

File No. 49,347	15. Formation Code: 113	Drainage Basin: NINNESCAH River	County: SU	Special Use:	Stream:																																																																																																																														
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="10" style="text-align:left;">16. Points of Diversion</th> <th colspan="5" style="text-align:left;">17. Rate and Quantity</th> </tr> <tr> <td style="font-size:small;">T MOD DEL ENT</td> <td style="font-size:small;">PDIV</td> <td style="font-size:small;">Qualifier</td> <td style="font-size:small;">S</td> <td style="font-size:small;">T</td> <td style="font-size:small;">R</td> <td style="font-size:small;">ID</td> <td style="font-size:small;">'N</td> <td style="font-size:small;">'W</td> <td></td> <td></td> <td style="font-size:small;">Authorized Rate gpm</td> <td style="font-size:small;">Quantity af</td> <td style="font-size:small;">Additional Rate gpm</td> <td style="font-size:small;">Quantity af</td> <td style="font-size:small;">Overlap PD Files</td> </tr> <tr> <td>MOD</td> <td>84186</td> <td>NW SW NW</td> <td>28</td> <td>31</td> <td>2E</td> <td>8</td> <td>3700</td> <td>5134</td> <td>(Geo-Ctr)</td> <td></td> <td>800</td> <td>94</td> <td>800</td> <td>94</td> <td>None</td> </tr> <tr> <td>ENT</td> <td>86439</td> <td>NW SW NW</td> <td>28</td> <td>31</td> <td>2E</td> <td></td> <td>3959</td> <td>5240</td> <td>(Batt 1 of 4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ENT</td> <td>86440</td> <td>NW SW NW</td> <td>28</td> <td>31</td> <td>2E</td> <td></td> <td>3940</td> <td>5039</td> <td>(Batt 1 of 4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ENT</td> <td>86441</td> <td>NW SW NW</td> <td>28</td> <td>31</td> <td>2E</td> <td></td> <td>3430</td> <td>5226</td> <td>(Batt 1 of 4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ENT</td> <td>86442</td> <td>NW SW NW</td> <td>28</td> <td>31</td> <td>2E</td> <td></td> <td>3470</td> <td>5030</td> <td>(Batt 1 of 4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="10" style="text-align:center;"><i>Battery ID #2050</i></td> <td colspan="5"></td> </tr> </table>						16. Points of Diversion										17. Rate and Quantity					T MOD DEL ENT	PDIV	Qualifier	S	T	R	ID	'N	'W			Authorized Rate gpm	Quantity af	Additional Rate gpm	Quantity af	Overlap PD Files	MOD	84186	NW SW NW	28	31	2E	8	3700	5134	(Geo-Ctr)		800	94	800	94	None	ENT	86439	NW SW NW	28	31	2E		3959	5240	(Batt 1 of 4)							ENT	86440	NW SW NW	28	31	2E		3940	5039	(Batt 1 of 4)							ENT	86441	NW SW NW	28	31	2E		3430	5226	(Batt 1 of 4)							ENT	86442	NW SW NW	28	31	2E		3470	5030	(Batt 1 of 4)							<i>Battery ID #2050</i>														
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20. Meter Required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No To be installed by <u>12/31/2018</u> Date Acceptable Meter Installed _____																																																																																																																																			
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Comments: *FILE NOS. 49,348 AND 49,388 TO BE VOLUNTARILY DISMISSED. PERMIT IS CONDITIONED TO REQUIRE INSTALLATION OF A GROUNDWATER OBSERVATION WELL. <i>Special Cond: Observation well</i>																																																																																																																																			

KANSAS DEPARTMENT OF AGRICULTURE
Division of Water Resources

M E M O R A N D U M

TO: Files

DATE: November 7, 2017

FROM: Doug Schemm

RE: Applications, File Nos. 49,347; 49,348; and
49,388

Mark Lawless has filed the above referenced new application (File No. 49,347) proposing to appropriate 94 acre-feet of groundwater at a diversion rate of 800 gallons per minute for irrigation use. There are no other water rights overlapping the point of diversion or place of use (File Nos. 49,348 & 49,388 are to be dismissed). The applicant has signed the application form stating he has legal access to the point of diversion. The proposed point of diversion is the geographic center of a battery of four wells located in the Northwest Quarter of Section 28, Township 31 South, Range 2 East, Sumner County.

The initial application had identified a 73 acre place of use in the Northwest Quarter of Section 28, however the applicant is in the process of purchasing the property (contract purchaser) in the Northeast Quarter of Section 29, immediately west of his original place of use. A review of the acreage in Section 28 shows it to be 62 acres, and the acreage in Section 29 consists of 44 acres for a total of 106 acres. The applicant is proposing to install a center pivot, which is estimated to cover 78 acres of the total acreage. The requested quantity of water of 94 acre-feet applied to 78 acres, is just slightly less than 1.3 acre-feet per acre, which is the maximum allowable for Sumner County, but still a reasonable quantity of water.

Please note that File Nos. 49,348 and 49,388 were both to authorize the same proposed pump site on the Ninnescah River, and to overlap in place of use with File No. 49,347. However, the applicant has requested that both of these pending files be dismissed, because he has adequate water from the groundwater file under 49,347. A "Voluntary Dismissal of an Application for Permit to Appropriate Water" form was subsequently received in our office on October 25, 2017 for each of these files, signed by the applicant. Findings and Orders have been prepared to dismiss these two files as requested.

Based on the driller log information that was submitted to our office, saturated thickness of the aquifer in this local area is limited (approximately 18 feet). Saturated thickness is typically defined as the distance from the water table to the base of the aquifer for a shallow, unconfined aquifer. The limited saturated thickness has created concerns as to what this source of water supply can physically yield. Both regulation, K.A.R. 5-3-20 specifically (b)(2), and statute K.S.A. 82a-711 specifically (b)(2)(4), support the need for additional information. K.A.R. 5-3-20 (b), states, in part, the maximum reasonable annual quantity of water that may be approved for use on irrigated land shall be limited to the following: (2) the quantity of water reasonably physically available from the source of water supply based on the physical characteristics of the source of water supply and the proposed diversion works. The saturated thickness at the proposed point of diversion is a physical characteristic of this aquifer, and is likely to be a significant factor in determining what quantity of water the Division of Water Resources can approve for this application. Therefore the applicant was sent a letter on September 5, 2017, requesting additional information such as a hydrologic analysis of the aquifer (e.g. aquifer pump test) to show what quantity of water is physically available from the source of supply.

Test results were received on October 23, 2017 in a report prepared by Ground Water Associates, Inc. The report includes the result of a 24 hour pumping test, and projected drawdown from a battery of 3 wells, pumping at a combined rate of 800 gpm continuously until the requested 94 acre-feet would be applied (26.6 days). Estimated drawdowns were 11.05' at 1,320 feet and 9.25' at ½ mile. The report concluded that the aquifer can sustain the requested pumping rate, and that with properly completed wells actual drawdowns will be significantly less than estimated projections. In addition, note that the saturated thickness is 8 feet greater in the test well than in the original log provided with the application.

Mark Lawless

File Nos. 49,347; 49,348; and 49,388

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In 2004 the United States Geological Survey (USGS) completed a hydrologic model of a portion of the Arkansas River and associated drainage basins (Ninnescah River), generally bounded by Ranges 2 West to 3 East and Townships 26 South to 34 South (near state line). The USGS model indicated that the aquifer in this area receives more recharge from precipitation than DWR has historically used in safe yield calculations. The data and analyses are detailed in the USGS Scientific Investigations Report 2004-5204 entitled "Characterization and Simulation of Flow in the Lower Arkansas River Alluvial Aquifer, South-Central Kansas". In order to evaluate the potential impact of this study on our safe yield calculations, DWR suspended processing applications for new appropriations of water in the model area.

DWR staff completed an evaluation of the USGS model and determined that the precipitation recharge value of 5.4 inches per year that is used in the USGS model is reasonable and appropriate. In order to reserve water in the alluvial aquifers that can contribute to base flow to area streams and for domestic use, it was determined that 75 percent of the 5.4 inches of precipitation recharge shall be available for appropriation. This is consistent with safe yield appropriation in many other basins across the state, and is the current percent available in for all applications in the Ninnescah River drainage basin. Therefore, for all pending applications within the model area, safe yield will be evaluated using the standard methodology in K.A.R. 5-3-11, which is based on the extent of the unconfined aquifer (area of consideration), a Potential Annual Recharge value of 5.4 inches, and a percent of recharge available for appropriation of 75%. Current annual recharge across the model area is approximately 3 inches.

Per the requirements in K.A.R. 5-3-11, safe yield is determined by the extent of the unconfined aquifer within a two-mile circle radius of the point of diversion, which establishes the area of consideration. For this application, the area of consideration (alluvial aquifer) provided an area of consideration of 6,145 acres, with a potential annual recharge of 5.4 inches, and 75% of recharge available for appropriation, safe yield was determined to be 2,073.94 acre-feet. Existing water rights have appropriated 1,869.89 acre-feet, providing a difference of 204.05 acre-feet of water available for appropriation. The application requesting 94 acre-feet complies with safe yield criteria.

The applicant identified several nearby domestic wells within one-half mile of the proposed point of diversion. Nearby well owner letters were sent out on October 5, 2017. There were no responses of any kind. According to the WRIS database, the nearest non-domestic point of diversion is located over 1,320 feet away, while the nearest domestic well is located over 1,500 feet away. The proposed point of diversion meets minimum well spacing to all existing wells. Per the requirements in K.A.R. 5-4-4 for all other aquifers, the minimum well spacing should be one-quarter mile to all other non-domestic wells and 660 feet to domestic wells. However, based on the potential drawdown analysis, the applicant will be required to ensure minimum well spacing is met when the wells are constructed, and he must also install an observation well near the domestic well to the east of his property. The observation well will assist in monitoring aquifer water levels.

In accordance with K.S.A. 82a-706c, the Chief Engineer retains full authority to require any water user to install meters, gages, or other measuring devices, which devices he or she or his or her agents may read at any time. Water flowmeter requirements are further described in K.A.R. 5-1-4 through K.A.R 5-1-12. If any chemical or foreign substance is injected into the water pumped under this permit, a check valve will also need to be installed. A water level measurement tube is required because the rate of diversion will exceed 100 gpm.

Mark Lawless

File Nos. 49,347; 49,348; and 49,388

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In a November 6, 2017 e-mail, Jeff Lanterman, Water Commissioner, Stafford Field Office, stated that the referenced application, File No. 49,347 be approved, with the requirement that an observation well be installed as noted above. Mr. Lanterman was also receptive of the modified place of use.

Based on the above discussion, that the area is open to new appropriations for groundwater, the proposed appropriation of water complies with safe yield and well spacing criteria, the applicant provided additional information regarding the aquifer yield, he has agreed to install a groundwater observation well, and there is no evidence that senior rights will be impaired, it is recommended that the referenced application File No. 49,347 be approved, and File Nos. 49,348 and 49,388 be dismissed as requested by the applicant.

Doug Schemm
Environmental Scientist
Topeka Field Office

1320 Research Park Drive
Manhattan, Kansas 66502
(785) 564-6700



900 SW Jackson, Room 456
Topeka, Kansas 66612
(785) 296-3556

Jackie McClaskey, Secretary

Governor Sam Brownback
FILE COPY

December 6, 2017

MARK E LAWLESS
PO BOX 515
BELLE PLAINE KS 67013

Re: Appropriation of Water, File No. 49,347, and Applications, File Nos. 49,348 and 49,388

Dear Mr. Lawless:

There is enclosed a permit to appropriate water (File No. 49,347) authorizing you to proceed with construction of the proposed diversion works (except those dams and stream obstructions regulated by K.S.A. 82a-301 through 305a), to divert such unappropriated water as may be available from the source and at the location specified in the permit, and to use it for the purpose and at the location described in the permit.

Your attention is directed to the enclosures and to the terms, conditions, and limitations specified in these approval documents with specific reference to Paragraph Nos. 19 through 22. You must ensure that the geographic center of the well battery complies with minimum well spacing criteria after the wells are constructed. In addition, you must install a groundwater observation well to document aquifer conditions. A water meter is required on the proposed diversion works and you must install it prior to water being put to beneficial use in order for you to maintain accurate records of water use. The meter should be used to provide the information required on the annual water use report.

Failure to notify the Chief Engineer of the Division of Water Resources of the completion of the diversion works within the time allowed, or within any authorized extension of time thereof, will result in the dismissal of this permit. Enclosed is a form which may be used to notify the Chief Engineer that the proposed diversion works have been completed. All requests for extensions of time to complete diversion works, or to perfect appropriations, must be submitted to the Chief Engineer before the expiration of time originally set forth in the permit to complete diversion works or to perfect an appropriation. If for any reason, you require an extension of time, you must request it before the expiration of time set forth in this permit. Failure to comply with this regulation will result in the dismissal of your permit or your water right. Any request for an extension of time shall be accompanied by the required statutory fee, which is currently \$100.00.

There is also enclosed an information sheet setting forth the procedure to obtain a Certificate of Appropriation which will establish the extent of your water right.

Mark Lawless

File Nos. 49,347; 49,348; and 49,388

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In addition, enclosed are the Findings and Orders by the Chief Engineer, Division of Water Resources, Kansas Department of Agriculture, dismissing Applications, File Nos. 49,348 and 49,388, as you requested in the "Voluntary Dismissal of an Application for Permit to Appropriate Water" forms received in our office on October 25, 2017. Appropriation of Water, File No. 49,347 will provide sufficient groundwater for the irrigation project, and this surface water source is not necessary.

If you have any questions, please contact our office. If you wish to discuss a specific file, please have the file number ready so that we may help you more efficiently.

Sincerely,



Kristen A. Baum

New Application Unit Supervisor

Water Appropriation Program

KAB:dws

Enclosures

pc: Stafford Field Office



KANSAS DEPARTMENT OF AGRICULTURE
Jackie McClaskey, Secretary of Agriculture

DIVISION OF WATER RESOURCES
David W. Barfield, Chief Engineer

**APPROVAL OF APPLICATION
and
PERMIT TO PROCEED**

(This is not a Certificate of Appropriation)

This is to certify that I have examined Application, **File No. 49,347** of the applicant

**MARK E LAWLESS
PO BOX 515
BELLE PLAINE KS 67013**

for a permit to appropriate water for beneficial use, together with the maps, plans and other submitted data, and that the application is hereby approved and the applicant is hereby authorized, subject to vested rights and prior appropriations, to proceed with the construction of the proposed diversion works (except those dams and stream obstructions regulated by K.S.A. 82a-301 through 305a, as amended), and to proceed with all steps necessary for the application of the water to the approved and proposed beneficial use and otherwise perfect the proposed appropriation subject to the following terms, conditions and limitations:

1. That the priority date assigned to such application is **March 18, 2015**.
2. That the water sought to be appropriated shall be used for irrigation use on land described in the application, as follows:

Sec.	Twp.	Range	NE¼				NW¼				SW¼				SE¼				TOTAL
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	
28	31S	2E					35	27										62	
29	31S	2E	22		2	20												44	

3. That the authorized source from which the appropriation shall be made is groundwater, to be withdrawn by means of a battery of four (4) wells with a geographic center located in the Northwest Quarter of the Southwest Quarter of the Northwest Quarter (NW¼ SW¼ NW¼) of Section 28, more particularly described as being near a point 3,700 feet North and 5,134 feet West of the Southeast corner of said section, in Township 31 South, Range 2 East, Sumner County, Kansas, located substantially as shown on the topographic map accompanying the application.

4. That the appropriation sought shall be limited to a maximum diversion rate not in excess of **800 gallons per minute** (1.78 c.f.s.) and to a quantity not to exceed **94 acre-feet** of water for any calendar year.

5. That installation of works for diversion of water shall be completed on or before **December 31, 2018**, or within any authorized extension thereof. The applicant shall notify the Chief Engineer and pay the statutorily required field inspection fee, which is currently \$400.00, when construction of the works has been completed. Failure to timely submit the notice and the fee will result in revocation of the permit. Any request for an extension of time shall be accompanied by the required statutory fee, which is currently \$100.00.

6. That the proposed appropriation shall be perfected by the actual application of water to the proposed beneficial use on or before **December 31, 2022**, or any authorized extension thereof. Any request for an extension of time shall be submitted prior to the expiration of the deadline and shall be accompanied by the required statutory fee, which is currently \$100.00.

7. That the applicant shall not be deemed to have acquired a water appropriation for a quantity in excess of the amount approved herein nor in excess of the amount found by the Chief Engineer to have been actually used for the approved purpose during one calendar year subsequent to approval of the application and within the time specified for perfection or any authorized extension thereof.

8. That the use of water herein authorized shall not be made so as to impair any use under existing water rights nor prejudicially and unreasonably affect the public interest.

9. That the right of the appropriator shall relate to a specific quantity of water and such right must allow for a reasonable raising or lowering of the static water level and for the reasonable increase or decrease of the streamflow at the appropriator's point of diversion.

10. That this permit does not constitute authority under K.S.A. 82a-301 through 305a to construct any dam or other obstruction; nor does it grant any right-of-way, or authorize entry upon or injury to, public or private property.

11. That all diversion works constructed under the authority of this permit into which any type of chemical or other foreign substance will be injected into the water pumped from the diversion works shall be equipped with an in-line, automatic quick-closing, check valve capable of preventing pollution of the source of the water supply. The type of valve installed shall meet specifications adopted by the Chief Engineer and shall be maintained in an operating condition satisfactory to the Chief Engineer.

12. That an acceptable water flow meter shall be installed and maintained on the diversion works authorized by this permit in accordance Kansas Administrative Regulations 5-1-4 through 5-1-12 adopted by the Chief Engineer. This water flow meter shall be used to provide an accurate quantity of water diverted as required for the annual water use report (including the meter reading at the beginning and end of the report year).

13. That the applicant shall maintain accurate and complete records from which the quantity of water diverted during each calendar year may be readily determined and the applicant shall file an annual water use report with the Chief Engineer by March 1 following the end of each calendar year. Failure to file the annual water use report by the due date shall cause the applicant to be subject to a civil penalty.

14. That all wells with a diversion rate of 100 gallons per minute or more drilled under the authority of this permit shall have a tube or other device installed in a manner acceptable to, and in accordance with specifications adopted by, the Chief Engineer. This tube or device shall be suitable for making water level measurements and shall be maintained in a condition satisfactory to the Chief Engineer.

15. That no water user shall engage in nor allow the waste of any water diverted under the authority of this permit.

16. That failure without cause to comply with provisions of the permit and its terms, conditions and limitations will result in the forfeiture of the priority date, revocation of the permit and dismissal of the application.

17. That the right to appropriate water under authority of this permit is subject to any minimum desirable streamflow requirements identified and established pursuant to K.S.A. 82a-703c for the source of supply to which this water right applies.

18. That this permit is limited such that all wells shall be located within a three hundred (300) foot radius circle, in the same local source of supply, and shall supply water to a common distribution system.

19. That the point of diversion constructed under the authority of this permit shall comply with the minimum spacing requirements of 1,320 feet to any senior non-domestic well and 660 feet to any senior domestic well.

20. That the applicant shall install, at the applicant's expense, an observation well that will be located approximately near the Northeast Quarter of the Southwest Quarter of the Northwest Quarter (NE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$) of Section 28, more particularly described as being near a point 3,600 feet North and 4,100 feet West of the Southeast corner of said section, in Township 31 South, Range 2 East, Sumner County, Kansas, prior to the diversion of water for beneficial use under the authority of this permit. Such observation well shall be completed in the same aquifer and screened in the same interval as the well authorized by this permit.

21. That the observation well shall be constructed to allow for groundwater monitoring and protected by a steel 6 X 6 inch square well protector that is of 5 feet minimum length and has a lockable lid. The monitoring well and square well protector shall be seated in a standard concrete well pad.

22. That the observation well required herein shall be maintained, by the applicant, in a condition that is satisfactory to the Chief Engineer. The applicant shall provide access for representatives of the Chief Engineer to the observation well, for measurements as may be necessary to document aquifer conditions.

RIGHT TO A HEARING AND TO ADMINISTRATIVE REVIEW

If you are aggrieved by this Order, then pursuant to K.S.A. 82a-1901, you may:

- 1) request an evidentiary hearing before the Chief Engineer, or
- 2) request administrative review by the Secretary of Agriculture.

Failure to request an evidentiary hearing before the Chief Engineer does not preclude your right to administrative review by the Secretary.

To obtain an evidentiary hearing before the Chief Engineer, a written request for hearing must be filed within 15 days after service of this Order as provided in K.S.A. 77-531 (**i.e., within a total of 18 days after this Order was mailed to you**), with: Kansas Department of Agriculture, Attn: Legal Section, 1320 Research Park Drive, Manhattan, Kansas 66502, FAX (785) 564-6777.

If you do not file a request for an evidentiary hearing before the Chief Engineer, you may petition for administrative review of the Order by the Secretary of Agriculture. A petition for review shall be in writing and state the basis for requesting administrative review. The request for hearing may be denied if the request fails to clearly establish factual or legal issues for review. See K.S.A. 77-527. The petition must be filed within 30 days after service of this Order as provided in K.S.A. 77-531 (**i.e., within a total of 33 days after this Order was mailed to you**), and be filed with: Secretary of Agriculture, Attn: Legal Division, Kansas Department of Agriculture, 1320 Research Park Drive, Manhattan, Kansas 66502, FAX (785) 564-6777.

APPLICATION COMPLETE

10/24/2017

Reviewer DWS

THE STATE OF KANSAS



WATER RESOURCES RECEIVED

MAY 11 2015

12:36

KS DEPT OF AGRICULTURE

KANSAS DEPARTMENT OF AGRICULTURE
Jackie McClaskey, Secretary of Agriculture

DIVISION OF WATER RESOURCES
David W. Barfield, Chief Engineer

File Number 49,347

This item to be completed by the Division of Water Resources.

WATER RESOURCES RECEIVED

APPLICATION FOR PERMIT TO APPROPRIATE WATER FOR BENEFICIAL USE

Filing Fee Must Accompany the Application
(Please refer to Fee Schedule attached to this application form.)

MAR 18 2015

1:01

KS DEPT OF AGRICULTURE

To the Chief Engineer of the Division of Water Resources, Kansas Department of Agriculture,
1320 Research Park Drive, Manhattan, Kansas 66502:

1. Name of Applicant (Please Print): MARK LAWLESS
Address: P.O. Box 515
City: BELLE PLAIN, KS State KS Zip Code 67013
Telephone Number: (620) 488-3908 (316) 617-3126

2. The source of water is: surface water in _____ (stream)
OR groundwater in Ninnescah River* (drainage basin)

Certain streams in Kansas have minimum target flows established by law or may be subject to administration when water is released from storage for use by water assurance district members. If your application is subject to these regulations on the date we receive your application, you will be sent the appropriate form to complete and return to the Division of Water Resources.

3. The maximum quantity of water desired is 94 acre-feet OR _____ gallons per calendar year, to be diverted at a maximum rate of 800 gallons per minute OR _____ cubic feet per second.

Once your application has been assigned a priority, the requested maximum rate of diversion and maximum requested quantity of water under that priority number can **NOT** be increased. Please be certain your requested maximum rate of diversion and maximum quantity of water are appropriate and reasonable for your proposed project and are in agreement with the Division of Water Resources' requirements.

4. The water is intended to be appropriated for (Check use intended):
(a) Artificial Recharge (b) Irrigation (c) Recreational (d) Water Power
(e) Industrial (f) Municipal (g) Stockwatering (h) Sediment Control
(i) Domestic (j) Dewatering (k) Hydraulic Dredging (l) Fire Protection
(m) Thermal Exchange (n) Contamination Remediation

YOU **MUST** COMPLETE AND ATTACH ADDITIONAL DIVISION OF WATER RESOURCES FORM(S) PROVIDING INFORMATION TO SUBSTANTIATE YOUR REQUEST FOR THE AMOUNT OF WATER FOR THE INTENDED USE REFERENCED ABOVE.

For Office Use Only:
F.O. 2 GMD 0 Meets K.A.R. 5-3-1 (YES/NO) Use IRR Source G/S County SU By VAG Date 3-18-15
Code REG Fee \$ 200 TR # 15050047 Receipt Date 3-18-15 Check # 7205

DWR 1-100 (Revised 06/16/2014)

WATER RESOURCES RECEIVED

NOV 17 2017

SCANNED

KS DEPT OF AGRICULTURE 3/26/2015 UCM

A. One in the NW quarter of the SW quarter of the NW quarter of Section 28 more particularly described as 3677 ³⁹⁵⁹ feet North and 5240 feet West of S/E corner of said Section, Township 31 S, Range 2 E, Sumner County, Kansas File No. 49,347

5. The location of the proposed wells, pump sites or other works for diversion of water is:

Note: For the application to be accepted, the point of diversion location must be described to at least a 10 acre tract, unless you specifically request a 60 day period of time in which to locate the site within a specifically described, minimal legal quarter section of land.

PROPOSED
GEO CENTER
PLEASE
ALLOW
60 DAYS
TO LOCATE!

- * One in the NW quarter of the SW quarter of the NW quarter of Section 28, more particularly described as being near a point 3388 ³⁷⁰⁰ feet North and 5215 ⁵¹³⁴ feet West of the Southeast corner of said section, in Township 31 South, Range 2 (East/West (circle one)), SUMNER County, Kansas.
- (B) One in the NW quarter of the SW quarter of the NW quarter of Section 28, more particularly described as being near a point 3622 ³⁹⁴⁰ feet North and 5037 feet West of the Southeast corner of said section, in Township 31 South, Range 2 (East/West (circle one)), SUMNER County, Kansas.
- (C) One in the NW quarter of the SW quarter of the NW quarter of Section 28, more particularly described as being near a point 3412 ³⁴³⁰ feet North and 5226 feet West of the Southeast corner of said section, in Township 31 South, Range 2 (East/West (circle one)), SUMNER County, Kansas.
- (D) One in the NW quarter of the SW quarter of the NW quarter of Section 28, more particularly described as being near a point 3188 ³⁴⁹⁰ feet North and 5030 feet West of the Southeast corner of said section, in Township 31 South, Range 2 (East/West (circle one)), SUMNER County, Kansas.

If the source of supply is groundwater, a separate application shall be filed for each proposed well or battery of wells, except that a single application may include up to four wells within a circle with a quarter (1/4) mile radius in the same local source of supply which do not exceed a maximum diversion rate of 20 gallons per minute per well.

A battery of wells is defined as two or more wells connected to a common pump by a manifold; or not more than four wells in the same local source of supply within a 300 foot radius circle which are being operated by pumps not to exceed a total maximum diversion rate of 800 gallons per minute and which supply water to a common distribution system.

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6. The owner of the point of diversion, if other than the applicant is (please print):

(name, address and telephone number) NOV 17 2017

(name, address and telephone number) KS DEPT OF AGRICULTURE

You must provide evidence of legal access to, or control of, the point of diversion from the landowner or the landowner's authorized representative. Provide a copy of a recorded deed, lease, easement or other document with this application. In lieu thereof, you may sign the following sworn statement:

I have legal access to, or control of, the point of diversion described in this application from the landowner or the landowner's authorized representative. I declare under penalty of perjury that the foregoing is true and correct.

Executed on 3/14, 2015. [Signature]
Applicant's Signature

The applicant must provide the required information or signature irrespective of whether they are the landowner. Failure to complete this portion of the application will cause it to be unacceptable for filing and the application will be returned to the applicant.

7. The proposed project for diversion of water will consist of 4 Wells
(number of wells, pumps or dams, etc.)
and (was)(will be) completed (by) ASAP
(Month/Day/Year - each was or will be completed)

8. The first actual application of water for the proposed beneficial use was or is estimated to be ASAP 8-24-15
(Mo/Day/Year)

* Revised geo-center to comply with well spacing criteria.
Applicant agreed in 9/14/17
phone call. DWS/DWR

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9. Will pesticide, fertilizer, or other foreign substance be injected into the water pumped from the diversion works?
 Yes No If "yes", a check valve shall be required.

All chemigation safety requirements must be met including a chemigation permit and reporting requirements.

10. If you are planning to impound water, please contact the Division of Water Resources for assistance, prior to submitting the application. Please attach a reservoir area capacity table and inform us of the total acres of surface drainage area above the reservoir.

Have you also made an application for a permit for construction of this dam and reservoir with the Division of Water Resources? Yes No

- If yes, show the Water Structures permit number here _____
- If no, explain here why a Water Structures permit is not required _____

11. The application must be supplemented by a U.S.G.S. topographic map, aerial photograph or a detailed plat showing the following information. On the topographic map, aerial photograph, or plat, identify the center of the section, the section lines or the section corners and show the appropriate section, township and range numbers. Also, please show the following information:

- (a) The location of the proposed point(s) of diversion (wells, stream-bank installations, dams, or other diversion works) should be plotted as described in Paragraph No. 5 of the application, showing the North-South distance and the East-West distance from a section line or southeast corner of section.
- (b) If the application is for groundwater, please show the location of any existing water wells of any kind within 1/2 mile of the proposed well or wells. Identify each existing well as to its use and furnish the name and mailing address of the property owner or owners. If there are no wells within 1/2 mile, please advise us.
- (c) If the application is for surface water, the names and addresses of the landowner(s) 1/2 mile downstream and 1/2 mile upstream from your property lines must be shown.
- (d) The location of the proposed place of use should be shown by crosshatching on the topographic map, aerial photograph or plat.
- (e) Show the location of the pipelines, canals, reservoirs or other facilities for conveying water from the point of diversion to the place of use.

A 7.5 minute U.S.G.S. topographic map may be obtained by providing the section, township and range numbers to: Kansas Geological Survey, 1930 Constant, Campus West, University of Kansas, Lawrence, Kansas 66047.

12. List any application, appropriation of water, water right, or vested right file number that covers the same diversion points or any of the same place of use described in this application. Also list any other recent modifications made to existing permits or water rights in conjunction with the filing of this application.

PLEASE Allow 60 Days to locate wells.

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13. Furnish the following well information if the proposed appropriation is for the use of groundwater. If the well has not been completed, give information obtained from test holes, if available.

Information below is from: Test holes Well as completed Drillers log attached

Well location as shown in paragraph No.	(A)	(B)	(C)	(D)	
Date Drilled	<u>4-6-15</u>				<i>Driller</i>
Total depth of well	<u>36</u>				<i>Estimated</i>
Depth to water bearing formation	<u>17</u>				<i>well at 250 to</i>
Depth to static water level	<u>17</u>				<i>300 gpm.</i>
Depth to bottom of pump intake pipe	<u>35</u>				

14. The relationship of the applicant to the proposed place where the water will be used is that of OWNER
(owner, tenant, agent or otherwise)

15. The owner(s) of the property where the water is used, if other than the applicant, is (please print):

_____ (name, address and telephone number)

_____ (name, address and telephone number)

16. The undersigned states that the information set forth above is true to the best of his/her knowledge and that this application is submitted in good faith.

Dated at Belle Plaine, Kansas, this 14 day of MARCH, 2015
(month) (year)

Paul White
(Applicant Signature)

By _____
(Agent or Officer Signature)

(Agent or Officer - Please Print)

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Assisted by _____ Date: _____
(office/title)

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Revised Per Applicant.
 11/6/2017
 DWS/DWR

Applicant is contract purchaser for
 Property in NE 1/4 of Section 29-31-2E.

**IRRIGATION USE
 SUPPLEMENTAL SHEET**

File No. 49,347

Name of Applicant (Please Print): MARK LAWLESS

1. Please supply the name and address of each landowner, the legal description of the lands to be irrigated, and designate the actual number of acres to be irrigated in each forty acre tract or fractional portion thereof:

Landowner of Record NAME: MARK LAWLESS
 ADDRESS: P.O. Box 515, BELL PLAINS, KS 67013

S	T	R	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTAL
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
28	31	2E					35	27										62 Ac	
29	31	2E	22		2	20												44 acres	

Total = 106 acres

Landowner of Record NAME: _____
 ADDRESS: _____

S	T	R	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTAL
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	

Landowner of Record NAME: _____
 ADDRESS: _____

S	T	R	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTAL
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	

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Schemm, Doug

From: Lanterman, Jeff
Sent: Monday, November 6, 2017 9:52 AM
To: Schemm, Doug
Cc: Conant, Cameron
Subject: RE: Revised place of use Mark Lawless 49,347

Works for me.

Jeff

From: Schemm, Doug
Sent: Monday, November 6, 2017 9:50 AM
To: Lanterman, Jeff <Jeff.Lanterman@ks.gov>
Cc: Conant, Cameron <Cameron.Conant@ks.gov>
Subject: FW: Revised place of use Mark Lawless 49,347

Hello Stafford,

Just talked with Mark, he's ok with the observation well requirement. He is buying the property to the west and would like to swing the pivot all the way around. The entire property is 106 acres, but the area under pivot will only be about 78 acres. Are you guys ok with this plan?

Thanks, Doug

From: Schemm, Doug
Sent: Monday, November 6, 2017 9:18 AM
To: Mark Karla Lawless (marklawless@sktc.net) <marklawless@sktc.net>
Subject: Revised place of use

Mark,

Here's the revised Place of use Map and the Irrigation Supplemental sheet. I revised the acreage a bit in Section 28. Also estimated pivot location. I got the area of the pivot to be about 78 acres or so. Take a look and see if it's ok by you,

Have a great day,

Doug

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Schemm, Doug

From: Mark Karla Lawless <marklawless@sktc.net>
Sent: Monday, November 6, 2017 9:41 AM
To: Schemm, Doug
Subject: Re: Revised place of use

Hi Doug

I looked at your map and it is spot on what I am trying to achieve. I am planning on using an end gun, so with the place of use map as you have it listed will encompass everything I would like to water.

Thanks
Mark Lawless

From: "Schemm, Doug" <Doug.Schemm@ks.gov>
To: "Mark Karla Lawless" <marklawless@sktc.net>
Sent: Monday, November 6, 2017 7:17:56 AM
Subject: Revised place of use

Mark,
Here's the revised Place of use Map and the Irrigation Supplemental sheet. I revised the acreage a bit in Section 28. Also estimated pivot location. I got the area of the pivot to be about 78 acres or so. Take a look and see if it's ok by you,
Have a great day,
Doug

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Schemm, Doug

From: Lanterman, Jeff
Sent: Friday, November 3, 2017 12:26 PM
To: Schemm, Doug
Cc: Conant, Cameron
Subject: FW: Mark Lawless 49347
Attachments: 49347 49348 and 49388 Memo to File.docx; 49347 rough map.jpg

Doug;

The LST study did show pretty good drawdown at a nearby domestic well which could equate to a pretty good percentage of saturated thickness at their well. Assuming ST is about the same as the Lawless wells ¼ of a mile away. First dry year that thing will be pumped hard.

I concur with the requirement for an observation well at or about the location noted above. There should be some wording regarding properly protecting it.

It will give us something to investigate with should an impairment claim occur.

Kelly told me that on the Pat Haffner apps the CE says a limit of 20% of the drawdown is impairment and they denied or are working on denial of those apps. We could get that here.

Jeff

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From: Conant, Cameron
Sent: Friday, November 3, 2017 10:38 AM
To: Lanterman, Jeff <Jeff.Lanterman@ks.gov>
Subject: FW: Mark Lawless 49347

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Jeff, this is a new application for irrigation for a battery of wells. The test log originally indicated less than 25' of saturated thickness so a LST study was requested. Groundwater Associates completed the study and it is in Docuware as well as in our shared drive of completed LST studies.

The LST study showed 3 wells, each pumping 267gpm (800gpm total) until the requested quantity of 94 AF was pumped, or about 26 days of continuous pumping. The observed drawdown at the pumping wells was about 15' and the resultant drawdown at 1320' was calculated to be ~11'.

http://hercules.kgs.ku.edu/geohydro/wizard/wizardwelldetail.cfm?usgs_id=372033097105402 (60' well located ~2 miles NE)

http://hercules.kgs.ku.edu/geohydro/wizard/wizardwelldetail.cfm?usgs_id=372036097134001 (57' well located ~1.5 miles NW)

Based on the above hydrographs, the nearby water levels appear stable, but in this area it's difficult to determine the possible recent impacts from the widespread new development. Also, the 2 hydrographs appear to be in better areas with more saturated thickness, this new application is being developed in a more "fringe area".

There are 2 nearby domestic wells. Both meet the 660' spacing by a wide margin, they are located ~ 1570' NW and 1430' E from the revised geo-center. I am unable to find well logs for either domestic well. Both domestic wells are shown on the application map and both were notified, neither submitted comments.

+++ Due to the potential for 11' of drawdown at 1320' when these new wells are operated continuously (which could happen in a dry year), I believe an OBS well should be required with permit conditions on this application. An OBS well located at ~3600' N & 4100'W seems appropriate for monitoring any potential impacts on the eastern domestic well. I have more concern about the east domestic well than I do about the NW domestic well. According the GWA study, the water flow is SE and there seems to be potential for the new wells to impact the E domestic well more than the NW domestic well. We need the "normal" OBS well requirements, same depth, screen, lockable steel protective casing, ect. Based on my understanding of the proposed place of use, placement here should not alter the irrigation system plans in any way. Based on the GWA study, a lowering of 10' at the domestic well could be a loss of 40% of the saturated thickness in any given year which could be problematic for the domestic. We really need a way to investigate this if it becomes an impairment issue. On the positive side, File No. 44569 has operated for many years with a single well pumping 300gpm and is located ~1200' from the domestic well. To date we have not had complaints from the domestic well owner, but the cumulative impact with the new battery has the potential to create problems.

+++ I think we need to include the additional condition as follows: *That this permit is further limited such that the authorized point of diversion (geographic center of the well battery), drilled and constructed under the authority of this permit shall comply with the minimum spacing requirement of 660' to any senior domestic well and 1,320' to any permitted irrigation well.*

Jeff, I think this new application can be recommended for approval with the additional condition to meet spacing as completed to all surrounding wells and with the requirement of an OBS well roughly located as discussed above and shown on the "rough map" attached to this email. The 2 surface water applications will be voluntarily dismissed with the approval of this new application.

Please pass on to Doug if you agree.

Cameron

From: Schemm, Doug
Sent: Monday, October 23, 2017 1:51 PM
To: Lanterman, Jeff <Jeff.Lanterman@ks.gov>
Cc: Conant, Cameron <Cameron.Conant@ks.gov>
Subject: Mark Lawless 49347

Hello Stafford,
Brad's report is in Docuware. It looks like Mark can get what he needs out of these wells. The test well log is actually quite a bit better than the initial test hole by Darling (565' SW). The test well had 26' of saturated thickness.
Please review and provide recommendation.
Thanks, Doug

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#49,347

1320' radius

44569

43705

46508 46508
46508

49347 revised location

31S02E27

require OBS well
~3,600'N & 4,100'W

NINNESCAH R.

Lawless-voluntarrily dismissed surface rights

31S02E29

49077

31S02E28

48559

48559 48559

48559

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Ground Water Associates, Inc.

109 W. 1st AVENUE, P.O. BOX 792 • GODDARD, KS 67052 • 316-550-6177

Oct 16, 2017

Doug Schemm
Division of Water Resources
6531 SE Forbes Ave., Suite B
Topeka, KS 66619

RECEIVED
OCT 23 2017
Topeka Field Office
DIVISION OF WATER RESOURCES

Subject: Mark Lawless Water Application No. 49,347

Dear Doug,

This letter is written to transmit information gathered on the twenty-four hour pumping test conducted on September 18 and 19, 2017. A pump was set in the 6" test well located near the northwest corner of Section 28, T31S, R2E, Sumner County, Kansas owned by the Mark Lawless. Readings were collected on the 6" pumping well, a 2" monitor well located 19.00 feet north, and the 4" Darling Drilling test well located 565 feet southwest.

Geology

Two drill logs are included with this report, the 2" monitor well and the 6" test well. We do not have a copy of the drill log for the 4" Darling Drilling monitor well. Both logs show good sand and gravel from sixteen feet to forty-one feet, then shale. GPS locations were taken with handheld units, using NAD 1927 datum to match the Oxford:KS map, all three wells are located on the included topographic map.

Bulletin 151, Geology and Ground-Water Resources of Sumner County, Kansas, indicates that Section 28, T31S, R2E is located in either the Wisconsin Terrace deposit or Recent Alluvium, both yield large quantities of water to wells in Sumner County. These deposits are sand and gravel, chiefly arkosic, with lenses of silt and clay.¹ These formations can only be differentiated by topographic position.²

The Ninnescah River flows toward the south and east within ¼ mile of this 6" test well location. Bulletin 151 Plate 2 shows the water level contours in 1961 (Plate 2 is included with this report). Section 28, T31S, R2E is approximately three miles west of the confluence of the Ninnescah River and the Arkansas River. Plate 2 indicates water flows towards the Arkansas River from the northeast, and towards the Ninnescah from the southwest in this part of Sumner County. Between these two rivers the flow is towards the southeast. This contour map shows that, between the rivers, the contour lines are further apart, indicating a less compacted formation, or a higher transmissivity.

¹ Kenneth L. Walters, Geology and Ground-Water Resources of Sumner County, Kansas, University of Kansas Publication, State Geological Survey of Kansas, Bulletin 151, 1961) Plate 1

² Kenneth L. Walters, Geology and Ground-Water Resources of Sumner County, Kansas, University of Kansas Publication, State Geological Survey of Kansas, Bulletin 151, 1961) Table 3



Investigation

On September 18 and 19, 2017, Ground Water Associates conducted a twenty-four hour pumping test and recovery, using the 6" test well as the pumping well and the 2" monitor well as the observation well to establish transmissivity, storativity and hydraulic conductivity of this aquifer. Readings were taken from the Darling Drilling 4" test well, located 565' southwest of the 6" test well.

Mark Lawless assisted with reading drawdown during the twenty-four hour test. The 6" test well was pumped at 180 gallons per minute for 1440 minutes, then recovery readings were taken on the 6" and 2" wells.

Findings

	6' Test Well	2" Monitor Well	4" Test Well
Bottom Aquifer	41'	41'	?
Static Water Level	14.98'	15.75'	15.30'
Saturated Thickness	26.02'	25.25'	?
Pumping Water Level 1440 min. @ 180 gpm	27.76'	20.05'	15.32'
Drawdown	12.78'	4.30'	0.02'
Percent Drawdown	49.12%	17.03%	?

To determine the aquifer characteristics, we used Aquifer Test Pro 4.0, Waterloo Hydrogeologic. This aquifer is unconfined and the best curve matches were made using Theis with Jacob Correction for the drawdown analysis, and Agarwal Solution with Jacob Correction for the recovery analysis. We used a one inch tube in the gravel pack of the 6" test well to collect the pumping level and recovery readings. This is done to avoid tangling the well sounder with the test pump and to avoid cascading water if we pump into the top of the screen.

The Darling Drilling 4" test well showed 0.02 feet of drawdown after 1440 minutes of the test pumping. This data is included with this report. However no analysis was made, due to the lack of drawdown.

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The best data to determine aquifer characteristics is from the 2" monitor well, located nineteen feet north of the 6" pumping well. Storativity is very difficult to determine from a pumping well.

Included with this report are the two drawdown analyses on the 6" and 2" wells and both recovery analyses, they are summarized below.

	6" Test Well Drawdown	2" Monitor Well Drawdown
Transmissivity (g/d/ft)	52,800	71,200
Storativity	0.0000039	0.0000537
Specific Capacity (gpm/ft of drawdown)	14.08	
	6" Test Well Recovery	2" Monitor Well Recovery
Transmissivity (g/d/ft)	50,800	71,200
Storativity	0.0000039	0.0000704
	6" Test Well Average	2" Monitor Well Average
Transmissivity (g/d/ft)	51,800	71,200
Storativity	0.0000039	0.00006205

The projection of drawdown was run from the center of a battery of three wells, each pumping at 267 gpm for 26.59 days, 30,669,970 gallons (94.12 acre feet). We feel the most accurate aquifer characteristics are the average of the drawdown and recovery from the 2" monitor well, and we used these to run the projection. This projection does not take in to account any recharge from precipitation (Aquifer Test 4.0 projection attached).

Drawdown at 660 feet:	12.69'
" " " 1320 feet:	11.05'
" " " 2640 feet:	9.25'

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Summary and Conclusion

The Wisconsin Terrace deposits or Recent Alluvium at this site will produce a sufficient amount of water to pump the 94 acre feet of water per year as requested. The aquifer flow between the Ninescah and the Arkansas rivers is towards the southeast and the terrace deposits are feeding the river during times of average or above average precipitation. The static water level of approximately fifteen feet, or 1160 feet in elevation, at the site agrees with the 1961 Plate 2 water level contour map, indicating the aquifer is not currently being over-pumped.

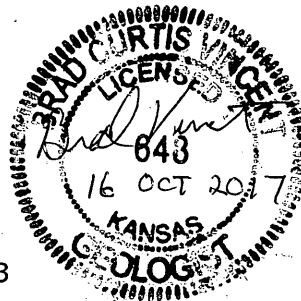
The drawdown from the 4" test well, located 565' southwest of the 6" test well, during the test was zero until 180 minutes, and then at 210 minutes the level was above static water level until 900 minutes. This shows a large amount of the water is flowing towards the southeast, with the river. We would have expected much more drawdown at the 4" test well site, given a storativity of 0.000062. This small storativity would have started to dewater the aquifer, this was not the case.

Test wells, like domestic wells, are drilled using a rotary drill method and this method has a tendency to plug the bore hole unless the drill mud is removed by development bailing or a chemical cleaner. During rotary drilling, the drill water goes down the drill tools and up the inside of the bore hole. From Ground Water Associates' experience, we have some bore hole plugging, which is affecting the aquifer characteristics. Further evidence of plugging is the difference in static water level between the 6" pumping well and the 2" monitor well, nineteen feet away.

Small storativity is caused by large amount of fine grained sand or clays causing less water to be released from the aquifer. Typically, Kansas alluvium or terrace deposits show a much larger storativity. We see lower storativity values in the fine grained Dakota Aquifer and lower glacial sand in northeast Kansas, or when aquifers are confined. This aquifer is not confined, and, as shown on the WWC5 drill logs, has very little fine sand or clay. Actual drawdown at 660', 1320' and 2640' will not be anywhere near as great as the pumping projection is showing.

A properly reverse rotary drilled, constructed (with more efficient screen), and developed production well will have a higher specific capacity and will produce 267 gpm at each battery. With reverse rotary drilling, the cuttings come up the drill tools which causes less plugging. If any additional information is needed or you have additional questions about this report, please contact me at 316-550-6177.

Pc: Mark Lawless
P.O. Box 515
Belle Plaine, Kansas 67013



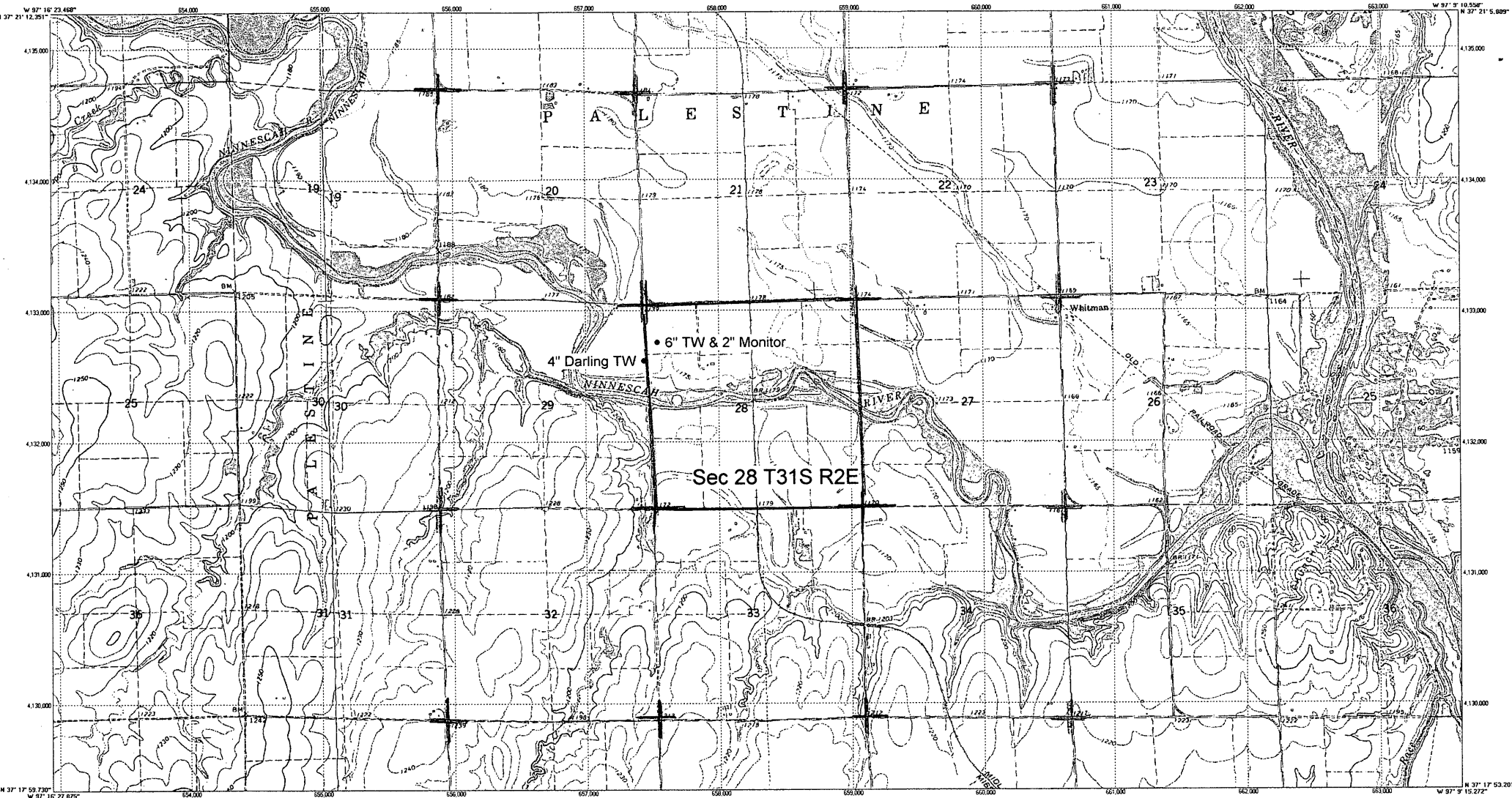
Best regards,

Brad C. Vincent, P.G.
Ground Water Associates

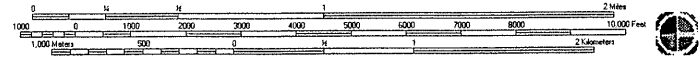
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1527 North American Datum: 1,000 meter UTM grid zone 14
 Generated by Big Top (www.bigtop.com)
 Map compiled from USGS Quads: C4808, K5, D4808, K5



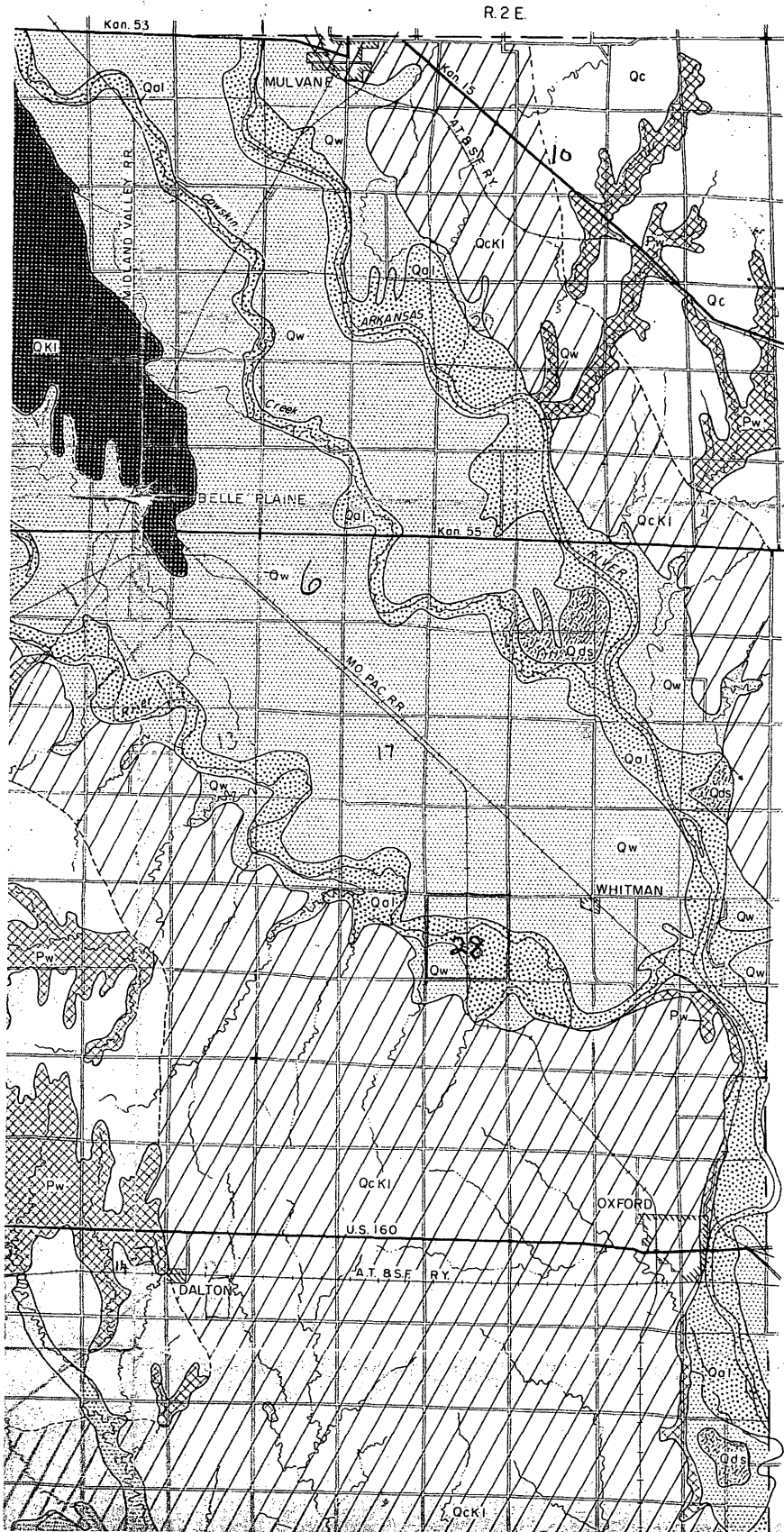
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Bulletin 151
Plate 1

EXPLANATION



PLEISTOCENE

KANSAN AND ILLINOISAN

NEBRASKAN

PERMIAN

ILLINOISAN TO RECENT

QUATERNARY

PERMIAN



Dune sand

Sand, medium and fine; contains some silt. Generally above the water table; does not yield water to wells.



Alluvium

Chiefly arkosic sand and gravel; contains lenses of silt and clay. Yields large quantities of water to wells.



Terrace deposits

Chiefly arkosic sand and gravel; contains lenses of silt and clay. Yields large quantities of water to wells.



Terrace deposits

Poorly sorted sand and gravel; contains red-brown silt and locally derived gravel. Yields moderate quantities of water to wells.



Terrace deposits

Chiefly medium to coarse arkosic sand. Yields moderate quantities of water to wells.



Ninescawh Shale

Predominately silty shale, mostly brownish red with gray-green spots; contains beds of dolomite, calcareous siltstone, and fine-grained sandstone. Yields small quantities of hard water to wells.



Wellington Formation

Chiefly shale and silty shale, mostly gray and green, some red; contains lenticular beds of gypsum, silty limestone, and dolomite. Yields small quantities of hard water to wells.



Colluvium or pediment deposits

Silt and clay; contains minor amounts of sand and gravel. Does not yield appreciable quantities of water to wells.

T. 30 S.

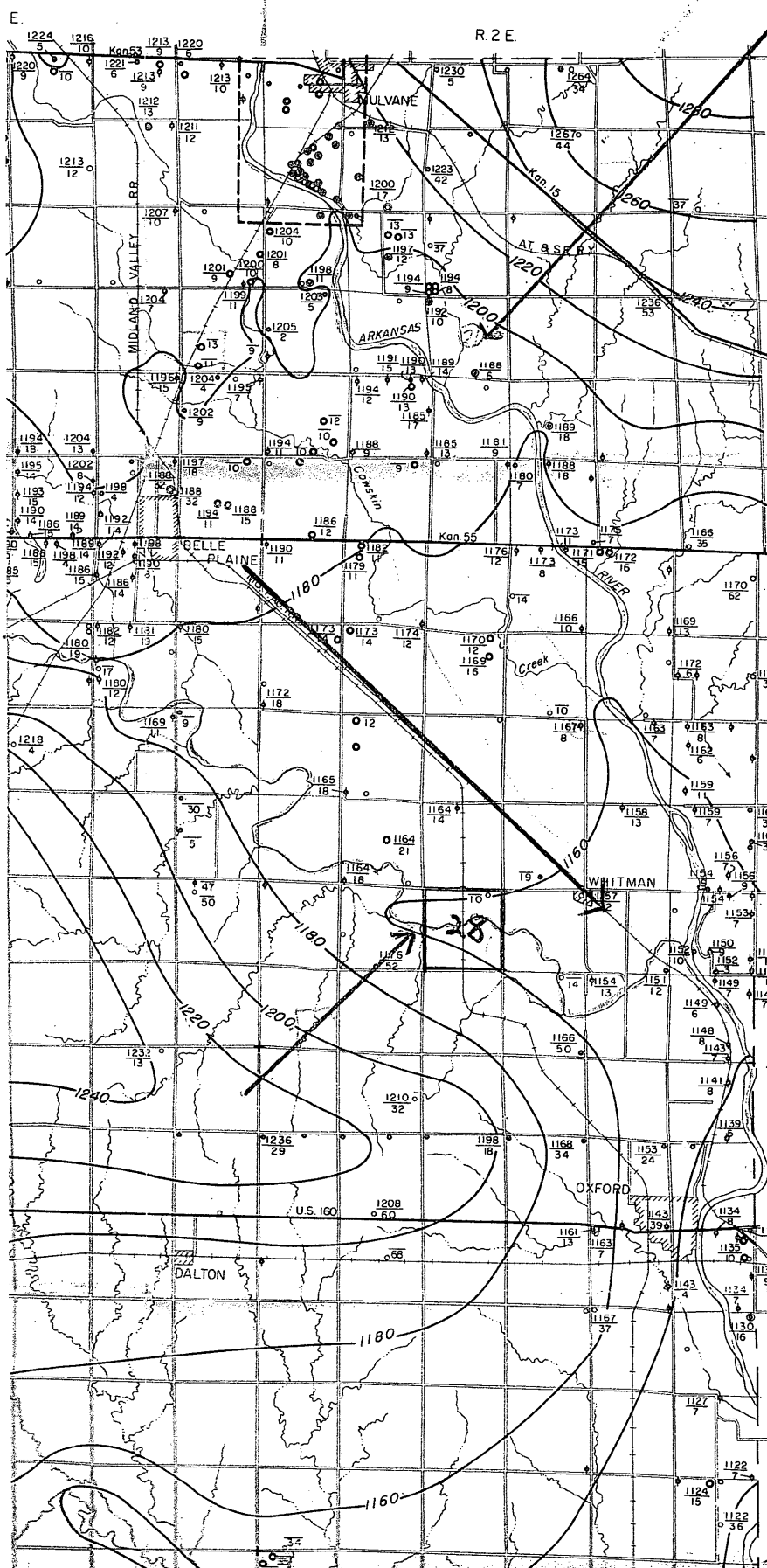
T. 31 S.

T. 32 S.

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NOV 17 2017

CENE



EXPLANATION

- Drilled test hole
 - ⚡ Augured test hole
 - Domestic or stock well
 - Public supply well
 - Irrigation well
 - Industrial well
 - Observation well
- 1180— Water-table contour:
 1189
 26
 Upper number refers to altitude of water level, in feet
 Lower number refers to depth to water below land surface, in feet

- Federal or state highway
- Graded road
- Railroad
- Ungraded road
- County line (no road)
- State line (no road)
- Section line (no road)
- Outline of area shown in inset map
- Intermittent stream

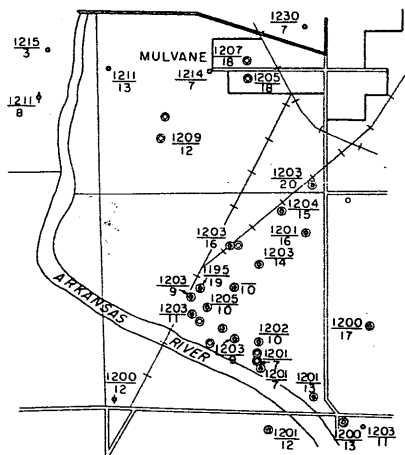


Scale, in miles

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KS DEPT OF AGRICULTURE





Ground Water Associates
 109 W. 1st, P.O. Box 792
 Goddard, KS 67052

Site Plan

Project: Mark Lawless Pumping Projection (94 acre Feet)

Number: 3 wells pumping @ 267 gpm for 26.59 days

Client: Transmissivity= 71,200 g/d/ft S= 0.0000620

Location: NW 1/4 section 28, T31S, R2E

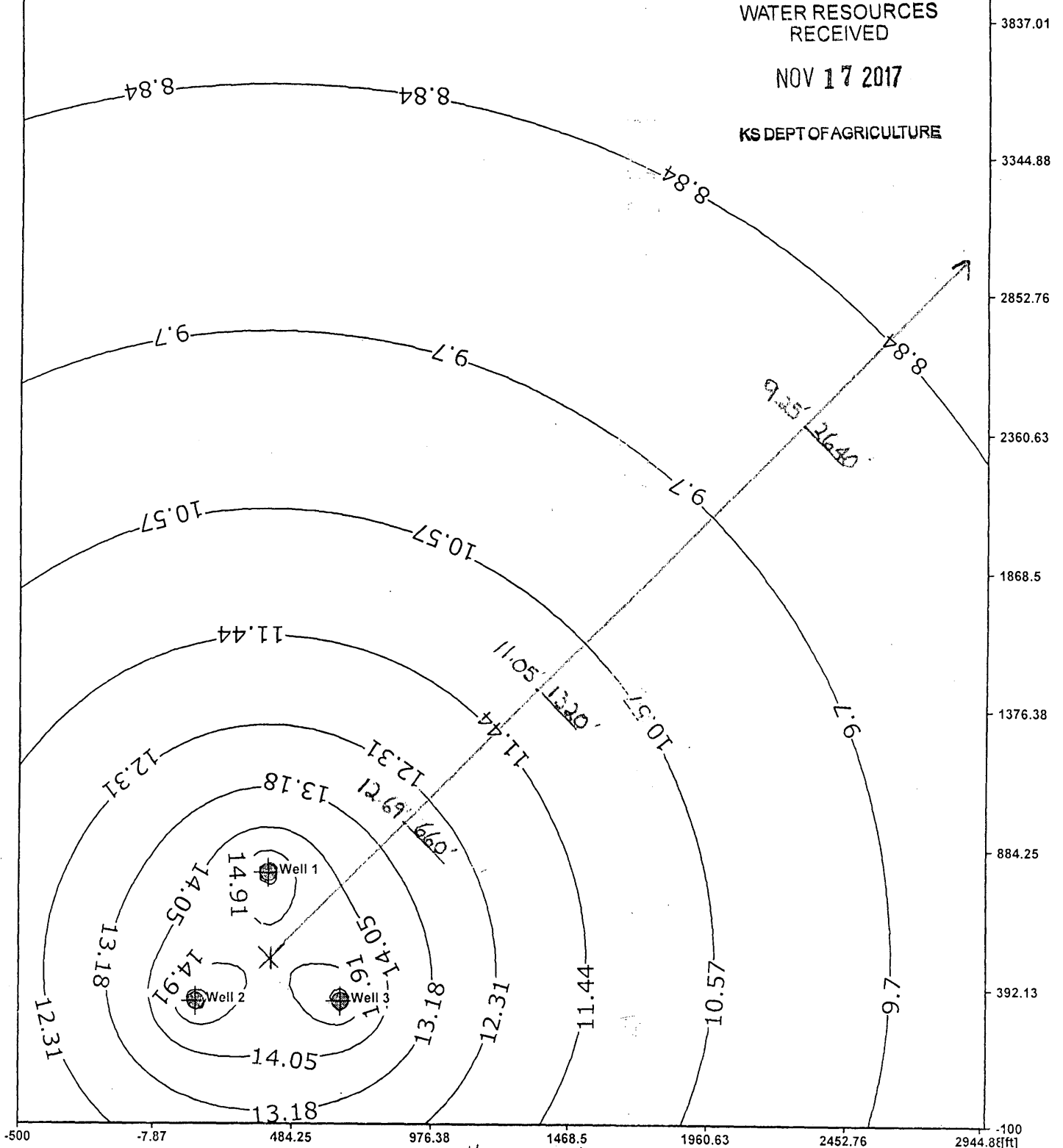
Scale 1:6000

Map Origin [ft] X: -500 Y: -100

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1" = 492'

Driller & Assistant:

Tom Hilly/Tucker A.

Date:

9/14/17

6" Test Well

CUSTOMER:

Mark Lawless

LOCATION:

50th + Webb S.E. of Belle Plaine

- Screen 16", 12", 10", 8"
- Compressor
- Portable Drill
- Casing Clamps/Screws
- Casing 16", 12", 10" 8"
- 1" Pipe
- Packing
- Gas & Oil - W.T.
- Couplings, 16", 12", 10" 8"
- 1" Caps
- Drill Stem
- Sawsall/spacers
- End Caps, 16", 12", 10" 8"
- 1" Coupling
- 30" Liner, if needed
- Inspection Sheet
- Solvent & Glue
- 2-1/2" PVC Tee
- Planks & Boards

ELEVATION 1175' EST

Depth: Formation:

Well Information:

0-3	T.S.	Static Water Level: 15'
3-16	clay.	Groundwater Depth: 16'
16-32	Sand + g m-c	Est. production: 150-300 gpm
32-38	Sand + g w/ small rounded pea gravel	Casing size/depth: 24.5' - 0' 6" PVC
38-41	Sand m-c	Screen size/depth: 44.5' - 24.5' 6" PVC
41-60	Shale/clay blue. 15' diam	Bore hole: 12" Slot size: .032
		Grouting depth: 20'-0'
		Concrete: Bentonite: 10 bags
		Nearest Contamination: none within 1/8 mile
		Maintenance & Safety:
		Notes:

Directions:

Permit:

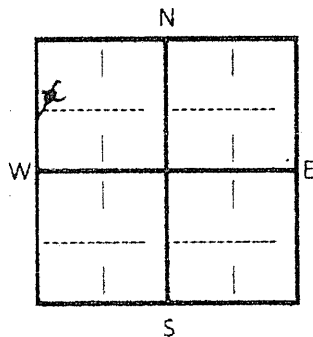
Latitude: 37.33008573 N decimal degrees (ex. 38.881796)

Longitude: -97.22207771 W decimal degrees (ex. 95.373889)

Datum: NAD27 NAD83 WGS84

Elevation: 1173 ft.

SE 1/4	SW 1/4	NW 1/4	NW 1/4
Sec. 28	T 31	R 2	E 1/4
County Sumner			



- \$35⁰⁰ x 44.5' /ft. Well
- \$200⁰⁰ /Grout or Concrete
- \$ /Test Pumping
- \$ /Water Sample
- \$300⁰⁰ /Mobilization/Travel
- \$ /Discount

Contract Received:

Invoice #: 1578

Date Mailed:

Well Data: Access:

Materials: Incent: THVTA

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IRRIGATION TEST WELL

2" MONITOR WELL

Driller & Assistant:

Tom Hall / Tucker A.

Date:

9/15/17

CUSTOMER:

Mark Landers

LOCATION:

SD3 + Webb SE of Belle Plaine

- Screen 2-1/2"
- Casing 2-1/2"
- Couplings, 2-1/2"
- End Caps, 2-1/2"
- Gravel Pack
- Holeplug
- Quarters
- Water
- Lime
- Drilling Mud
- Gas & Oil - W.T.
- 3/4" Polyethylene
- 2-1/2" PVC Tee
- 5" & 6" Bits
- Packing
- 6" or 5" Liner if needed
- Solvent & Glue
- Water Sample Bottle
- Inspection Sheet

Elev 1175 EST

Depth:	Formation:	Well Information:
0-3	T.S.	Static Water Level: 15'
3-16	clay	Est. Production: 150-300 gpm
16-32	Sand + g m-c.	Casing Size/Depth: 22' - 0" 2" PVC
32-38	Sand + g C w/ small med pea gravel	
38-41	Sand m-c.	Screen Size/Depth: 42'-22' .020 2"
41-60	shale/clay blue. 15% clay	PVC
		Slot Size:
		Grouting Depth: 20'-0'
		Number of Bags: 4 bags bentonite.
		Nearest Contamination: none within 1/8 mile.
		Notes: Air developed

Directions: -

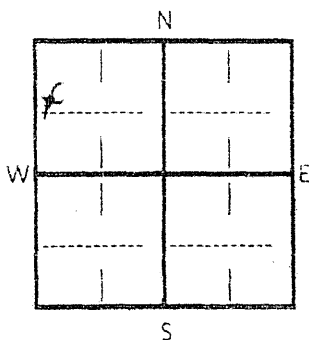
Latitude: 37.380171 N decimal degrees (ex. 38.881796)

Longitude: -97.222097 W decimal degrees (ex. 95.373889)

Datum: NAD27 NAD83 WGS84

Elevation: 1173 ft.

SE 1/4	SW 1/4	NW 1/4	NW 1/4
Sec. 29	T 31	R 2	R 2
County Sumner			



- \$ 8⁰⁰ x 60' /ft. Well
- \$ 50⁰⁰ /Grout
- \$ _____ /Test Pumping
- \$ _____ /Water Sample
- \$ 300⁰⁰ /Mobilization/Travel

\$ (1235⁰⁰) /Discount per help on Nolan job

Contract Received:

Invoice #: 1978

Date Mailed:

Well Data:

Access:

Materials:

Incent: TH VTA

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Ground Water Associates
 109 W. 1st, P.O. Box 792
 Goddard, KS 67052

Pumping Test - Water Level Data

Project: Mark Lawless

Number: Twenty-Four Hour Pumping Test

Client:

Location: NW 1/4 Sec 28, T31S, R2E

Pumping Test: 24 hr pumping test

Pumping well: 6" Test Well

Test conducted by: Ground Water Associates

Test date: 9/18/2017

Discharge: variable, average rate 180 [U.S. gal/min]

Observation well: 6" Test Well

Static water level [ft]: 14.98

Radial distance to PW [ft]: -

	Time [min]	Water Level [ft]	Drawdown [ft]
1	1	25.63	10.65
2	2.5	25.90	10.92
3	4	26.04	11.06
4	5	26.19	11.21
5	7	26.38	11.40
6	9	26.47	11.49
7	11	26.53	11.55
8	15	26.63	11.65
9	20	26.63	11.65
10	34	26.66	11.68
11	35	26.69	11.71
12	40	26.70	11.72
13	45	26.71	11.73
14	50	26.73	11.75
15	74	26.82	11.84
16	90	26.86	11.88
17	100	26.90	11.92
18	120	26.94	11.96
19	150	27.02	12.04
20	180	27.05	12.07
21	270	27.19	12.21
22	360	27.33	12.35
23	465	27.40	12.42
24	600	27.53	12.55
25	720	27.82	12.84
26	900	27.92	12.94
27	1020	28.06	13.08
28	1140	28.06	13.08
29	1260	28.13	13.15
30	1395	28.17	13.19
31	1440	27.76	12.78
32	1441	16.43	1.45
33	1442	16.33	1.35
34	1443	16.28	1.30
35	1444	16.26	1.28
36	1445	16.25	1.27
37	1447	16.22	1.24
38	1449	16.20	1.22
39	1451	16.17	1.19
40	1455	16.09	1.11
41	1461	16.10	1.12
42	1465	16.08	1.10
43	1473.5	16.04	1.06
44	1475.5	16.03	1.05
45	1480	16.02	1.04
46	1485	15.99	1.01

Recovery
↓

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Ground Water Associates
109 W. 1st, P.O. Box 792
Goddard, KS 67052

Pumping Test - Water Level Data

Page 2 of 2

Project: Mark Lawless

Number: Twenty-Four Hour Pumping Test

Client:

	Time [min]	Water Level [ft]	Drawdown [ft]
47	1490	15.98	1.00
48	1501	15.93	0.95
49	1510	15.91	0.93
50	1520	15.88	0.90
51	1530	15.86	0.88
52	1540	15.84	0.86
53	1560	15.80	0.82
54	1573	15.78	0.80

WATER RESOURCES
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KS DEPT OF AGRICULTURE



Ground Water Associates
109 W. 1st, P.O. Box 792
Goddard, KS 67052

Pumping Test - Water Level Data

Project: Mark Lawless

Number: Twenty-Four Hour Pumping Test

Client:

Location: NW 1/4 Sec 28, T31S, R2E

Pumping Test: 24 hr pumping test

Pumping well: 6" Test Well

Test conducted by: Ground Water Associates

Test date: 9/18/2017

Discharge: variable, average rate 180 [U.S. gal/min]

Observation well: 2" Monitor Well

Static water level [ft]: 15.75

Radial distance to PW [ft]: 19

	Time [min]	Water Level [ft]	Drawdown [ft]
1	1.5	18.68	2.93
2	3	18.80	3.05
3	4.5	18.86	3.11
4	5.5	18.90	3.15
5	7.5	18.98	3.23
6	9.5	19.02	3.27
7	11.5	19.04	3.29
8	15.5	19.07	3.32
9	20.5	19.09	3.34
10	25	19.11	3.36
11	30	19.16	3.41
12	35	19.15	3.40
13	40	19.16	3.41
14	45	19.17	3.42
15	50	19.19	3.44
16	75	19.25	3.50
17	90	19.28	3.53
18	100	19.29	3.54
19	120	19.33	3.58
20	150	19.37	3.62
21	180	19.43	3.68
22	270	19.54	3.79
23	360	19.65	3.90
24	465	19.71	3.96
25	600	19.78	4.03
26	720	19.86	4.11
27	900	19.97	4.22
28	1020	20.05	4.30
29	1140	20.09	4.34
30	1260	20.11	4.36
31	1395	20.14	4.39
32	1440	20.05	4.30
33	1441.25	17.20	1.45
34	1442.5	17.11	1.36
35	1443.5	17.07	1.32
36	1444.5	17.06	1.31
37	1445.5	17.06	1.31
38	1447.5	17.02	1.27
39	1449.5	17.00	1.25
40	1451.5	16.98	1.23
41	1455.5	16.95	1.20
42	1461.5	16.81	1.06
43	1465.5	16.88	1.13
44	1473	16.85	1.10
45	1475	16.84	1.09
46	1480.5	16.81	1.06

Recovery



WATER RESOURCES
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Ground Water Associates
109 W. 1st, P.O. Box 792
Goddard, KS 67052

Pumping Test - Water Level Data

Page 2 of 2

Project: Mark Lawless

Number: Twenty-Four Hour Pumping Test

Client:

	Time [min]	Water Level [ft]	Drawdown [ft]
47	1485.5	16.80	1.05
48	1490.5	16.77	1.02
49	1500.5	16.74	0.99
50	1510	16.71	0.96
51	1520	16.71	0.96
52	1530	16.67	0.92
53	1540	16.64	0.89
54	1560	16.60	0.85

WATER RESOURCES
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KS DEPT OF AGRICULTURE



Ground Water Associates
109 W. 1st, P.O. Box 792
Goddard, KS 67052

Pumping Test - Water Level Data

Project: Mark Lawless

Number: Twenty-Four Hour Pumping Test

Client:

Location: NW 1/4 Sec 28, T31S, R2E

Pumping Test: 24 hr pumping test

Pumping well: 6" Test Well

Test conducted by: Ground Water Associates

Test date: 9/18/2017

Discharge: variable, average rate 180 [U.S. gal/min]

Observation well: 4" Darling Well

Static water level [ft]: 15.30

Radial distance to PW [ft]: 565

	Time [min]	Water Level [ft]	Drawdown [ft]
1	17	15.30	0.00
2	33	15.30	0.00
3	54	15.30	0.00
4	103	15.30	0.00
5	120	15.30	0.00
6	600	15.29	-0.01
7	720	15.28	-0.02
8	900	15.29	-0.01
9	1426	15.32	0.02

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KS DEPT OF AGRICULTURE



Ground Water Associates
 109 W. 1st, P.O. Box 792
 Goddard, KS 67052

Pumping Test Analysis Report

Project: Mark Lawless

Number: Twenty-Four Hour Pumping Test

Client:

Location: NW 1/4 Sec 28, T31S, R2E

Pumping Test: 24 hr pumping test

Pumping well: 6" Test Well

Test conducted by: Ground Water Associates

Test date: 9/18/2017

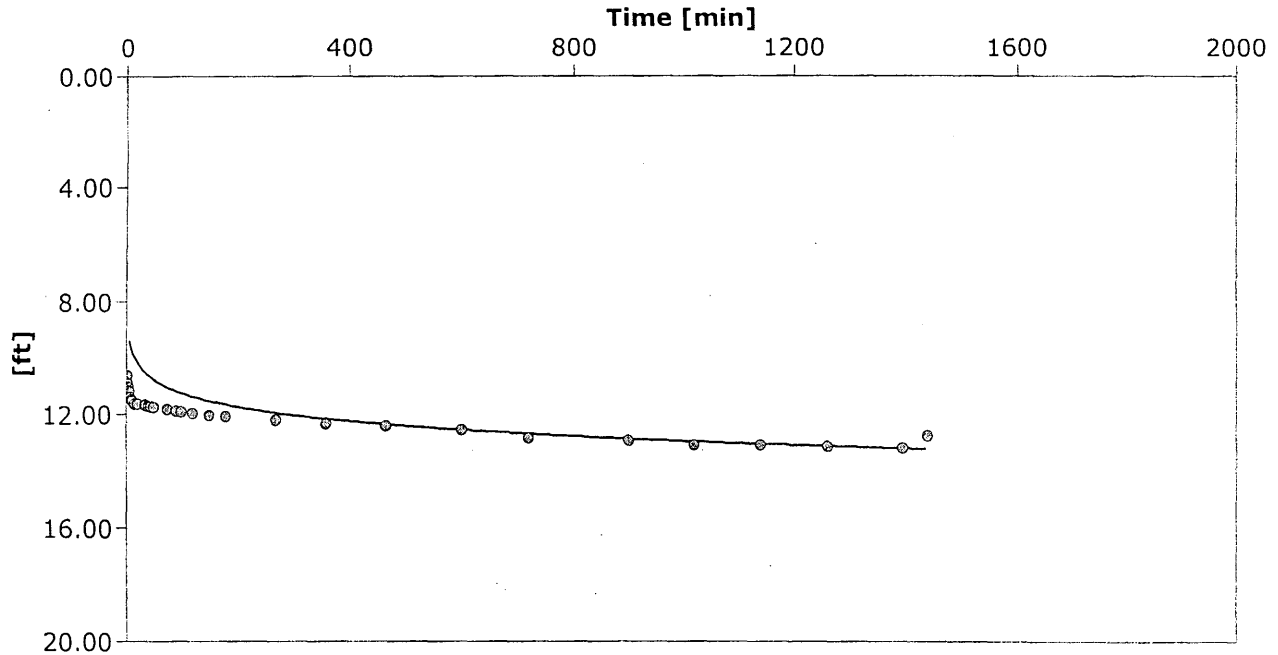
Analysis performed by: Brad Vincent

Drawdown

Date: 9/26/2017

Aquifer Thickness: 26.02 ft

Discharge: variable, average rate 180 [U.S. gal/min]



Calculation after Theis with Jacob Correction

Observation well	Transmissivity [U.S. gal/d-ft]	K [U.S. gal/d-ft ²]	Storage coefficient	Radial distance to PW [ft]
6" Test Well	5.28×10^4	2.03×10^3	3.90×10^{-6}	0.21

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Ground Water Associates
 109 W. 1st, P.O. Box 792
 Goddard, KS 67052

Pumping Test Analysis Report

Project: Mark Lawless

Number: Twenty-Four Hour Pumping Test

Client:

Location: NW 1/4 Sec 28, T31S, R2E

Pumping Test: 24 hr pumping test

Pumping well: 6" Test Well

Test conducted by: Ground Water Associates

Test date: 9/18/2017

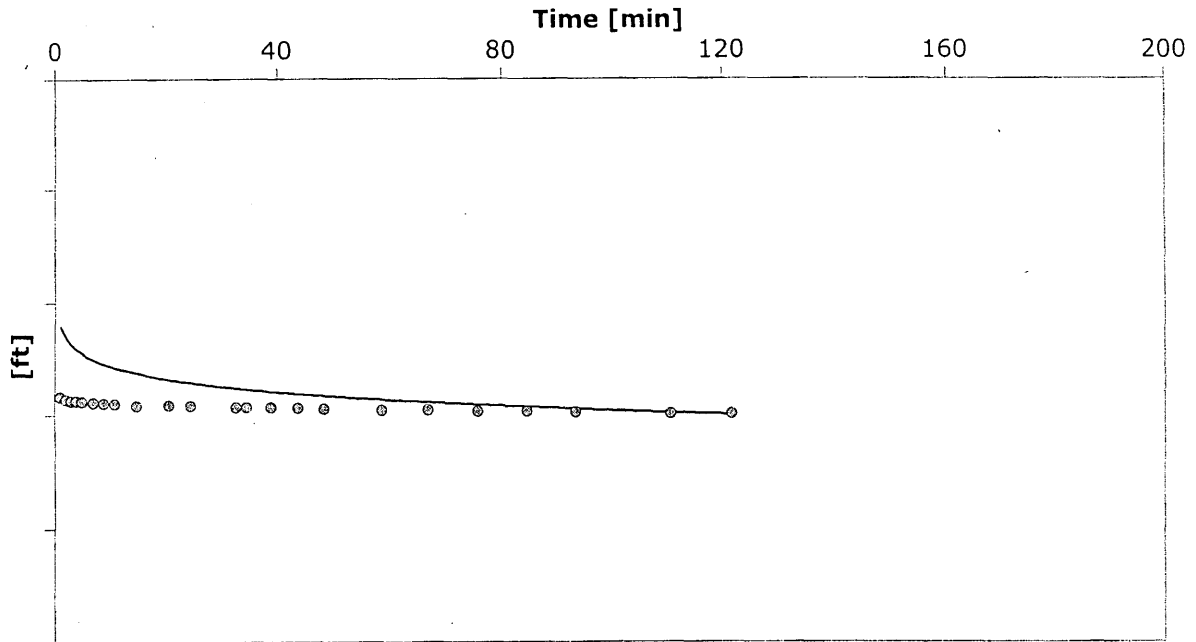
Analysis performed by: Brad Vincent

Recovery

Date: 9/26/2017

Aquifer Thickness: 26.02 ft

Discharge: variable, average rate 180 [U.S. gal/min]



Calculation after AGARWAL + Theis with Jacob Correction

Observation well	Transmissivity [U.S. gal/d-ft]	K [U.S. gal/d-ft ²]	Storage coefficient	Radial distance to PW [ft]
6" Test Well	5.08×10^4	1.95×10^3	3.90×10^{-6}	0.21

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KS DEPT OF AGRICULTURE



Ground Water Associates
 109 W. 1st, P.O. Box 792
 Goddard, KS 67052

Pumping Test Analysis Report

Project: Mark Lawless

Number: Twenty-Four Hour Pumping Test

Client:

Location: NW 1/4 Sec 28, T31S, R2E

Pumping Test: 24 hr pumping test

Pumping well: 6" Test Well

Test conducted by: Ground Water Associates

Test date: 9/18/2017

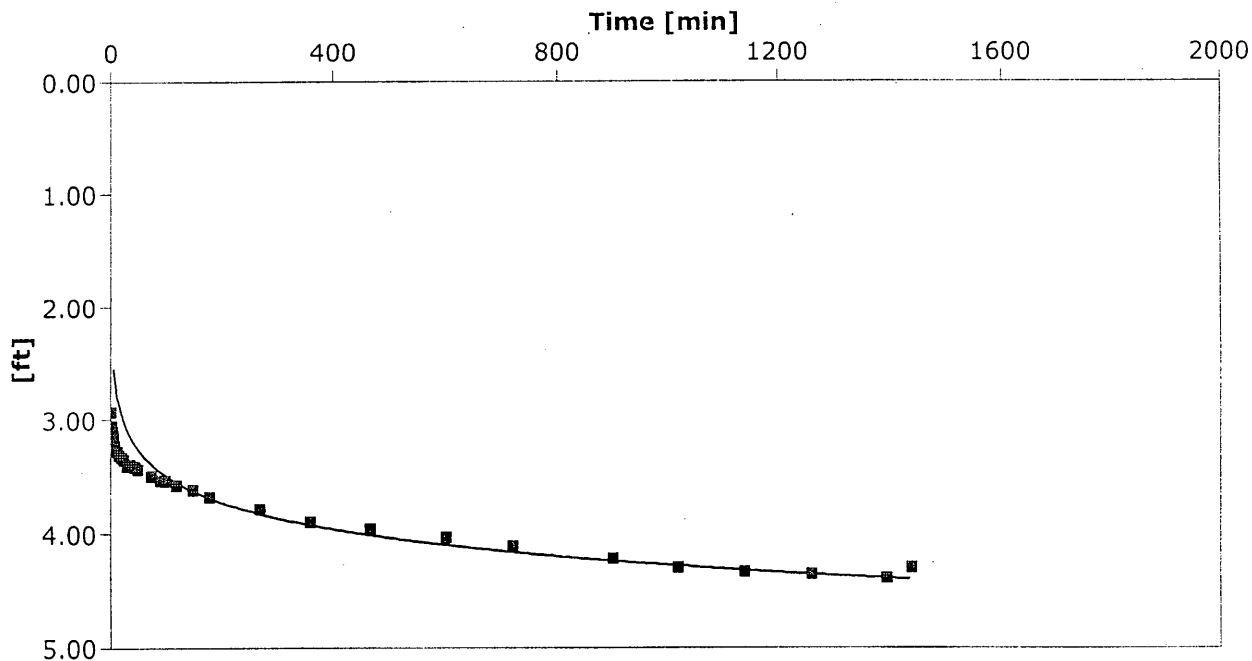
Analysis performed by: Brad Vincent

Drawdown

Date: 9/26/2017

Aquifer Thickness: 26.02 ft

Discharge: variable, average rate 180 [U.S. gal/min]



Calculation after Theis with Jacob Correction

Observation well	Transmissivity [U.S. gal/d-ft]	K [U.S. gal/d-ft ²]	Storage coefficient	Radial distance to PW [ft]
2" Monitor Well	7.12×10^4	2.74×10^3	5.37×10^{-5}	19.0

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Ground Water Associates
 109 W. 1st, P.O. Box 792
 Goddard, KS 67052

Pumping Test Analysis Report

Project: Mark Lawless

Number: Twenty-Four Hour Pumping Test

Client:

Location: NW 1/4 Sec 28, T31S, R2E

Pumping Test: 24 hr pumping test

Pumping well: 6" Test Well

Test conducted by: Ground Water Associates

Test date: 9/18/2017

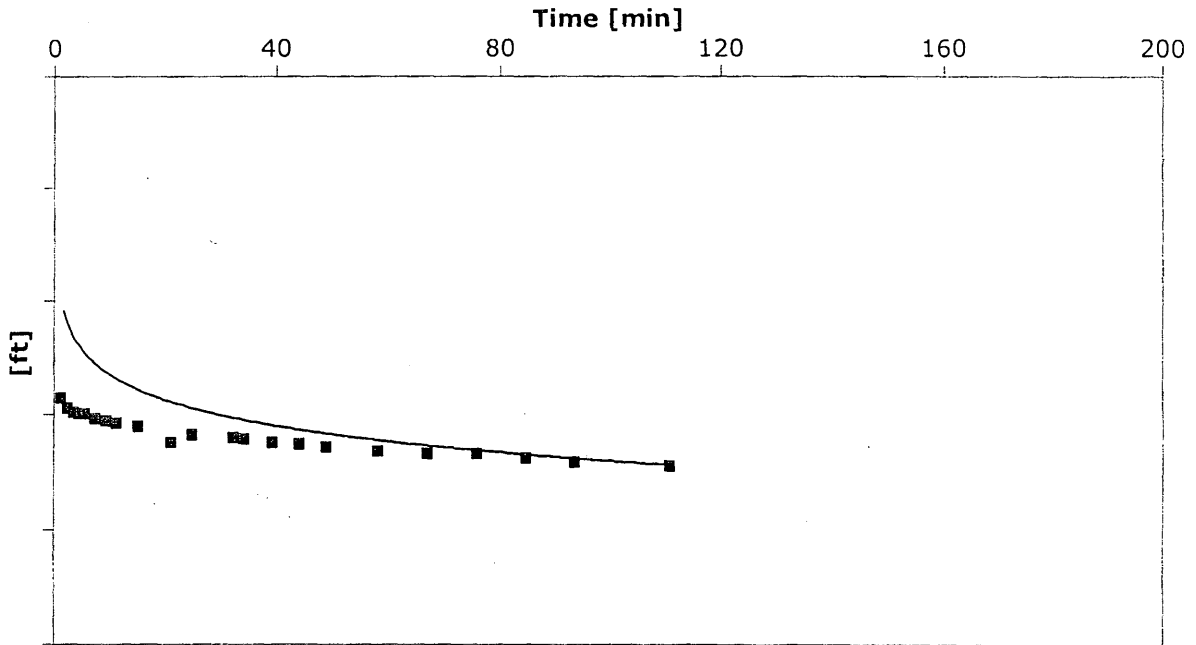
Analysis performed by: Brad Vincent

Recovery

Date: 9/26/2017

Aquifer Thickness: 26.02 ft

Discharge: variable, average rate 180 [U.S. gal/min]



Calculation after AGARWAL + Theis with Jacob Correction

Observation well	Transmissivity [U.S. gal/d-ft]	K [U.S. gal/d-ft ²]	Storage coefficient	Radial distance to PW [ft]
2" Monitor Well	7.12×10^4	2.74×10^3	7.04×10^{-5}	19.0

WATER RESOURCES
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KS DEPT OF AGRICULTURE


Kansas
Department of Agriculture
Division of Water Resources

Topeka Field Office
6531 SE Forbes Ave., Suite B
Topeka, Kansas 66619

Phone: (785) 296-5733
Fax: (785) 862-2460
www.agriculture.ks.gov

Jackie McClaskey, Secretary
David W. Barfield, Chief Engineer
Katherine A. Tietsort, Water Commissioner

Sam Brownback, Governor

October 5, 2017

HAROLD T & M L SHAPLEY
604 QUAIL NEST RD
WINFIELD KS 67156

Re: Pending New Application, File No. 49,347

Dear Sir or Madam:

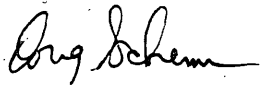
This is to advise you that Mark Lawless has filed the application referred to above for a permit to appropriate 94 acre-feet of groundwater per calendar year for irrigation use to be diverted at a maximum rate of 800 gallons per minute from a battery of wells, with a geographic center located as follows:

In the Northwest Quarter of the Southwest Quarter of the Northwest Quarter of Section 28, in Township 31 South, Range 2 East, in Sumner County, Kansas.

A map is enclosed indicating the location of the proposed point of diversion. Records in this office indicate that you may have a well or wells in this vicinity and you are being notified of receipt of this application in order that you may be fully informed of the proposed location of the applicant's point of diversion and proposed use of water. Consideration will be given to comments or other information which you desire to submit to this office **within 15 days** from the date of this letter.

If you have any questions or comments, you may also contact me at (785) 296-3495. If you call, please reference the file number so I can help you more efficiently.

Sincerely,



Douglas W. Schemm
Environmental Scientist
Topeka Field Office

Enclosure

pc: Mark Lawless

WATER RESOURCES
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NOV 17 2017

KS DEPT OF AGRICULTURE


Kansas
Department of Agriculture
Division of Water Resources

Topeka Field Office
6531 SE Forbes Ave., Suite B
Topeka, Kansas 66619

Jackie McClaskey, Secretary
David W. Barfield, Chief Engineer
Katherine A. Tietsort, Water Commissioner

Phone: (785) 296-5733
Fax: (785) 862-2460
www.agriculture.ks.gov
Sam Brownback, Governor

October 5, 2017

RONNIE NEISES
409 N ROCK ROAD
BELLE PLAINE KS 67013

Re: Pending New Application, File No. 49,347

Dear Sir or Madam:

This is to advise you that Mark Lawless has filed the application referred to above for a permit to appropriate 94 acre-feet of groundwater per calendar year for irrigation use to be diverted at a maximum rate of 800 gallons per minute from a battery of wells, with a geographic center located as follows:

In the Northwest Quarter of the Southwest Quarter of the Northwest Quarter of Section 28, in Township 31 South, Range 2 East, in Sumner County, Kansas.

A map is enclosed indicating the location of the proposed point of diversion. Records in this office indicate that you may have a well or wells in this vicinity and you are being notified of receipt of this application in order that you may be fully informed of the proposed location of the applicant's point of diversion and proposed use of water. Consideration will be given to comments or other information which you desire to submit to this office **within 15 days** from the date of this letter.

If you have any questions or comments, you may also contact me at (785) 296-3495. If you call, please reference the file number so I can help you more efficiently.

Sincerely,



Douglas W. Schemm
Environmental Scientist
Topeka Field Office

Enclosure

pc: Mark Lawless

WATER RESOURCES
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NOV 17 2017

KS DEPT OF AGRICULTURE


Kansas
Department of Agriculture
Division of Water Resources

Topeka Field Office
6531 SE Forbes Ave., Suite B
Topeka, Kansas 66619

Jackie McClaskey, Secretary
David W. Barfield, Chief Engineer
Katherine A. Tietsort, Water Commissioner

Phone: (785) 296-5733
Fax: (785) 862-2460
www.agriculture.ks.gov
Sam Brownback, Governor

October 5, 2017

MARSHA NEEDHAM
1525 E 50TH AVENUE NORTH
BELLE PLAINE KS 67013

Re: Pending New Application, File No. 49,347

Dear Sir or Madam:

This is to advise you that Mark Lawless has filed the application referred to above for a permit to appropriate 94 acre-feet of groundwater per calendar year for irrigation use to be diverted at a maximum rate of 800 gallons per minute from a battery of wells, with a geographic center located as follows:

In the Northwest Quarter of the Southwest Quarter of the Northwest Quarter of Section 28, in Township 31 South, Range 2 East, in Sumner County, Kansas.

A map is enclosed indicating the location of the proposed point of diversion. Records in this office indicate that you may have a well or wells in this vicinity and you are being notified of receipt of this application in order that you may be fully informed of the proposed location of the applicant's point of diversion and proposed use of water. Consideration will be given to comments or other information which you desire to submit to this office **within 15 days** from the date of this letter.

If you have any questions or comments, you may also contact me at (785) 296-3495. If you call, please reference the file number so I can help you more efficiently.

Sincerely,



Douglas W. Schemm
Environmental Scientist
Topeka Field Office

Enclosure

pc: Mark Lawless

WATER RESOURCES
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KS DEPT OF AGRICULTURE


Kansas
Department of Agriculture
Division of Water Resources

Topeka Field Office
6531 SE Forbes Ave., Suite B
Topeka, Kansas 66619

Jackie McClaskey, Secretary
David W. Barfield, Chief Engineer
Katherine A. Tietsort, Water Commissioner

Phone: (785) 296-5733
Fax: (785) 862-2460
www.agriculture.ks.gov
Sam Brownback, Governor

September 5, 2017

MARK E LAWLESS
PO BOX 515
BELLE PLAINE KS 67013

RE: Pending Application, File No. 49,347

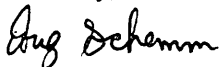
Dear Mr. Lawless:

We have completed a preliminary review of your new application referenced above, and additional information is required to continue our processing. Based on the driller log information we received in our office, it appears that the saturated thickness of the aquifer in this local area is limited (approximately 18 feet). Saturated thickness is typically defined as the distance from the water table to the base of the aquifer for a shallow, unconfined aquifer. The limited saturated thickness has created concerns as to what this source of water supply can physically yield. Both regulation, K.A.R. 5-3-20 specifically (b)(2), and statute K.S.A. 82a-711 specifically (b)(2)(4), support our request for additional information. K.A.R. 5-3-20 (b), states, in part, the maximum reasonable annual quantity of water that may be approved for use on irrigated land shall be limited to the following: (2) the quantity of water reasonably physically available from the source of water supply based on the physical characteristics of the source of water supply and the proposed diversion works.

Application, File No. 49,347 is requesting 94 acre-feet at a diversion rate of 800 gallons per minute. As described above, the maximum allowable quantity of water that can be approved is limited to what is physically available from the source of water supply (aquifer). The saturated thickness at the proposed point of diversion is a physical characteristic of this aquifer, and is likely to be a significant factor in determining what quantity of water the Division of Water Resources can approve for this application. **Therefore, you must provide additional information such as a hydrologic analysis of the aquifer (e.g. aquifer pump test) to show what quantity of water is physically available from your source of supply.**

You have a period of 30 days (**until October 5, 2017**) to either (1) submit additional information to our office or (2) request additional time beyond the 30 days to submit additional information. If you wish to request additional time, you must do so **in writing**, before the 30 day period expires. Such a request should state what steps are being taken to obtain the information and the amount of time you will need to supply the information to our office. If you do not request more time within the 30 day period, or if your request is not granted, the above- referenced application will be submitted to the Chief Engineer with a recommendation it be denied for failure to timely show to the satisfaction of the chief engineer that the application can be approved for the requested quantity of water. Any relevant credible information submitted within the time allowed will be given due consideration, prior to final action on the application. If you have any questions, please contact me at (785) 296-3495. If you wish to discuss a specific file, please have the file number ready so that I may help you more efficiently.

Sincerely,



Douglas W. Schemm
Environmental Scientist
Topeka Field Office

Enclosure

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Limited Saturated Thickness Supporting Information

The supporting information that the Division of Water Resources is requesting based on K.A.R. 5-3-20 (b)(2) and K.S.A. 82a-711(b)(2)(4) should be provided in a concise report by a consulting firm or groundwater professional that is licensed through the Kansas Board of Technical Professions. An outline of what is expected is below.

- 1) A twenty-four hour pumping test and aquifer recovery period that establishes a maximum sustainable pumping rate.
 - a. The pump test should be completed on a well that is within 300' of the proposed point of diversion and constructed to the same depth, screened area and aquifer as the proposed irrigation wells. The test should be twenty-four continuous hours pumping a near constant rate.
 - b. The recovery test should be long enough to allow water levels to return to the static level prior to the pumping test.
 - c. Please notify DWR at least 10 days prior to the pumping test. Staff may be present but are not required to be present during the test.

- 2) The consultant should submit a short but detailed report to DWR which includes a minimum of the following:
 - a. the maximum sustainable pumping rate as determined by the 24 hour pumping test
 - b. aquifer properties such as transmissivity, storativity, hydraulic conductivity
 - c. measured drawdown at the well during the pumping test
 - d. simulated drawdown at distances of 660', 1320', and 2640' from the pumping well or wells (perform the simulated drawdown based on the final number of wells and proposed location and operation of those wells if it is a battery to be requested in the application)
 - e. all results from the pump test including aquifer recovery
 - f. well logs from any wells used in the aquifer test
 - g. an estimation of the number of days the owner anticipates the irrigation wells will pump in a given year (this should be based on normal irrigation practices in the area on a higher water usage crop, calculated data that substantiates the normal pumping days in a year should be included)

- 3) Once DWR receives the completed consultant's report, it will be reviewed to determine if the requested rate and quantity on the new application are appropriate. Based on 5-3-20(b)(2) and the information supplied in the report, DWR may revise the application. If the application is revised, the applicant will have 30 days to review the revisions and submit additional comments. DWR will process the application accordingly.

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Water Rights and Points of Diversion Within 2.00 miles of point defined as:

*Geo-Center 49, 347
meets well spacing
>1,320'*

3700 ft. N and 5134 ft W of the SE Corner of Section 28, T 31S, R 2E

Located at: 97.222321 West Longitude and 37.328537 North Latitude

GROUNDWATER ONLY

File Number	Use	ST	SR	Dist	(ft)	Q4	Q3	Q2	Q1	FeetN	FeetW	Sec	Tw	Rng	ID	Batt	Auth_Quan	Add_Quan	Unit
A__ 28609	00	IRR	NK	G	6249	--	NC	S2	NW	3460	3695	20	31	2E	2		148.00	148.00	AF
A__ 31244	00	IRR	NK	G	8665	--	--	--	--	80	3770	17	31	2E	1		152.00	152.00	AF
A__ 41894	00	IRR	NK	G	5375	--	NW	SE	NE	3750	1163	20	31	2E	3		155.00	155.00	AF
A__ 41946	00	IRR	NK	G	3051	--	NW	SE	SW	1286	3814	21	31	2E	2	G 2	151.00	151.00	AF
Same					3001	--	NW	SE	SW	1288	3948	21	31	2E	1	B 2			
Same					3106	--	NW	SE	SW	1285	3680	21	31	2E	3	B 2			
A__ 43705	00	IRR	NK	G	5143	--	NW	NW	NW	4739	5142	27	31	2E	1		163.50	163.50	AF
A__ 44569	00	IRR	NK	G	2009	--	NW	NE	NW	4659	3369	28	31	2E	2		54.60	54.60	AF
A__ 45215	00	IRR	NK	G	6583	--	NE	SW	SW	1316	4098	27	31	2E	2		91.00	91.00	AF
A__ 45216	00	IRR	NK	G	7402	--	NW	NE	NW	5319	3874	34	31	2E	1		135.20	135.20	AF
A__ 46508	00	IRR	KE	G	3728	--	SE	NW	NE	4200	1440	28	31	2E	3	G 2	122.59	122.59	AF
Same					3827	--	SE	NW	NE	4200	1340	28	31	2E	5	B 2			
Same					3628	--	SE	NW	NE	4200	1540	28	31	2E	6	B 2			
A__ 47826	00	IRR	LO	G	5496	--	NE	SW	NW	3890	4000	21	31	2E	4	G 4	169.00	169.00	AF
Same					5447	--	NE	SW	NW	3890	4300	21	31	2E	6	B 4			
Same					5561	--	NW	SE	NW	3890	3700	21	31	2E	7	B 4			
Same					5791	--	SE	NW	NW	4190	4000	21	31	2E	8	B 4			
Same					5202	--	NE	SW	NW	3590	4000	21	31	2E	9	B 4			
A__ 48065	00	IRR	HK	G	6985	--	SE	NW	NE	4200	1600	30	31	2E	6	G 4	169.00	169.00	AF
Same					7006	--	SE	NW	NE	4400	1600	30	31	2E	7	B 4			
Same					6969	--	SE	NW	NE	4000	1600	30	31	2E	8	B 4			
Same					7184	--	SE	NW	NE	4200	1800	30	31	2E	9	B 4			
Same					6786	--	SE	NW	NE	4200	1400	30	31	2E	10	B 4			
A__ 48559	00	IRR	KE	G	4681	--	NW	SE	SE	1306	1112	28	31	2E	4	G 4	77.00	77.00	AF
Same					4786	--	NW	SE	SE	1106	1112	28	31	2E	10	B 4			
Same					4581	--	SW	NE	SE	1506	1112	28	31	2E	11	B 4			
Same					4510	--	NW	SE	SE	1306	1312	28	31	2E	12	B 4			
Same					4854	--	NW	SE	SE	1306	912	28	31	2E	13	B 4			
A__ 49077	00	IRR	GY	G	1322	--	NW	NW	SW	2393	4934	28	31	2E	7		162.00	162.00	AF
A__ 49273	00	IRR	GY	G	6723	--	SW	NE	NE	4016	1210	21	31	2E	10*		15.00	15.00	AF
A__ 49347	00	IRR	AY	G	327	--	NW	SW	NW	3383	5215	28	31	2E	8		94.00	94.00	AF
A__ 49473	00	IRR	AY	G	8157	--	--	--	SW	1320	3960	16	31	2E	1		169.00	169.00	AF
A__ 49828	00	IRR	AY	G	5150	--	--	--	NW	3960	3960	33	31	2E	1		180.00	180.00	AF
A__ 49829	00	IRR	AY	G	6272	--	--	--	NE	3960	1320	33	31	2E	2		110.00	110.00	AF
A__ 49834	00	IRR	AY	G	5678	--	--	--	NE	2430	210	30	31	2E	11		180.00	180.00	AF

Total Net Quantities Authorized:	Direct	Storage
Total Requested Amount (AF) =	733.00	.00
Total Permitted Amount (AF) =	545.59	.00
Total Inspected Amount (AF) =	169.00	.00
Total Pro_Cert Amount (AF) =	.00	.00
Total Certified Amount (AF) =	1050.30	.00
Total Vested Amount (AF) =	.00	.00
TOTAL AMOUNT (AF) =	2497.89	.00

An * after the source of supply indicates a pending application for change for the file number.

An * after the ID indicates a 15 AF exemption was granted for the file number.

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A "G" in the Batt column indicates the GEO CTR of a battery. A "B" indicates a well in the battery.
The number in the Batt column is the number of wells in the battery.

Water Rights and Points of Diversion Within 2.00 miles of point defined as:

97.222321 West Longitude and 37.328537 North Latitude

GROUNDWATER ONLY

WATER USE CORRESPONDENTS:

=====

File Number Use ST SR

A__ 28609 00 IRR NK G

> MICHAEL NEISES

>

> 1277 E 50TH AVE N

> BELLE PLAINE KS 67013

A__ 31244 00 IRR NK G

> CURT HOUBLER

>

> 1346 E 130TH AVE N

> MULVANE KS 67110

A__ 41894 00 IRR NK G

> DOUGLAS E HISKEN

>

> 1459 E 60TH AVE N

> BELLE PLAINE KS 67013

A__ 41946 00 IRR NK G

> CURT HOUBLER

>

> 1346 E 130TH AVE N

> MULVANE KS 67110

A__ 43705 00 IRR NK G

> BUTTS BROTHERS

>

> 205 S CENTRAL AVE

> MULVANE KS 67110

A__ 44569 00 IRR NK G

> LEOLA L & JAMES H NEISES TRUST

>

> 1318 E WOODBROOK ST

> DERBY KS 67037

A__ 45215 00 IRR NK G

> CHARLES C & LOU ANN BUSS

>

> 1692 E 30TH AVE N

> OXFORD KS 67119

A__ 45216 00 IRR NK G

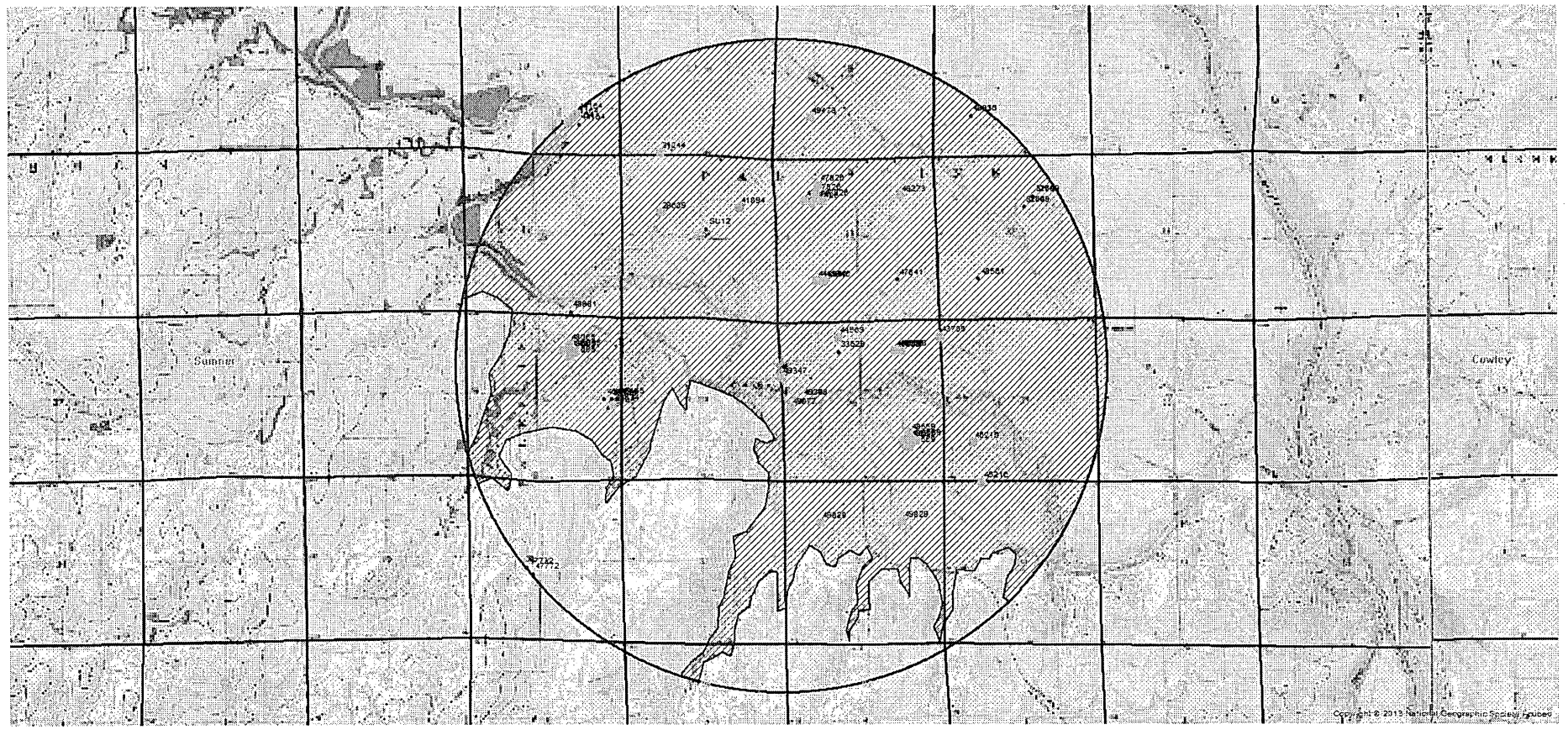
49,347

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Safe Yield Report Sheet
Proposed Water Right Application
Point of Diversion in NWNWSWNW 28-31S-02E
File No. 49,347 (3,690'N & 5,215'W)



File #49,347
 Requesting 94 AF
 meets safe yield

Analysis Results

The selected PD is in an area to new appropriations.
 The safe yield, based on the variables listed below is 2,050.99 AF.
 Total prior appropriation in the circle is 2,602.89 AF. - 733 = 1869.89
 Total quantity of water available for appropriation is ~~0.00~~ AF.

181.1

Safe Yield Variables

The area used for the analysis is set at 6077 acres.
 Potential annual recharge of the area is estimated to be 5.4 inches.
 The percent of recharge available for appropriation is 75%.

Authorized Quantity values are as of 29-AUG-2017 and are based on Appropriated and Vested ground water right and possible stream nodes for GMD #2. Domestic, Term and Temporary water rights have been excluded.

There are 20 water right(s) and 38 point(s) of diversion within the circle.

File Number	Use	ST	SR	Q4	Q3	Q2	Q1	FeetN	FeetW	Sec	Tw	Rng	ID	Qind	Auth_Quant	Add_Quant	Tacres	Nacres
A	28609	00	IRR	NK	G		NC S2 NW	3460	3695	20	31	02E	2	WR	148.00	148.00	222.00	222.00
A	31244	00	IRR	NK	G			80	3770	17	31	02E	1	WR	152.00	152.00	317.00	317.00
A	41894	00	IRR	NK	G		NW SE NE	3750	1163	20	31	02E	3	WR	155.00	155.00	103.60	103.60
A	41946	00	IRR	NK	G		NW SE SW	1288	3948	21	31	02E	1	WR	151.00	151.00	128.00	128.00
Same			IRR	NK	G		NW SE SW	1286	3814	21	31	02E	2	WR				
Same			IRR	NK	G		NW SE SW	1285	3680	21	31	02E	3	WR				
A	43705	00	IRR	NK	G		NW NW NW	4739	5142	27	31	02E	1	WR	163.50	163.50	135.00	135.00
A	44164	00	IRR	NK	G		NE SW SE	1210	1548	18	31	02E	1	WR	105.00	105.00	76.00	76.00
Same			IRR	NK	G		SE NW SE	1356	1403	18	31	02E	2	WR				
Same			IRR	NK	G		NE SW SE	1064	1693	18	31	02E	3	WR				
A	44569	00	IRR	NK	G		NW NE NW	4659	3369	28	31	02E	2	WR	54.60	54.60	42.00	42.00
A	45215	00	IRR	NK	G		NE SW SW	1316	4098	27	31	02E	2	WR	91.00	91.00	79.00	79.00
A	45216	00	IRR	NK	G		NW NE NW	5319	3874	34	31	02E	1	WR	135.20	135.20	114.00	114.00
A	46508	00	IRR	KE	G		SE NW NE	4200	1440	28	31	02E	3	WR	122.59	122.59	94.30	94.30
Same			IRR	KE	G		SE NW NE	4200	1340	28	31	02E	5	WR				
Same			IRR	KE	G		SE NW NE	4200	1540	28	31	02E	6	WR				
A	47826	00	IRR	LO	G		NE SW NW	3890	4000	21	31	02E	4	WR	169.00	169.00	130.00	130.00
Same			IRR	LO	G		NE SW NW	3890	4300	21	31	02E	6	WR				
Same			IRR	LO	G		NW SE NW	3890	3700	21	31	02E	7	WR				
Same			IRR	LO	G		SE NW NW	4190	4000	21	31	02E	8	WR				
Same			IRR	LO	G		NE SW NW	3590	4000	21	31	02E	9	WR				

A	48065	00	IRR	HK	G	SE NW NE	4200	1600	30	31	02E	6	WR	169.00	169.00	130.00	130.00
Same			IRR	HK	G	SE NW NE	4400	1600	30	31	02E	7	WR				
Same			IRR	HK	G	SE NW NE	4000	1600	30	31	02E	8	WR				
Same			IRR	HK	G	SE NW NE	4200	1800	30	31	02E	9	WR				
Same			IRR	HK	G	SE NW NE	4200	1400	30	31	02E	10	WR				
A	48559	00	IRR	KE	G	NW SE SE	1306	1112	28	31	02E	4	WR	77.00	77.00	67.00	67.00
Same			IRR	KE	G	NW SE SE	1106	1112	28	31	02E	10	WR				
Same			IRR	KE	G	SW NE SE	1506	1112	28	31	02E	11	WR				
Same			IRR	KE	G	NW SE SE	1306	1312	28	31	02E	12	WR				
Same			IRR	KE	G	NW SE SE	1306	912	28	31	02E	13	WR				
A	49077	00	IRR	GY	G	NW NW SW	2393	4934	28	31	02E	7	WR	162.00	162.00	132.00	132.00
A	49273	00	IRR	GY	G	SW NE NE	4016	1210	21	31	02E	10	WR	15.00	15.00	15.00	15.00
A	49347	00	IRR	AY	G	NW SW NW	3383	5215	28	31	02E	8	WR	94.00	94.00	73.00	73.00
A	49473	00	IRR	AY	G	SW	1320	3960	16	31	02E	1	WR	169.00	169.00	130.00	130.00
A	49828	00	IRR	AY	G	NW	3960	3960	33	31	02E	1	WR	180.00	180.00	160.00	160.00
A	49829	00	IRR	AY	G	NE NE	3960	1320	33	31	02E	2	WR	110.00	110.00	80.00	80.00
A	49834	00	IRR	AY	G	NE SE	2430	210	30	31	02E	11	WR	180.00	180.00	119.00	119.00

} Pending

733

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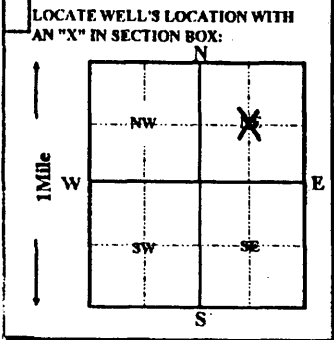
NOV 17 2017

KS DEPT OF AGRICULTURE

1 LOCATION OF WATER WELL: Sumner	FRACTION 1/4 C of NE 1/4	Section Number 20	Township Number T 31 S	Range Number R 2E E/W
--	------------------------------------	-----------------------------	----------------------------------	---------------------------------

Distance and direction from nearest town or city street address of well if located within city?
2 m. E., 3 m. S., 3/4 m. E., 1/4 m. S. of Belle Plaine, Kansas

WATER WELL OWNER: HISKEN, Doug RR#, ST. ADDRESS, BOX #: 1459 E. 60th North CITY, STATE, ZIP CODE: Belle Plaine, Kansas	Board of Agriculture, Division of Water Resource Application Number: 41.894
---	---



4 DEPTH OF COMPLETED WELL **57** ft. ELEVATION:

Depth(s) groundwater Encountered **1** ft. **2** ft. **3** ft.

WELL'S STATIC WATER LEVEL **13** FT. BELOW LAND SURFACE MEASURED ON **07/08/1996**

Pump test data: Well water was _____ ft. after _____ hours pumping _____ gpm

Est. Yield **700** gpm: Well water was _____ ft. after _____ hours pumping _____ gpm

Bore Hole Diameter **30** in. to **57** ft. and _____ in. to _____ ft.

WELL WATER TO BE USED AS:

5 Public water supply	8 Air conditioning	11 Injection well
1 Domestic	3 Feedlot	6 Oil field water supply
2 Irrigation	4 Industrial	7 Lawn and garden only
		9 Dewatering
		12 Other (Specify below)
		10 Monitoring well

Was a chemical/bacteriological sample submitted to Department? Yes _____ No **X**; If yes, mo/day/yr sample was submitted _____

Water Well Disinfected? Yes **X** No _____

5 TYPE OF CASING USED:

1 Steel	3 RMP (SR)	5 Wrought iron	8 Concrete tile	CASING JOINTS: Glued <input checked="" type="checkbox"/> Clamped
2 PVC	4 ABS	6 Asbestos-Cement	9 Other (Specify below)	Welded
		7 Fiberglass	SDR-26	Threaded

Blank casing Diameter **16** in. to **27** ft., Dia _____ in. to _____ ft., Dia _____ in. to _____ ft.

Casing height above land surface **12** in., weight **19.750** lbs. / ft. Wall thickness or gauge No. **.616**

TYPE OF SCREEN OR PERFORATION MATERIAL:

1 Steel	3 Stainless Steel	5 Fiberglass	8 RMP (SR)	11 other (specify)
2 Brass	4 Galvanized steel	6 Concrete tile	9 ABS	12 None used (open hole)

SCREEN OR PERFORATION OPENING ARE:

1 Continuous slot	3 Mill slot	5 Gauzed wrapped	8 Saw cut	11 None (open hole)
2 Louvered shutter	4 Key punched	6 Wire wrapped	9 Drilled holes	
		7 Torch cut	10 Other (specify)	

SCREEN-PERFORATION INTERVALS: from **27** ft. to **57** ft., From _____ ft. to _____ ft.

GRAVEL PACK INTERVALS: from **20** ft. to **57** ft., From _____ ft. to _____ ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout 3 Bentonite 4 Other **bentonite hole plug**

Grout Intervals: From **0** ft. to **20** ft. From _____ ft. to _____ ft.

What is the nearest source of possible contamination:

1 Septic tank	4 Lateral lines	7 Pit privy	10 Livestock pens	14 Abandon water well
2 Sewer lines	5 Cess pool	8 Sewage lagoon	11 Fuel storage	15 Oil well/Gas well
3 Watertight sewer lines	6 Seepage pit	9 Feedyard	12 Fertilizer storage	16 Other (specify below)
			13 Insecticide storage	None Apparent

Direction from well?		How many feet?				
FROM	TO	LITHOLOGIC LOG		FROM	TO	PLUGGING INTERVALS
0	2	soil				
2	13	brown clay				
13	25	fine to coarse sand				
25	45	fine to coarse sand and fine to medium gravel				
45	57	fine to coarse sand and medium to coarse gravel with few cemented streaks				
57	58	gray shale				
						WATER RESOURCES RECEIVED
						NOV 17 2017
						KS DEPT OF AGRICULTURE

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/year) **07/08/1996** and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. **236** This Water Well Record was completed on (mo/day/yr) **07/09/96**

Under the business name of **Harp Well & Pump Service, Inc.** by (signature) *Todd S. Harp*

WATER WELL RECORD

Form WWC-5

Division of Water Resources App. No.

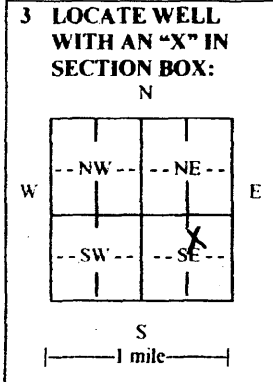
48,559

1 LOCATION OF WATER WELL: County: Sumner	Fraction NW ¼ SW ¼ NE ¼ SE ¼	Section Number 28	Township No. T 31 S	Range Number R 2 <input checked="" type="checkbox"/> E <input type="checkbox"/> W
--	---------------------------------	----------------------	------------------------	--

Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here
1-1/4 mile West & 3-1/4 mile North of Oxford, Ks.

Global Positioning System (GPS) information:
Latitude: 37.32311419 (in decimal degrees)
Longitude: 97.2094934 (in decimal degrees)
Elevation: 1170
Datum: WGS 84, NAD 83, NAD 27
Collection Method:
 GPS unit (Make/Model:)
 Digital Map/Photo, Topographic Map, Land Survey
Est. Accuracy: <3 m, 3-5 m, 5-15 m, >15 m

2 WATER WELL OWNER: Thane Buss
RR#, Street Address, Box #: 418 Olive St.
City, State, ZIP Code : Oxford, Kansas 67119



4 DEPTH OF COMPLETED WELL 44 ft.

Depth(s) Groundwater Encountered (1)..... ft. (2)..... ft. (3)..... ft.

WELL'S STATIC WATER LEVEL 7 ft. below land surface measured on mo/day/yr. 1/28/2016.....

Pump test data: Well water was..... ft. after..... hours pumping..... gpm

EST. YIELD. 300-500 gpm. Well water was..... ft. after..... hours pumping..... gpm

Bore Hole Diameter 18 in. to 44 ft., and..... in. to..... ft.

WELL WATER TO BE USED AS: Public water supply Geothermal Injection well
 Domestic Feedlot Oil field water supply Dewatering Other (Specify below)
 Irrigation Industrial Domestic-lawn & garden Monitoring well

Was a chemical/bacteriological sample submitted to Department? Yes No

If yes, mo/day/yr sample was submitted.....

Water well disinfected? Yes No

5 TYPE OF CASING USED: Steel PVC Other.....

CASING JOINTS: Glued Clamped Welded Threaded

Casing diameter 10 in. to 24 ft., Diameter..... in. to..... ft., Diameter..... in. to..... ft.

Casing height above land surface 12 in., Weight 8.878 lbs./ft., Wall thickness or gauge No. 0.413.....

TYPE OF SCREEN OR PERFORATION MATERIAL:
 Steel Stainless Steel PVC Other (Specify).....
 Brass Galvanized Steel None used (open hole)

SCREEN OR PERFORATION OPENINGS ARE:
 Continuous slot Mill slot Gauze wrapped Torch cut Drilled holes None (open hole)
 Louvered shutter Key punched Wire wrapped Saw cut Other (specify).....

SCREEN-PERFORATED INTERVALS: From 24 ft. to 44 ft., From..... ft. to..... ft.
From..... ft. to..... ft., From..... ft. to..... ft.

GRAVEL PACK INTERVALS: From 20 ft. to 44 ft., From..... ft. to..... ft.
From..... ft. to..... ft., From..... ft. to..... ft.

6 GROUT MATERIAL: Neat cement Cement grout Bentonite Other.....

Grout Intervals: From 0 ft. to 20 ft., From..... ft. to..... ft., From..... ft. to..... ft.

What is the nearest source of possible contamination:
 Septic tank Lateral lines Pit privy Livestock pens Insecticide storage Other (specify below)
 Sewer lines Cesspool Sewage lagoon Fuel storage Abandoned water well
 Watertight sewer lines Seepage pit Feedyard Fertilizer storage Oil well/gas well

Direction from well None within 1/4 mile Distance from well.....

FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	2	Sand, fine			
2	5	Clay, brown			
5	18	Sand, w/clay 70/30			
18	38	Sand, medium			
38	42.5	Sand, medium-coarse w/clay streaks			
42.5	44	Shale, gray			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (mo/day/year) 1/28/2016..... and this record is true to the best of my knowledge and belief.

Kansas Water Well Contractor's License No. 897..... This Water Well Record was completed on (mo/day/year) 2/1/2016.....

under the business name of Peterson McNett Drilling, Inc. by (signature) *[Signature]*

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks and check the correct answers. Send one copy to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5524. Send one copy to WATER WELL OWNER and retain one for your records. Include fee of \$5.00 for each constructed well. Visit us at <http://www.kdheks.gov/waterwell/index.html>



WATER WELL RECORD Form WWC-5 1173586

Division of Water Resources App. No.

46,508

Well ID

Original Record Correction Change in Well Use

1 LOCATION OF WATER WELL: County: Sumner	Fraction SW 1/4 SW 1/4 NE 1/4 NE 1/4	Section Number 28	Township Number T 31 S	Range Number R 2 <input checked="" type="checkbox"/> E <input type="checkbox"/> W
--	---	----------------------	---------------------------	--

2 WELL OWNER: Last Name: BUSS First: Thane Business: Address: 418 E. Olive St. Address: City: Oxford State: KS ZIP: 67119	Street or Rural Address where well is located (if unknown, distance and direction from nearest town or intersection): If at owner's address, check here: <input type="checkbox"/> 2 miles West & 4 miles North of Oxford, KS
--	--

3 LOCATE WELL WITH "X" IN SECTION BOX: N W E S -----1 mile-----	4 DEPTH OF COMPLETED WELL: 66 ft. Depth(s) Groundwater Encountered: 1) 17 ft. 2) ft. 3) ft., or 4) <input type="checkbox"/> Dry Well WELL'S STATIC WATER LEVEL: 17 ft. <input checked="" type="checkbox"/> below land surface, measured on (mo-day-yr) 12/17/2013 <input type="checkbox"/> above land surface, measured on (mo-day-yr) Pump test data: Well water was ft. after hours pumping gpm Well water was ft. after hours pumping gpm Estimated Yield: 1200 gpm Bore Hole Diameter: 30 in. to 66 ft. and in. to ft.	5 Latitude: 37.32994 (decimal degrees) Longitude: 97.20976 (decimal degrees) Datum: <input type="checkbox"/> WGS 84 <input checked="" type="checkbox"/> NAD 83 <input type="checkbox"/> NAD 27 Source for Latitude/Longitude: <input type="checkbox"/> GPS (unit make/model:) (WAAS enabled? <input type="checkbox"/> Yes <input type="checkbox"/> No) <input type="checkbox"/> Land Survey <input type="checkbox"/> Topographic Map <input type="checkbox"/> Online Mapper:
		6 Elevation: 1172 ft. <input checked="" type="checkbox"/> Ground Level <input type="checkbox"/> TOC Source: <input type="checkbox"/> Land Survey <input type="checkbox"/> GPS <input type="checkbox"/> Topographic Map <input checked="" type="checkbox"/> Other KOLAR

7 WELL WATER TO BE USED AS:

1. Domestic: <input type="checkbox"/> Household <input type="checkbox"/> Lawn & Garden <input type="checkbox"/> Livestock	2. <input checked="" type="checkbox"/> Irrigation	3. <input type="checkbox"/> Feedlot	4. <input type="checkbox"/> Industrial	5. <input type="checkbox"/> Public Water Supply: well ID	6. <input type="checkbox"/> Dewatering: how many wells?	7. <input type="checkbox"/> Aquifer Recharge: well ID	8. <input type="checkbox"/> Monitoring: well ID	9. Environmental Remediation: well ID	<input type="checkbox"/> Air Sparge <input type="checkbox"/> Soil Vapor Extraction <input type="checkbox"/> Recovery <input type="checkbox"/> Injection	10. <input type="checkbox"/> Oil Field Water Supply: lease	11. Test Hole: well ID	<input type="checkbox"/> Cased <input type="checkbox"/> Uncased <input type="checkbox"/> Geotechnical	12. Geothermal: how many bores?	a) Closed Loop <input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical b) Open Loop <input type="checkbox"/> Surface Discharge <input type="checkbox"/> Inj. of Water	13. <input type="checkbox"/> Other (specify):
--	---	-------------------------------------	--	--	---	---	---	---	--	--	------------------------------	---	---------------------------------------	--	---

Was a chemical/bacteriological sample submitted to KDHE? Yes No If yes, date sample was submitted:

Water well disinfected? Yes No

8 TYPE OF CASING USED: Steel PVC Other CASING JOINTS: Glued Clamped Welded Threaded
Casing diameter **16** in. to **30** ft., Diameter in. to ft., Diameter in. to ft.
Casing height above land surface **12** in. Weight **16.15** lbs./ft. Wall thickness or gauge No. **500**

TYPE OF SCREEN OR PERFORATION MATERIAL:
 Steel Stainless Steel Fiberglass PVC Other (Specify)
 Brass Galvanized Steel Concrete tile None used (open hole)

SCREEN OR PERFORATION OPENINGS ARE:
 Continuous Slot Mill Slot Gauze Wrapped Torch Cut Drilled Holes Other (Specify)
 Louvered Shutter Key Punched Wire Wrapped Saw Cut None (Open Hole)

SCREEN-PERFORATED INTERVALS: From **30** ft. to **66** ft., From ft. to ft., From ft. to ft.
GRAVEL PACK INTERVALS: From **22** ft. to **66** ft., From ft. to ft., From ft. to ft.

9 GROUT MATERIAL: Neat cement Cement grout Bentonite Other

Grout Intervals: From **2** ft. to **22** ft., From ft. to ft., From ft. to ft.

Nearest source of possible contamination:
 Septic Tank Lateral Lines Pit Privy Livestock Pens Insecticide Storage
 Sewer Lines Cess Pool Sewage Lagoon Fuel Storage Abandoned Water Well
 Watertight Sewer Lines Seepage Pit Feedyard Fertilizer Storage Oil Well/Gas Well
 Other (Specify)

Direction from well? Distance from well?

10 FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	3	Topsoil			
3	18	Clay, tan & silty			
18	45	Sand, medium to coarse, white			
45	51	Clay, brown			
51	55	Clay, gray			
55	66	Sand, fine to coarse, tan			
			Notes: KS DEPT OF AGRICULTURE		

11 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (mo-day-year) **12/17/2013** and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. **138** This Water Well Record was completed on (mo-day-year) **12/18/2013** under the business name of **Peterson Irrigation, Inc.**

1320 Research Park Drive
Manhattan, Kansas 66502
(785) 564-6700



900 SW Jackson, Room 456
Topeka, Kansas 66612
(785) 296-3556

Jackie McClaskey, Secretary

Governor Sam Brownback

April 17, 2015

MARK LAWLESS
PO BOX 515
BELLE PLAINE KS 67013

RE: Pending Application, File No. 49,347

Dear Mr. Lawless:

The application referred to above was returned to you for additional information on March 31, 2015, and with your current extension of time the required response date is May 18, 2015. The purpose of this letter is to provide a reminder that in order for you to retain your priority of filing, the original application, and requested information, needs to be returned to this office on or before **May 18, 2015**, or within any authorized extension of time thereof. According to the law, default in the refiling of the completed application and attachments, within the time allowed, shall constitute forfeiture of priority date and dismissal of the application.

If an extension of time is necessary to supply the requested information, please request the extension of time, in writing, before **May 18, 2015**. Provide information on why the additional time is needed and how much additional time is requested. Since there are instances when the Chief Engineer may deny your request for an extension of time, there is no guarantee that future requests for more time will be granted.

If you have any questions, please contact me at (785) 564-6631 or by email at katie.goff@kda.ks.gov. If you wish to discuss a specific file, please have the file number ready so that I may help you more efficiently.

Sincerely,

A handwritten signature in black ink that reads "Katie Goff". The signature is written in a cursive, flowing style.

Katie Goff
Environmental Scientist
Water Appropriation Program

WATER RESOURCES
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NOV 17 2017

KS DEPT OF AGRICULTURE

1320 Research Park Drive
Manhattan, Kansas 66502
(785) 564-6700



900 SW Jackson, Room 456
Topeka, Kansas 66612
(785) 296-3556

Jackie McClaskey, Secretary

Governor Sam Brownback

March 31, 2015

MARK LAWLESS
PO BOX 515
BELLE PLAINE KS 67013

RE: Pending Application, File No. 49,347

Dear Mr. Lawless:

After reviewing your above referenced application for a permit to appropriate water for beneficial use, the file is being returned to you for additional information. As specified in K.A.R. 5-3-1, an application acceptable for filing shall show the source of water supply and either shall show a description of the location of the proposed point of diversion or shall request a 60-day period of time in which to establish the location of the proposed point of diversion within a limited area. In your original application, received in this office on March 18, 2015, you had requested a 60-day period of time in which to locate the specific point of diversion within a specified quarter section tract of land described as the Northwest Quarter of Section 28, in Township 31 South, Range 2 East, Sumner County, Kansas.

In Paragraph No. 5 of the application please provide the description of the location of the proposed geographic center of the well battery, and the location for **each of the individual wells comprising the battery** of wells. The feet distances North and West from the Southeast corner of the section must be listed for each well in the battery. The location of the point of diversion for the file (i.e. the geographic center of the proposed well battery) must be plotted on the enclosed site map. Per K.A.R. 5-3-4, the location of all water wells of every kind within one-half (½) mile of the point of diversion covered by the proposed appropriation must be plotted on the topographic map, identified as to its use, and include the name and mailing address of the well owner. The application currently has this information attached; please verify the information is correct once you have established your point of diversion for this file.

Paragraph No. 13 of the application requests well information so the source of supply of the proposed wells may be determined. Pursuant to K.A.R. 5-3-4d, this office requires a stratigraphic log of a well or test hole within 300 feet of the proposed point of diversion, unless the chief engineer has sufficient information to understand the lithology and determine the groundwater source formation. Please supply the indicated information and a test hole log or a driller's log with the returned application.

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(over)

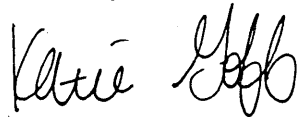
Mark Lawless

Pending Application, File No. 49,347

Page 2

In order for the application to retain its priority of filing, the original application and attachments must be returned, with the requested information to this office on or before May 18, 2015, or within any authorized extension of time thereof. According to the law, default in the refiling of the completed application and attachments, within the time allowed, shall constitute forfeiture of the priority date and dismissal of the application. If you have any questions, please contact me at (785) 564-6631 or by email at katie.goff@kda.ks.gov. If you wish to discuss a specific file, please have the file number ready so that I may help you more efficiently.

Sincerely,

A handwritten signature in cursive script, appearing to read "Katie Goff".

Katie Goff

Environmental Scientist

Water Appropriation Program

Enclosure

2. Please complete the following information for the description of the operation for the irrigation project. Attach supplemental sheets as needed.

a. Indicate the soils in the field(s) and their intake rates:

Soil Name	Percent of field (%)	Intake Rate (in/hr)	Irrigation Design Group
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Total:	100 %	_____	_____

b. Estimate the average land slope in the field(s): _____ %

Estimate the maximum land slope in the field(s): _____ %

c. Type of irrigation system you propose to use (check one):

- Center pivot ___ Center pivot - LEPA ___ "Big gun" sprinkler
 ___ Gravity system (furrows) ___ Gravity system (borders) ___ Sideroll sprinkler

Other, please describe: _____

d. System design features:

i. Describe how you will control tailwater:

ii. For sprinkler systems:

- (1) Estimate the operating pressure at the distribution system: 35 psi
 (2) What is the sprinkler package design rate? 800 gpm
 (3) What is the wetted diameter (twice the distance the sprinkler throws water) of a sprinkler on the outer 100 feet of the system? 65' feet
 (4) Please include a copy of the sprinkler package design information.

e. Crop(s) you intend to irrigate. Please note any planned crop rotations:

f. Please describe how you will determine when to irrigate and how much water to apply (particularly important if you do not plan a full irrigation).

You may attach any additional information you believe will assist in informing the Division of the need for your request.

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MAR 18 2015

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SCANNED

3-16-2015

(Date)

Kansas Department of Agriculture
Division of Water Resources
David W. Barfield, Chief Engineer
1320 Research Park Drive
Manhattan, Kansas 66502

Re: Application
File No. 49,347

Minimum Desirable Streamflow

Dear Sir:

I understand that a Minimum Desirable Streamflow requirement has been established by the legislature for the source of supply to which the above referenced application applies.

I understand that diversion of water pursuant to this application will be subject to regulation any time Minimum Desirable Streamflow requirements are not being met.

I also understand that if this application is approved, there could be times, as determined by the Division of Water Resources, when I would not be allowed to divert water. I realize that this could affect the economics of my decision to appropriate water.

I am aware of the above factors, and with the knowledge thereof, request that the Division of Water Resources proceed with processing and approval if possible, of the above referenced application.

Signature of Applicant

State of Kansas)
County of Sumner) ss

MARK LAWLESS
(Print Applicant's Name)

I hereby certify that the foregoing instrument was signed in my presence and sworn to before me this 16th day of March, 2015.



Notary Public

My Commission Expires: 11-03-2016

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MAR 18 2015

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1320 Research Park Drive
Manhattan, Kansas 66502
(785) 564-6700



900 SW Jackson, Room 456
Topeka, Kansas 66612
(785) 296-3556

Jackie McClaskey, Secretary

Governor Sam Brownback

March 27, 2015

MARK LAWLESS
PO BOX 515
BELLE PLAINE KS 67013-0515

RE: Application
File No. 49,347

Dear Sir or Madam:

Your application for permit to appropriate water in 28-31-2E in Sumner County, was received and has been assigned the file number noted above.

As a matter of record, the Division of Water Resources has on hand a large number of applications awaiting processing. Therefore to be fair to all concerned, and so that we can process those applications on hand in the order they were received, we intend to concentrate on the backlog of applications until the issue is resolved. Once review of your application has begun, we will contact you if additional information is required.

In accordance with the provisions of the Kansas Water Appropriation Act, a portion of which is included below, the use of water as proposed prior to approval of the application is unlawful. Once approved, compliance with the terms, conditions and limitations of the permit is necessary. Conservation of the water resources of Kansas is required.

Section 82a-728 of the Kansas Water Appropriation Act, provides (a) except for the appropriation of water for the purpose of domestic use, ...it shall be unlawful for any person to appropriate or threaten to appropriate water from any source without first applying for and obtaining a permit to appropriate water in accordance with the provisions of the Water Appropriation Act or for any person to violate any condition of a vested right, appropriation right or an approved application for a permit to appropriate water for beneficial use.

(b)(1)The violation of any provision of this section by any person is a class C misdemeanor...

A class C misdemeanor is punishable by a fine not to exceed \$500 and/or a term of confinement not to exceed one month in the county jail. Each day that the violation occurs constitutes a separate offense.

If you have any questions, please contact me at (785) 564-6640. If you wish to discuss a specific file, please have the file number ready so that we may help you more efficiently.

Sincerely,

Kenneth A. Kopp, P.G.
Water Appropriation Program
Division of Water Resources

pc: Stafford Field Office

SCANNED

49,347



All wells of any kind within 1/2 mile of the requested point of diversion have been plotted.
Noir Luc 55 3/15/15

Harold T + M.C. Shupley
604 Quail Nest Rd.
Warfield, KS 67156

PLACE OF USE
Revised -
See Map



wpt020

RONNIE NEISBS
409 N Rock Rd.
BELL PLANE, KS 67013

wpt021

MARSHA NEEDHAM
1525 E 50th AVE North
BELL PLANE, KS 67015
5134'

surface pump001
dismissed

3383' North
3700'

2665' North

4558' West

Section 28, T31, R2E

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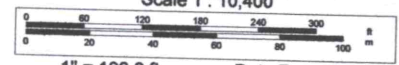
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MAY 11 2015

WATER RESOURCES RECEIVED

MAR 18 2015

Scale 1 : 10,400



1" = 196.8 ft

Data Zoom 13-3

Data use subject to license.
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www.delorme.com

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SCANNED

MARK LAWLESS - FILE NO. 49,347 SITE MAP
SECS. 28 & 29, T31S, R2E
SUMNER COUNTY



1:12,000



Proposed Place of Use *

Revised per applicant 11/6/17



Proposed Point of Diversion

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