Quarterly Monitoring Report for 2013 have already been submitted to the OWRB for review and analysis.

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<sup>1</sup> Mine's Equal Proportionate Share

**DOLESE BROS. CO.**

20 NW 13th Street • P.O. Box 677

Oklahoma City, OK 73101-0677

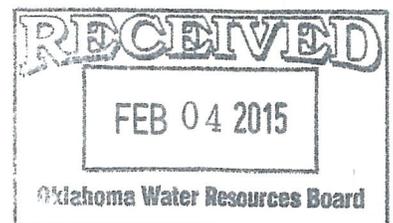
405.235.2311

dolese.com

Below, in Tables 1, 2, and 3, please find the 4<sup>th</sup> Quarter 2014 summary data collected at the Davis Quarry.

*Table 1—4<sup>th</sup> Quarter 2014*

ACCUMULATION & DISPOSITION OF PIT WATER DURING 4 <sup>TH</sup> QUARTER 2014		Acre-Feet
Water entering the Mine Pit		
Groundwater		62.12
Surface Water		67.69
Total		129.81
Water diverted from the Mine Pit into Fresh Water Lake		
Groundwater		62.12
Surface Water		67.69
Total		129.81
Water removed from Fresh Water Lake		
Groundwater		229.22
Surface Water		398.79
Total		628.01
Water returned to Fresh Water Lake		
Groundwater		251.43
Surface Water		437.43
Total		688.86
Water returned to Land Surface overlying Arbuckle Simpson Aquifer (ASA) basin		
Groundwater		17.26
Surface Water		30.02
Total		47.28
Water consumptively used		
Groundwater (See Table 3 for calculations)		7.18

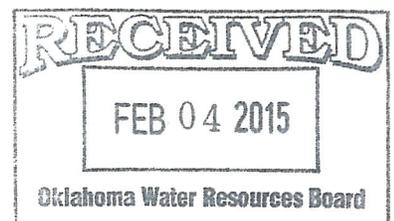


*Table 2-4<sup>th</sup> Quarter 2014*

Water Fluctuations in the Fresh Water Lake during 4 <sup>th</sup> Quarter 2014	
Average Size of Lake	30.86 acres
Gain in Water Elevation	1.02 feet
Gain in Lake Volume	31.48 acre-feet

*Table 3*  
**Consumptive Use Summary for 4QTR14**

Activity or Location	Amount of Pit Water Used, Acre-Feet	Percent Ground-Water	Groundwater Component, Acre-Feet
1 North Water Well	0.00	All	0.32
2 South Water Well	0.00	All	0.46
3 Material Moisture Hauled from Site	4.07	36.50% *(0.3650)	1.48
4 Land Application for Roadway Dust Suppression	13.11	36.50% *(0.3650)	4.79
5 Evaporation from Mine Pit	0.27	47.85% *(0.4785)	0.13
6 Offsite Dewatering	0.00	36.50% *(0.3650)	0.00
For 4QTR14, Total Groundwater Consumption from ASA at Davis Quarry = <b>7.18 Acre-Feet</b>			



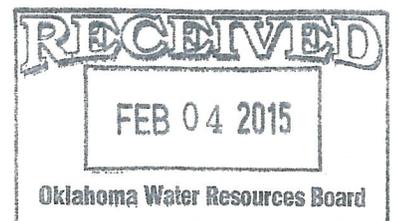
Below, in Tables 4, 5, and 6, please find the 2014 Annual Summary data collected at the Davis Quarry.

*Table 4—Annual Summary for 2014*

ACCUMULATION & DISPOSITION OF PIT WATER DURING 2014	Acre-Feet
Water entering the Mine Pit	
Groundwater	274.64
Surface Water	344.80
Total	619.44
Water diverted from the Mine Pit into Fresh Water Lake	
Groundwater	274.64
Surface Water	344.80
Total	619.44
Water removed from Fresh Water Lake	
Groundwater	1,065.61
Surface Water	1,690.61
Total	2,756.22
Water returned to Fresh Water Lake	
Groundwater	1,118.06
Surface Water	1,824.56
Total	2,942.62
Water returned to Land Surface overlying Arbuckle Simpson Aquifer (ASA) basin	
Groundwater	106.04
Surface Water	174.38
Total	280.42
Water consumptively used	
Groundwater (See Consumptive Use Summary Table)	61.66

*Table 5—Annual Summary for 2014*

Water Fluctuations in the Fresh Water Lake during 2014	
Average Size of Lake during Year 2014	29.76 acres
Gain in Water Elevation	5.48 feet
Gain in Lake Volume	162.24 acre-feet



*Table 6—Annual Summary for 2014*  
**Consumptive Use Summary for 2014**

Activity or Location	Groundwater Component, Acre-Feet
1 North Water Well	2.07
2 South Water Well	1.88
3 Material Moisture Hauled from Site	6.35
4 Land Application for Roadway Dust Suppression	16.51
5 Evaporation from Mine Pit	0.47
6 Offsite Dewatering	34.36
For Calendar Year 2014, Total Groundwater Consumption from ASA at Davis Quarry = <b>61.66 Acre-Feet</b>	

Below, in Table 7, please find the Groundwater Rights Summary for the Davis Quarry.

*Table 7*

### Groundwater Rights

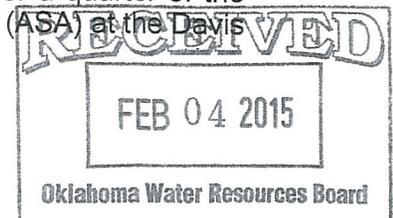
#### **Davis Quarry Groundwater Rights**

From Acreage on the Arbuckle-Simpson Aquifer  
 And Included in the ASA Groundwater Rights:  
 (1,083 acres on ASA)\*(0.2 ac-ft/acre) = 216.6 acre-feet on the ASA

From Acreage off the Arbuckle-Simpson Aquifer  
 And Excluded from the ASA Groundwater Rights:  
 (937 acres off ASA)\*(2.0 ac-ft/acre) = 1,874 acre-feet off the ASA

Based on the plan that we have adopted and implemented to monitor and report the accumulation and disposition of pit water, based on our actual consumptive use of groundwater quantities, and based on the timely submittal of this 4<sup>th</sup> Quarterly Report and Annual Summary for 2014, we believe that the Davis Quarry is in full compliance with all of the regulations that allow us to maintain its preexisting exemption.

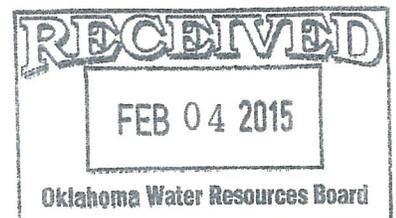
Our calculations show that Davis Quarry's total groundwater consumption for 2014 was 61.66 acre-feet. We were pleased to learn that this amount equates to just over a quarter of the water rights that we are entitled to overlying the Arbuckle Simpson Aquifer (ASA) at the Davis

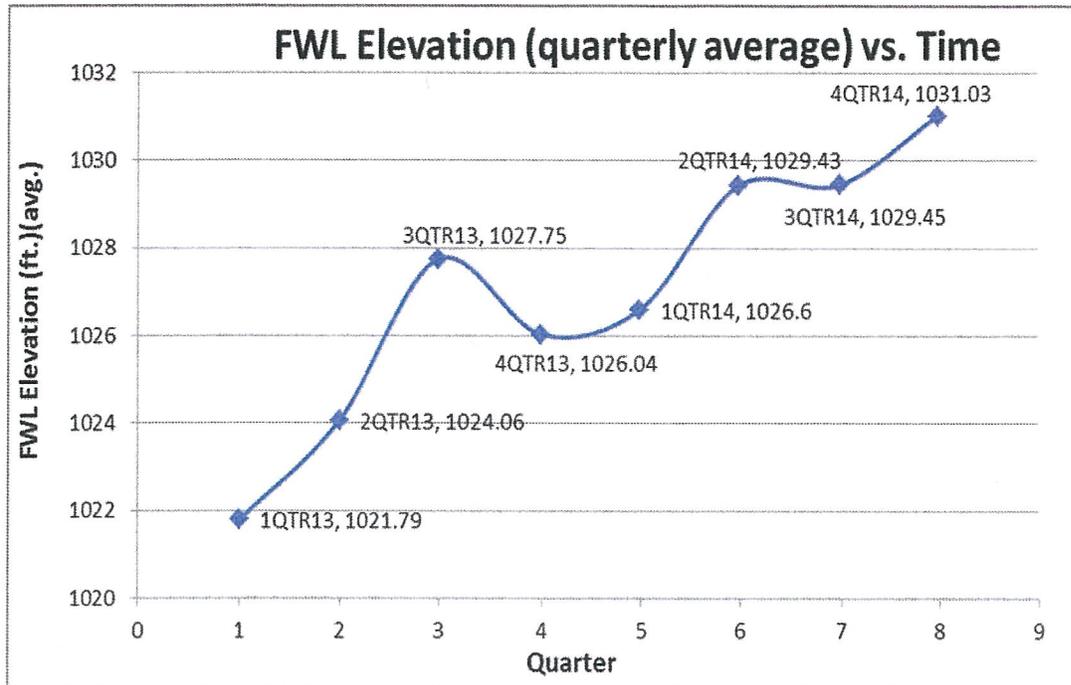


Quarry. For the record, we have 216.6 acre-feet of water rights over the ASA at the Davis Quarry location. Our total available water rights for this site could also include other unused water rights that we own at another site that overlies the ASA in Murray County.

Even though our groundwater consumption is indicated as just a fraction of the quantity we are entitled to, we still firmly believe that the consumptive use figure is overstated. Listed below are some reasons that we believe our groundwater consumption figure is inflated. Many of these reasons have been addressed in detail in previously submitted Quarterly Reports; however, we believe that it is important to recap these items in this 2014 Annual Report.

- We routinely dewater the working area called the Mine Pit into our storage lake called the Fresh Water Lake (FWL), yet this FWL has been observed to seep back into the Mine Pit on a continual basis. We have not currently determined an accurate way to account for the quantity of this seepage; so, to avoid any debate, we currently allow it to be counted as “groundwater seepage” into the Mine Pit. Every gallon of seepage that re-enters the Mine Pit from the FWL causes the calculated groundwater percentage in the Mine Pit and FWL to appear to be much higher than actual—and then, when we use water from this FWL in our operations, we are thereby charged with a higher consumption of groundwater.
- The debate as to what is truly groundwater entering the Mine Pit versus delayed storm water seepage is somewhat complex. One could argue that if the Mine Pit remained dry as it did during a two-week drought period during a recent summer—that the level of the Mine Pit floor was not beneath the water table level of the ASA. And, similarly, one could argue that once a storm event was received at the site, an initial surge of runoff water would enter the Mine Pit in the first day or two, and then the remainder of the water from the storm (minus losses) would trickle in during the next few weeks—and that this trickle of water was not truly ASA groundwater. Currently, to avoid this debate, we have counted this continual trickle of water from recent storm events as groundwater, even though our current Mine Pit is not likely within the ASA at all.
- Currently, on average, we store more water at the Davis Quarry than ever stored in the history of the site, as shown on the following graph. The reason for this increased water storage is that we have attempted to hold as much blended water as possible in our FWL to avoid its being discharged—and then being counted as consumption (specifically, the groundwater portion of the blend). We have pumped water offsite a couple of times, as indicated by the two (2) “dips” in the curve shown on the graph, and in both cases we have counted the calculated groundwater portion of this blended water as consumption. While these discharges certainly benefitted the downstream creeks, rivers, and water users, we accepted no credits for this “stream augmentation” because the regulations have seemingly become too complex for us to justify obtaining stream augmentation credits—especially since we do not need any credits at this time.





We are hopeful that you recognize the commitment that Dolese Bros. Co. has made to comply with the complex regulations that have been placed upon us and the mining industry. We trust you understand that we have the same goals as the Oklahoma Water Resources Board and many others who reside in this region, and that is to carefully manage our water resources in a responsible manner so that water is available for future generations. We also believe in consuming only the amount of groundwater that is allotted to us, and less if practical. After completing the second year of this Water Monitoring Program, we are pleased with the efforts that we have made towards accomplishing these goals and we are optimistic that you feel the same way.

Please contact me if you have any questions or comments concerning this submittal. Thank you.

Sincerely,  
DOLESE BROS. CO.

*Daniel E. Becker*

Daniel E. Becker, P.E.  
Environmental Engineer

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