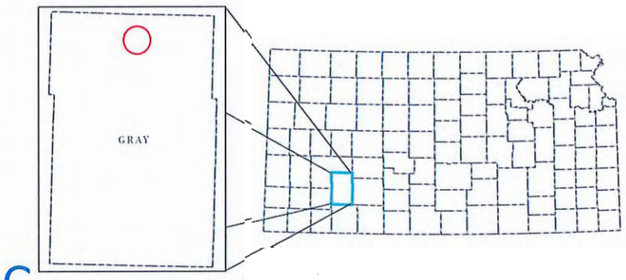
January 2018 – December 2020

Midwest Feeders, Inc.



Water Conservation Area Executive Summary

WCA Acres: 1,145 acres
Number of STK Water Rights: 7
Number of STK Wells: 9 (with 3 Geocenters)
Number of IRR Water Rights: 4
Number of IRR Wells: 3
Historical Period: 2012-2017 based on current operations and ownership
Prior Conservation:

- Past conversion of four IRR water rights to STK use; total reduced by 951.30 AF
- Average reuse of wastewater from feedlot of 391.74 AF per year applied to irrigation fields
- Estimated additional recharge provided by wastewater is approximately 50.93 AF/Yr
- Estimated average unit consumption rate of 8.72 gallons per head per day (58% of maximum allowable rate for beef cattle)
- **WCA Allocation:**
- Total WCA allocation of 3,100.56 AF for period of WCA
    - STK- Held to total annual authorized quantity (746.10 AF x 3-yrs)
    - IRR- 10% conservation based on historical average use (287.42 AF x 3-Yrs)

Corrective Controls- Flexibilities requested exceeding base water right

- All STK wells, with exception of File No. 10,999, shall be limited to 746.10 AF/Yr
- All STK wells will be held to current operating diversion rates listed in management plan
    - Operating diversion rates **do not** allow any STK well to exceed 746.10 AF/Yr
- STK File No. 10,999 (ID-8 Geo) shall be limited to a total combined quantity of 267 AF/Yr
- STK File No. 10,999 (ID-3 Geo) shall be limited to a total combined quantity of 241 AF/Yr
- All Stockwater points of diversion cannot exceed a total annual aggregate use of 746.10 AF (total annual authorized quantity of all STK points of diversion)
    - Irrigation points of diversion cannot exceed annual authorized quantity (per well/year)

*Additional corrective controls on Midwest Feeders, Inc. WCA Management Plan starting on page 6.

Total water conserved over WCA period (based on historical use): 95.82 AF

NOTE: Executive Summary provided by KS Dept of Agriculture – Division of Water Resources
Initial consultations with KDA-DWR began in January 2018

MANAGEMENT PLAN FOR THE DESIGNATION OF A WATER CONSERVATION AREA (WCA)

FOR

MIDWEST FEEDERS, INC.

GRAY COUNTY, KANSAS

ORIGINALLY SUBMITTED ON MARCH 2, 2018

REVISED AUGUST 7, 2018 BASED ON DWR ANALYSIS AND REVIEW

TECHNICAL ASSISTANCE PROVIDED BY

RURAL RESOURCES CONSULTING, LLC
751 SE CR 36
SYRACUSE, KS 67878

&

KLA ENVIRONMENTAL SERVICES, INC.
1303 YUCCA ST
SCOTT CITY, KS 67871

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MIDWEST FEEDERS, INC. WATER CONSERVATION AREA MANAGEMENT PLAN

Management Plan for the Designation of a Water Conservation Area (WCA) for Midwest Feeders, Inc. Gray County, Kansas

Purpose

Midwest Feeders, Inc. is an established part of the Gray County community and economy. Our staff consists of 52 full-time employees. We provide a local market for feed crops by purchasing 5,000,000 bushels of corn, 30,000 tons of corn silage, and 6,000 tons of alfalfa hay annually. Midwest Feeders, Inc. produces a value-added product that supplies the largest sector of the local and regional economy. We recognize that water is a primary resource and that both our economy and community are dependent upon our water supply. Midwest Feeders, Inc. has intensively managed water use for many years and has recorded one of the lowest beef cattle consumption rates in the region. We believe that we can continue to improve water management if appropriate tools are available to us. In order to reduce the rate of decline of groundwater levels in our region and extend the life of our water supply, we propose to establish a Water Conservation Area that encompasses the land and water rights associated with the Midwest Feeders, Inc. cattle feeding facility. The management plan for this Water Conservation Area is presented herein and shall form the basis of a Consent Agreement and Order Designating a Water Conservation Area pursuant to K.S.A. 82a-745 (WCA Law). The participating water right owner agrees to the terms and conditions contained in this proposed management plan.

Expression of Conservation Goals

Midwest Feeders, Inc. is the sole water right owner participating in the Midwest Feeders, Inc. Water Conservation Area. The primary goal of Midwest Feeders, Inc. is to sustain their business and community by conserving their groundwater resources. The facility is currently permitted for a capacity of 59,320 head of beef cattle. Expansion of the facility to a total capacity of 74,000 head of beef cattle is planned for completion in 2018. Flexibility is needed to allocate groundwater resources according to the seasonal demands of livestock consumption. The participants have concluded that the goals of conservation and flexible water resource allocation can be achieved by taking the following actions:

1. Establish base water rights that provide a sufficient quantity of water to support the total planned capacity of the facility.

2. Limit average unit consumption to a rate of 9 gallons per head per day during the term of the WCA. Annual unit consumption will vary based upon weather conditions, cattle numbers, and average cattle weights.

3. Gain the flexibility needed to intensively manage the wells that supply the interconnected pressurized water system and the associated storage tanks. This will be accomplished by operating under a single quantity limitation that is equal to the total annual authorized aggregate quantity of all the stockwater rights participating in the management plan.

4. Reduce irrigation use to augment conservation of the local aquifer.

5. Implement advancements in water conservation technology that are compatible with the provisions of this management plan.

6. Participate for a period that is compatible with typical stocking and market fluctuations and long enough to indicate measurable results.

7. Establish a process to evaluate the effectiveness of this management plan so that it may be revised as needed and continued for subsequent terms.

Term

The terms and conditions of the Midwest Feeders, Inc. Water Conservation Area shall be effective upon issuance of a Consent Agreement and Order Designating a Water Conservation Area (WCA Agreement) that is approved by all participating water right owners and the Chief Engineer of the Division of Water Resources. The proposed term of the WCA Agreement is three (3) years extending from January 1, 2018 through December 31, 2020.

Water Rights Enrolled and Geographical Boundaries

The Midwest Feeders, Inc. Water Conservation Area encompasses the cattle feeding facility located in Section 19 Township 24 South Range 28 West (T24S R28W) and Sections 24 and 25 Township 24 South Range 29 West (T24S R29W), all in Gray County. There are nine points of diversion (wells) associated with six water rights in this area that are devoted to stockwater use to supply the facility. Two other points of diversion associated with four water rights are located in Section 25 T24S R29W and are authorized for irrigation use. One point of diversion associated with File No. 22,121 located in Section 25 T24S R29W is authorized for both irrigation and stockwater use. These irrigation rights are an integral part of the facility's waste management system and Nutrient Management Plan.

Table 1 summarizes the water rights and points of diversion included in this Water Conservation Area.

Table 1 – Water Rights and Points of Diversion Included in the Midwest Feeders, Inc. WCA

WATER RIGHT FILE NO.	WELL ID NO.	BENEFICIAL USE*	AUTHORIZED QUANTITY (AF)	P/D DIST. FROM SE SECTION CORNER		
				SEC-TWP-RGE	NORTH	WEST
4,887	5	STK	5.00	24-24S-29W	990 FT	2630 FT
22,122	5	STK	25.00	24-24S-29W	990 FT	2630 FT
10,639	3*	STK	135.00	24-24S-29W	102 FT	2514 FT
32,786	3*	STK	38.00	24-24S-29W	102 FT	2514 FT
22,122	2	STK	124.00	24-24S-29W	2800 FT	100 FT
10,639	7	STK	95.00	25-24S-29W	3667 FT	1248 FT
32,787	7	STK	38.00	25-24S-29W	3667 FT	1248 FT
10,999	3*	STK	174.10	19-24S-28W	175 FT	1550 FT
10,999	8*	STK		19-24S-28W	2098 FT	1844 FT
22,121	3	STK	112.00	25-24S-29W	2197 FT	1898 FT
10,639	2	IRR	159.60	25-24S-29W	3440 FT	2525 FT
22,122	2	IRR	52.00	25-24S-29W	3440 FT	2525 FT
22,121	2	IRR	41.40	25-24S-29W	3440 FT	2525 FT
22,121	3	IRR	112.10	25-24S-29W	2197 FT	1898 FT
29,614	9	IRR	109.00	25-24S-29W	170 FT	4030 FT

Legend: STK = stockwater use IRR = irrigation use AF = acre-feet/year
P/D = point of diversion SEC-TWP-RGE = Section, Township and Range
* Geographical center of battery of wells

All the stockwater rights have a common place of use; that is, they are completely overlapped. Change applications will be filed by October 31, 2018 to add the SW ¼ Section 19 T24S R28W to the place of use. This additional area will cover the expansion that is in the process of being constructed. Completion is anticipated by March 2019. This management plan proposes to completely overlap all places of use so that water from any point of diversion authorized for stockwater use can be used anywhere within the WCA-authorized place of use. The geographical description of the WCA-authorized place of use is shown in Table 2. The geographic boundaries of the Midwest Feeders, Inc. Water Conservation Area are shown on the *WATER CONSERVATION AREA PLACE OF USE MAP* included in Appendix 1 of this management plan.

Table 2 – WCA-Authorized Place of Use for the Midwest Feeders, Inc. WCA

LEGAL DESCRIPTION		USE
FRACTION	SECTION-TOWNSHIP-RANGE	
NE ¼, NW ¼, SW ¼ & N ½ SE ¼	19-24S-28W	STOCKWATER
SE ¼	24-24S-29W	STOCKWATER
NE ¼, E ½ NW ¼ & NW ¼ SE ¼	25-24S-29W	STOCKWATER

Table 3 summarizes the totals of the authorized quantities associated with the water rights enrolled in this WCA. It also summarizes the total average annual water use for the period 2012 through 2017. Refer to Appendix 1 for a summary of water use history by water right. A conservation use level of 9 gallons per head per day and the planned capacity of the cattle feeding facility (74,000 head) were used to determine the basis for the quantity of permissible groundwater withdrawal. This level is slightly more than the historic rate of 8.72 gallons per head per day and provides a modest safety factor for unanticipated conditions. This quantity was then multiplied by three (3), which is the term of the WCA, to arrive at the total quantity of permissible groundwater withdrawal for stockwater use that is authorized by this WCA. A ten percent (10%) conservation factor was applied to the total average annual irrigation water use for the period 2012 through 2017. The reduced quantity was then used as the basis for the quantity of permissible groundwater withdrawal for irrigation use. This quantity was then multiplied by three (3), which is the term of the WCA, to arrive at the total quantity of permissible groundwater withdrawal for irrigation use that is authorized by this WCA.

Table 3 – Summary of Water Use and Total Permissible Quantity of Withdrawal

BENEFICIAL USE	STOCKWATER	IRRIGATION
2012 – 2017 AVERAGE USE	492.04 AF	319.36 AF
CURRENT AUTHORIZED QUANTITY*	746.10 AF	474.10 AF
BASIS FOR PERMISSIBLE QUANTITY OF GROUNDWATER WITHDRAWAL	746.10 AF	287.42 AF
TOTAL PERMISSIBLE QUANTITY OF GROUNDWATER WITHDRAWAL (3 x BASIS)	2,238.30 AF	862.26 AF

*Official average use is 443.87 AF; actual quantity was used to determine actual use in gallons/head/day.

Findings Regarding Groundwater Conditions

K.S.A. 82a-745 and K.S.A. 82a-1036(a) through (d) require a finding that one of the following conditions be present within the area proposed as a Water Conservation Area:

1. Groundwater levels in the area in question are declining or have declined excessively;
2. The rate of withdrawal of groundwater in the area equals or exceeds the rate of recharge within such area;
3. Preventable waste of water is occurring or may occur within the area in question; or
4. Unreasonable deterioration of the quality of water is occurring or may occur within the area in question.

The participating water right owner has determined that the following conditions exist:

- Groundwater levels within T24S R28W and T24S R29W, Gray County, have declined excessively and continue to decline under the current levels of water use. The amount of decline has been documented by the Kansas Geological Survey and the Kansas Department of Agriculture, Division of Water Resources. Two water level observation wells are located in the vicinity of Midwest Feeders, Inc.: one in the NW ¼ of Section 28 T24S R28W and the other in the SE ¼ of Section 16 T24S R29W. The monitoring data indicate water level declines ranging from 25 to 50 feet in this area.

- The *Kansas High Plains Aquifer Atlas* published by the Kansas Geological Survey contains information concerning aquifer depletion. The *Percent Change in Saturated Thickness, Predevelopment to Average 2015-2017, Kansas High Plains Aquifer* map provides this information on a township basis. This map indicates that the area where Midwest Feeders, Inc. is located has experienced a decrease in saturated thickness of 30 to 45 percent.

Refer to Appendix 2 for detailed information documenting these conditions.

This information provides evidence that groundwater levels within this area have declined excessively and are continuing this trend. The loss of saturated thickness also implies that the rate of groundwater withdrawal is substantially greater than the rate of aquifer recharge. These conditions indicate a diminishing groundwater resource and justify the establishment of a Water Conservation Area in this region.

Due Consideration for Past Conservation

Midwest Feeders, Inc. has taken several actions that have reduced water use. Four of the six water rights that provide stockwater to the facility were originally perfected for irrigation use. Conversion from irrigation to stockwater use resulted in a substantial reduction in authorized quantity. These reductions are summarized in Table 4. File Nos. 10,639 and 22,122 include remaining portions of irrigation quantity as well as current stockwater quantities.

Table 4 – Reductions in Authorized Quantity Resulting from Changes in Use

WATER RIGHT FILE NO.	ORIGINAL AUTHORIZED QUANTITY (AF)	CURRENT AUTHORIZED QUANTITY (AF)	QUANTITY REDUCTION (AF)	QUANTITY REDUCTION (%)
4,887	281	5.00	276.00	98.2%
10,639	937	389.60	547.40	58.4%
10,999	302	174.10	127.90	42.4%
22,122	201	201.00	0.00	0.0%
TOTALS	1,721	769.70	951.30	55.3%

The total reduction resulting from change in beneficial use from irrigation to stockwater represents 55.3 percent of the original authorized quantity. This is a substantial reduction that occurred prior to and during the period of historical use. Therefore, the voluntary change in use to stockwater resulted in a reduced level of use prior to the establishment of this WCA, especially when this use is compared to neighboring irrigation use.

Midwest Feeders, Inc. is required by state and Federal law to retain all wastewater and stormwater runoff generated within the facility. Most of this wastewater quantity is derived from surface runoff from pens, roofs and related structures. This additional source of water is ultimately used for irrigation on the land included in the facility's Nutrient Management Plan. The wastewater serves as a supplemental source of recharge to the aquifer. Records indicate an average annual application of 114.53 acre-feet of wastewater on land owned by Midwest Feeders, Inc. that is adjacent to the facility. The records also indicate that an average annual quantity of 277.21 acre-feet of wastewater is exported to neighboring users as a source of supplemental irrigation water. Refer to Appendix 3 for a summary of these records. The efficiency of the sprinkler irrigation systems used by Midwest Feeders, Inc. and neighboring irrigators is estimated to be 87 percent. This implies a potential recharge rate of 13 percent of the water applied by irrigation. Using this recharge rate, the average estimated additional recharge provided by wastewater irrigation is 50.93 acre-feet per year.

Evaluation of water use during the period of 2012 through 2017 indicates an average unit consumption rate of 8.72 gallons per head per day. This consumption rate is approximately 58 percent of the maximum allowable rate for beef cattle indicated in K.A.R. 5-3-22. This rate is also approximately 13 percent less than the average consumption rate of 10 gallons per head day for cattle feeding facilities in this region.

Due consideration for past conservation, including reduction in authorized quantity, supplement aquifer recharge, and reduced livestock consumption rates, provides justification for the conservation plan and associated corrective control provisions presented herein.

Corrective Control Provisions and Plan for Conservation

The following corrective control provisions pertaining to the Midwest Feeders, Inc. Water Conservation Area will be in effect during the term of the WCA Agreement:

1. The term of the WCA Agreement shall extend from January 1, 2018 through December 31, 2020.

2. File change in place of use applications in 2018 pertaining to all stockwater rights that will cover the WCA-authorized place of use, including the expansion area in the SW ¼ Section 19 T24S R28W.

3. The total quantity of permissible groundwater withdrawal for stockwater use during the term of this WCA shall be limited to no more than 2,238.30 AF. This quantity is based on continuation of the conservation use previously established by Midwest Feeders, Inc.

4. The total quantity of permissible groundwater withdrawal for irrigation use during the term of this WCA shall be limited to no more than 862.26 AF.

5. The north battery of wells associated with File No. 10,999 (ID 8) having a geographical center located at 2,098 feet north and 1,844 feet west of the southeast corner of Section 19 T24S R28W shall be limited to a total rate of 380 gallons per minute (gpm) and 267 AF per year.

6. The south battery of wells associated with File No. 10,999 (ID 3) having a geographical center located at 175 feet north and 1,550 feet west of the southeast corner of Section 19 T24S R28W shall be limited to a total rate of 150 gpm and 241 AF per year.

7. The rates of wells authorized for stockwater use shall be subject to the limitations indicated in the following table:

WATER RIGHT FILE NO.	DWR WELL ID	RATE LIMITATION (GPM)	FACILITY WELL ID
4,887 & 22,122	5	80	8
10,639 & 32,786	4	100	1
10,639 & 32,786	6	60	2
10,639 & 32,787	7	120	3
10,999	6	70	5
10,999	7	80	4
10,999	9	210	6
10,999	10	170	7
22,122	2	190	9
22,121	3	200	10

8. Water rights may be pumped as directed by the owner. Water rights authorized for stockwater use will be considered as a group subject to an overall limitation of 746.10 acre-feet per year. Groundwater may be withdrawn from the wells authorized for stockwater use in any combination of quantities as long as the total use from these wells does not exceed 746.10 acre-feet per calendar year.

9. Water rights authorized for irrigation use will be considered as a group subject to an overall limitation of 287.42 acre-feet per year. Each water right authorized for irrigation shall also be limited to its current authorized rate and annual quantity.

10. It is recognized that the overall stockwater limitation of 746.10 acre-feet per year may be exceeded when the facility is operated at full capacity during extended periods of hot, dry weather. A term permit will be filed to obtain authorization to exceed the overall limitation if such conditions occur. Additional quantity obtained through a term permit will be offset by reduced use of the irrigation wells included in this WCA.

11. Midwest Feeders, Inc. with continue to provide supplemental recharge through wastewater irrigation on land adjacent to the facility and by export to neighboring users as a source of supplemental irrigation water. The distribution of the wastewater will be controlled by the provisions of the Nutrient Management Plan that is regulated by the Kansas Department of Health and Environment.

12. Midwest Feeders, Inc. will install a water tank overflow recycling system in conjunction with the 2018 expansion project in the SW ¼ of Section 19 T24S R28W. The performance of this system will be evaluated and this conservation technology will be extended to the rest of the facility if feasible.

13. A remainder quantity is defined as the accumulated portion of the total quantity of permissible groundwater withdrawal that is not used during the term of the WCA Agreement. Midwest Feeders, Inc. may elect to deposit the remainder quantity into a subsequent WCA Agreement that is governed by this management plan or revised versions thereof. Such a deposit shall be in addition to the total annual quantity of permissible groundwater withdrawal determined for the subsequent WCA Agreement. The credited portion of the remainder quantity may be carried forward through the term of the subsequent WCA Agreement until it is diverted.

Compliance Monitoring and Enforcement

Midwest Feeders, Inc. acknowledges the compliance monitoring and enforcement provisions stated herein. This includes any specific provisions relating to measuring or reporting water usage.

Monitoring

Midwest Feeders, Inc. or an authorized representative thereof will submit an annual report for each calendar year included in the term of this WCA. The annual report for each calendar year shall be submitted to the Chief Engineer no later than March 1st of the following year. The report will include a record of the following information:

- Beginning and ending flow meter readings for each point of diversion included in the WCA Agreement
- Quantity of water diverted by each point of diversion
- Total quantity of water diverted during the calendar year for stockwater and irrigation uses
- Annual unit rate of water use in gallons/head/day
- Unused portion of the total quantity of permissible groundwater withdrawal.

These records will be maintained in electronic and paper format. Copies will be made available to Kansas Department of Agriculture, Division of Water Resources staff upon request.

Water diverted from a well that supplies both irrigation and stockwater uses shall be metered in a manner that accurately quantifies each use. The metering or measurement system shall be reviewed and approved by the Water Commissioner of the Garden City Field Office of the Division of Water Resources.

Midwest Feeders, Inc. acknowledges that the measurement chambers of the water flow meters within this WCA will be sealed by Kansas Department of Agriculture, Division of Water Resources staff. These seals will remain in place for the duration of this management plan to ensure accurate water use records.

Midwest Feeders, Inc. agrees to install and maintain water flow meters and appurtenances that comply with the requirements of the Division of Water Resources and Southwest Kansas Groundwater Management District No. 3. Midwest Feeders, Inc. or an authorized designee who finds a flow meter that is inoperable or inaccurate shall notify the Garden City Field Office of the Division of Water Resources within 48 hours of discovery. Whenever an inoperable or inaccurate meter is repaired or replaced, Midwest Feeders, Inc. or an authorized designee shall notify the Garden City Field Office of the Division of Water Resources within seven (7) days on a form prescribed by the Chief Engineer of the water flow meter installation or any water flow meter repair or replacement event.

Enforcement

Midwest Feeders, Inc. acknowledges that failure to abide by the terms of this agreement may result in the termination of the WCA. Failure to abide by the terms, conditions, and limitations of the individual water rights will be subject to the civil penalties outlined in K.A.R. 5-14-10 and 5-14-12.

Review of Effectiveness

The Midwest Feeders, Inc. WCA management plan will be evaluated annually by the participants. Revisions and amendments to the management plan will be developed as needed and submitted to the Chief Engineer for consideration. A formal review shall be conducted during the final year of the term to ensure that the provisions of this management plan are appropriate and are achieving the stated goals of the Midwest Feeders, Inc. WCA. This review shall be completed by the Chief Engineer in consultation with the participants by August 31, 2020. Information obtained from the observation wells located in the

NW ¼ of Section 28 T24S R28W and the SE ¼ of Section 16 T24S R29W will be considered in this review. If the Chief Engineer finds that this WCA has achieved its goals and that there are no legal or physical conditions that require it to be altered or terminated, then the Midwest Feeders, Inc. WCA may be continued upon request of the participants. The management plan may be revised based upon the findings of the Chief Engineer and with the concurrence of all participating parties. The annual report for the last year in the term of this WCA shall indicate the total water use during the WCA period.

Participant Addition, Withdrawal, and Removal

Midwest Feeders, Inc. acknowledges that water right owners and their associated water rights and geographic boundaries may be added to this WCA upon written notification to the Chief Engineer by the owners of each enrolling water right. Such notification shall include the legal descriptions of the areas to be added. A participant may withdraw from the WCA through written notification to the Chief Engineer that is signed by the owners of the participating water right or rights to be withdrawn from the WCA.

If the addition or withdrawal of water rights requires modification of the permissible quantities of groundwater withdrawal, geographical boundaries, places of use, terms, or conditions of the original WCA, then the management plan shall be revised to incorporate such changes and the associated consent agreements shall be reaffirmed by all parties, after opportunity for comment on the proposed revisions by Southwest Kansas Groundwater Management District No. 3.

The Chief Engineer shall reserve the right to remove any participant from the Midwest Feeders, Inc. WCA for repeated violations of their WCA Agreement and/or violations of state laws and regulations that pertain to water rights and legal use of water.

Termination

The Midwest Feeders, Inc. WCA Agreement may be terminated by written notification submitted to the Chief Engineer. Such notification will state the intent to terminate, any applicable reasons for termination, and shall be signed by all currently participating members of the WCA.

State Law

The participants of the Midwest Feeders, Inc. WCA acknowledge that this WCA is subject to compliance with all other applicable state laws. The participants in conjunction with the Division of Water Resources will monitor any changes in Kansas laws that may impact this management plan or existing WCA Agreements.

Notification to Nearby Owners

Midwest Feeders, Inc. acknowledges that the Chief Engineer is required by state law to provide written notification to all water right owners with a point of diversion within ½ mile of the boundaries of this WCA. The Chief Engineer may consider information submitted by nearby owners when evaluating the potential for impairment of neighboring water rights.

Assurances

None of the terms and conditions of this management plan or a WCA Agreement executed in accordance with this management plan shall result in any permanent change to the enrolled water rights.

Review of Other Applicable Requirements

The Midwest Feeders, Inc. WCA lies within the boundaries of Southwest Kansas Groundwater Management District No. 3. The rules and regulations pertaining to this groundwater management district (K.A.R. 5-23-1 through 5-23-15) were reviewed to determine if there were any provisions that would result in a greater level of water conservation than that contained in this management plan. No such provisions were identified.

There is currently no approved Local Enhanced Management Area (LEMA) within the boundaries of this WCA. The participants acknowledge that this WCA may be terminated if a LEMA is established that has more stringent requirements, after due consideration has been given to past conservation by the participants.

Participants' Agreement

By signing below, Midwest Feeders, Inc., the water right owner, agrees that this management plan is fair and equitable. This management plan, provided to the Chief Engineer and water right owner, is the expressed written intent of the parties and the whole agreement between the parties. Midwest Feeders, Inc., the water right owner, agrees to be bound by all the terms contained in this management plan and understands that the provisions of this agreement shall be construed to give effect to the provisions listed. Midwest Feeders, Inc., the water right owner, also agrees that this management plan is the basis for a consent agreement among the Chief Engineer and the undersigned water right owner, and therefore any order and consent agreement issued by the Chief Engineer, designating this WCA, shall be binding upon all parties as the necessary formal implementation of this management plan.

For the Participants: All participating water right owners signing below, affirm their approval of this WCA management plan and, if approved by the Chief Engineer, allow consent to the Chief Engineer to formally approve the designation of this Water Conservation Area, described herein, by means of a Consent Agreement and Order.

Jeffrey H. Sternberger, Owner and Agent
Midwest Feeders, Inc.

ACKNOWLEDGEMENT OF NOTARY

STATE OF Kansas)
) SS
COUNTY OF Gray)

On this 7 day of August, 2018, before me, the undersigned Notary Public, personally appeared Jeffrey H. Sternberger known to me (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged that they executed the same for the purposes therein contained.

In Witness Whereof, I have hereunto set my hand and official seal.

NOTARY PUBLIC - State of Kansas
ANGELA L. HALE
My Appt. Exp. 2/25/2021

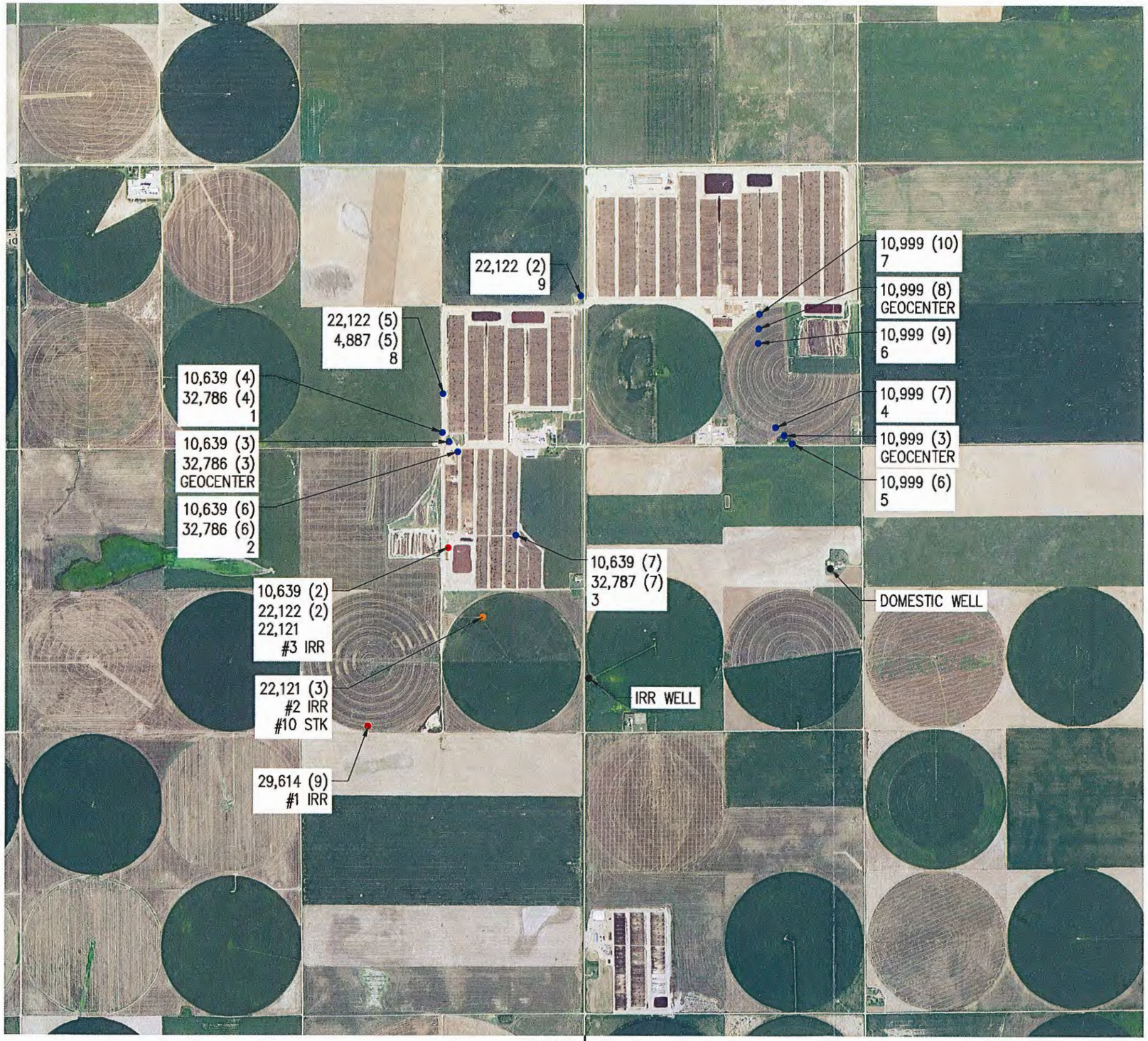
Angela L Hale
Notary Public
My Commission Expires 2/25/2021

Printed Name: Angela L. Hale

APPENDIX 1

Maps
Official DWR Summary

REV.	DATE	BY	DESCRIPTION	CHECK	APPROVE
1	8/18	JRC	REVISED WELL LABELS AND LEGEND	FCM	FCM



LEGEND

- POINT OF DIVERSION (IRR)
- POINT OF DIVERSION (STK)
- POINT OF DIVERSION (STK & IRR)
- NEIGHBORING WELL

WATER RIGHT FILE NO. — POINT OF DIVERSION ID

4,887 (5)
8

FACILITY WELL ID

T24S

RECEIVED
AUG 08 2018
Garden City Field Office
DIVISION OF WATER RESOURCES

SCALE IN FEET
0 2000 4000

WELL LOCATION MAP

DRAWN	DLB	DATE 2/18
CHECKED	FCM	DATE 2/18
APPROVED	FCM	DATE 2/18

MIDWEST FEEDERS, INC.
WATER RIGHTS
SECTION 19 T24S R28W & SECTIONS 24 & 25 T24S R29W
GRAY COUNTY, KANSAS

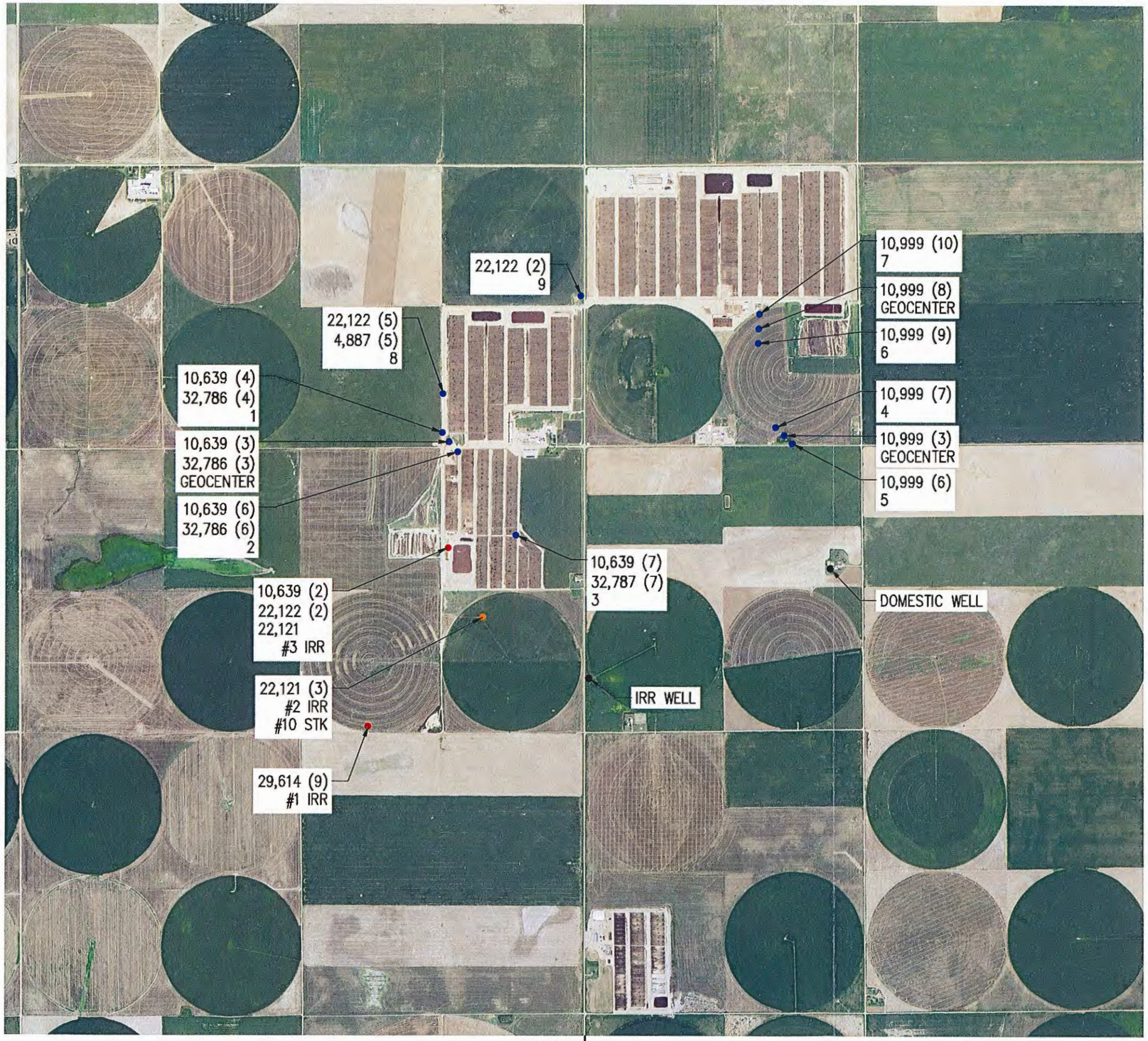
1700 E. IRON
SALINA, KANSAS 67401
(785) 823-0097

1303 YUCCA STREET
SCOTT CITY, KANSAS 67871
(620) 872-2300

KLA ENVIRONMENTAL SERVICES, INC.

CAD FILE NAME:
WATER RIGHTS.dwg

REV.	DATE	BY	DESCRIPTION	CHECK	APPROVE
1	8/18	JRC	REVISED WELL LABELS AND LEGEND	FCM	FCM



LEGEND

- POINT OF DIVERSION (IRR)
- POINT OF DIVERSION (STK)
- POINT OF DIVERSION (STK & IRR)
- NEIGHBORING WELL

WATER RIGHT FILE NO. — POINT OF DIVERSION ID

4,887 (5)
8

FACILITY WELL ID

T24S

RECEIVED
AUG 08 2018
Garden City Field Office
DIVISION OF WATER RESOURCES

N
W E
S

SCALE IN FEET
0 2000 4000

WELL LOCATION MAP

DRAWN	DLB	DATE 2/18
CHECKED	FCM	DATE 2/18
APPROVED	FCM	DATE 2/18

MIDWEST FEEDERS, INC.
WATER RIGHTS
SECTION 19 T24S R28W & SECTIONS 24 & 25 T24S R29W
GRAY COUNTY, KANSAS

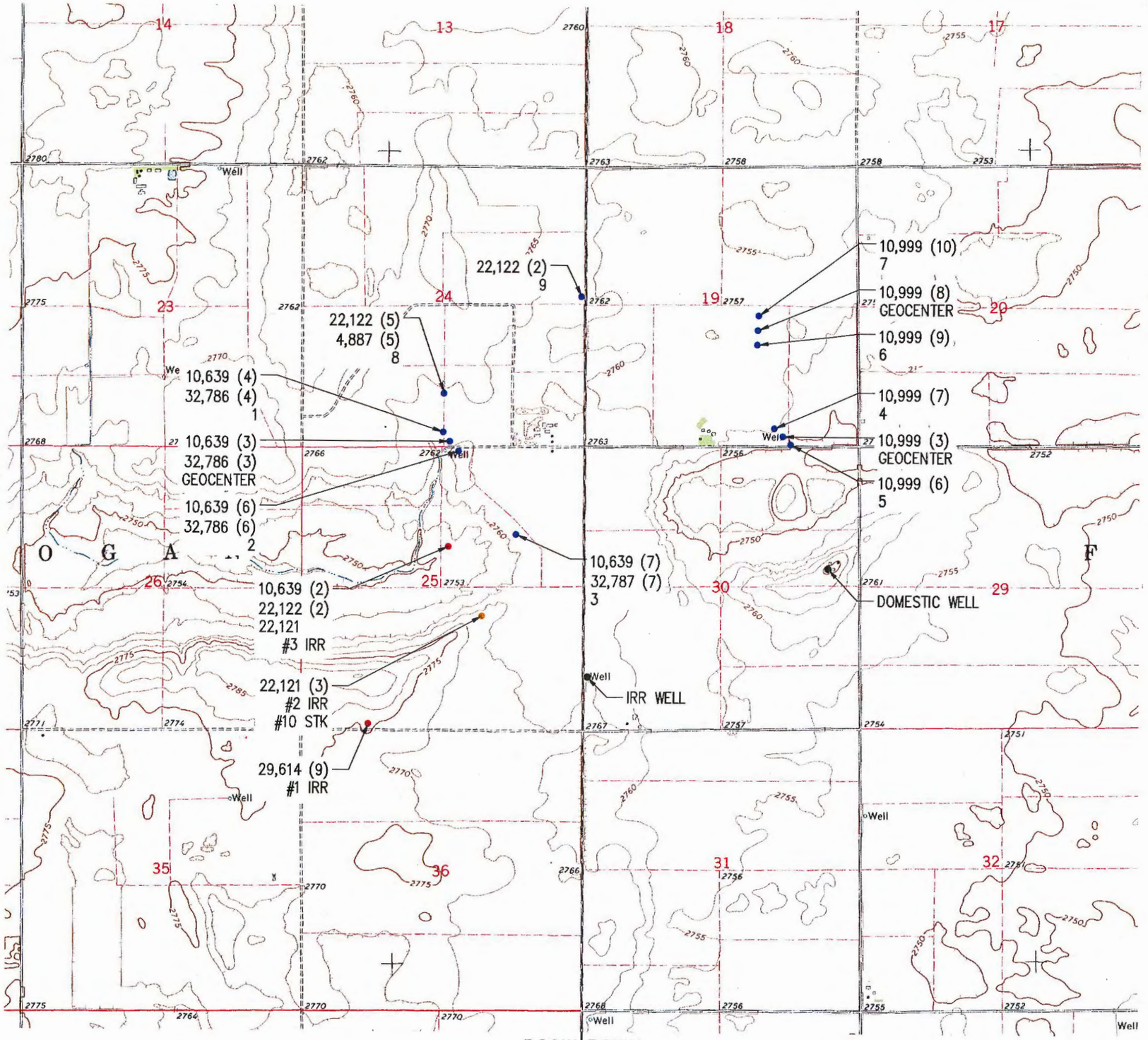
1700 E. IRON
SALINA, KANSAS 67401
(785) 823-0097

1303 YUCCA STREET
SCOTT CITY, KANSAS 67871
(620) 872-2300

KLA ENVIRONMENTAL SERVICES, INC.

CAD FILE NAME:
WATER RIGHTS.dwg

REV.	DATE	BY	DESCRIPTION	CHECK	APPROVE
1	8/18	JRC	REVISED WELL LABELS AND LEGEND	FCM	FCM



LEGEND

- POINT OF DIVERSION (IRR)
- POINT OF DIVERSION (STK)
- POINT OF DIVERSION (STK & IRR)
- NEIGHBORING WELL

WATER RIGHT FILE NO. — POINT OF DIVERSION ID

4,887 (5)
8

FACILITY WELL ID

T24S

RECEIVED

AUG 08 2018

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SHEET NO. 2 OF 2

REV.	DATE	BY	DESCRIPTION	CHECK	APPROVE
1	8/18	JRC	REVISED PLACE OF USE LOCATION	FCM	FCM

T24S

R29W | R28W

LEGEND

PLACE OF USE

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WATER CONSERVATION AREA PLACE OF USE MAP

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SHEET NO. 1 OF 2

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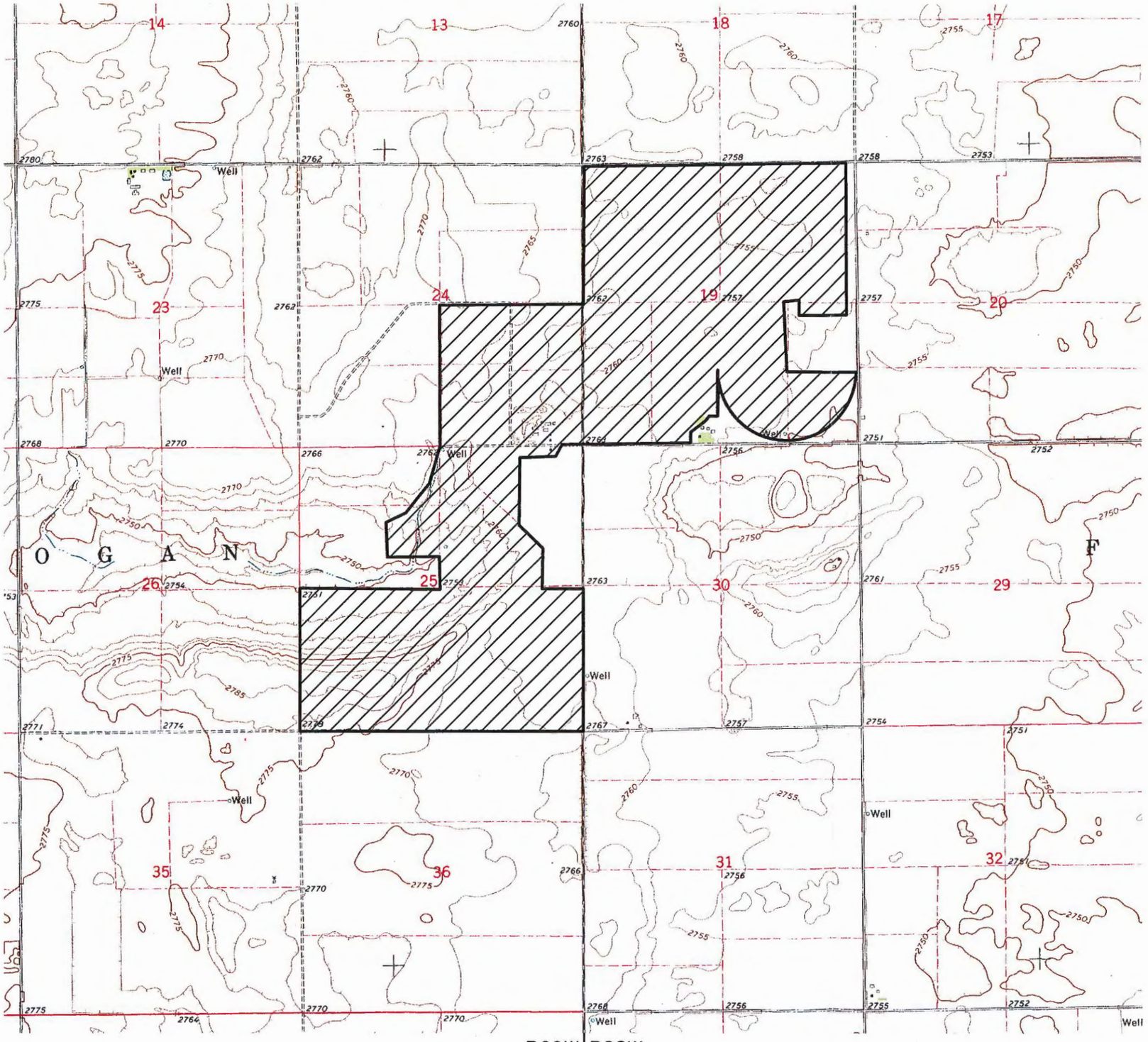
1	8/18	JRC	REVISED PLACE OF USE LOCATION	FCM	FCM



T24S

LEGEND

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DIVISION OF WATER RESOURCES

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SHEET NO. 2 OF 2

WATER CONSERVATION AREA PLACE OF USE MAP

MIDWEST FEEDERS, INC.
SUMMARY OF STOCKWATER USE FOR THE PERIOD 2012 - 2017

DWR Edited - Total Reported Water Use

YEAR	ANNUAL WATER USE IN ACRE-FEET BY STOCKWATER FILE NO.													TOTAL ANNUAL USE	HEAD COUNT	RATE (GAL/HD/DAY)
	Term Permit 20129485 [1]	Term Permit 20129486 [2]	Term Permit 20139067 [2]	Term Permit 20139068 [1]	Term Permit 20179073 [3]	4,887 (5) & 22,122 (5)	10,639 (4) & 32,786 (4)	10,639 (6) & 32,786 (6)	10,369 (7) & 32,787 (7)	10,999 (6)	10,999 (7)	10,999 (9)	10,999 (10)	22,122 (2)			
Auth Qty	80	80	100	150	224.098	5.002	134.970		94.982	174.098				123.983			
Add Qty						25.011	38.000		38.000								
Total Auth	80	80	100	150	224.098	30.014	172.970		132.982	174.098				123.983	**634.046**	**= Total Authorized Quantity/Year (AF)**	
2012	29.142	70.771				TP20129486	46.356	72.210	75.967	50.525	11.472	68.976	52.828	TP20129485	478.25	50,317	8.49
2013			103.029	136.739		TP20139067	11.454	61.132	87.795	2.648	1.948	49.354	85.370	TP20139068	539.47	50,673	9.50
2014						49.324	18.604	30.465	92.334	32.513	20.292	98.342	63.241	78.258	483.37	50,591	8.53
2015						32.688	36.338	12.000	38.578	62.548	17.439	96.486	87.828	88.142	472.05	49,861	8.45
2016						21.338	18.442	44.623	36.579	36.187	61.709	113.619	86.423	82.777	501.70	50,113	8.94
2017					219.960	26.596	43.322	42.757	29.250	TP20179073				115.544	477.43	50,719	8.40
PDIV#	35128	79489	79489	35128	35128	79489	62512	37771	487	62014	62015	62495	62496	35128	**492.04**	← Average →	**8.72**
UMW	STK	STK	STK	STK	STK	STK	STK	STK	STK	STK	STK	STK	STK	STK			

[1] Associated with File No. 22,122

[2] Associated with File No. 4,887 /10,639

[3] Associated with File No. 10,999

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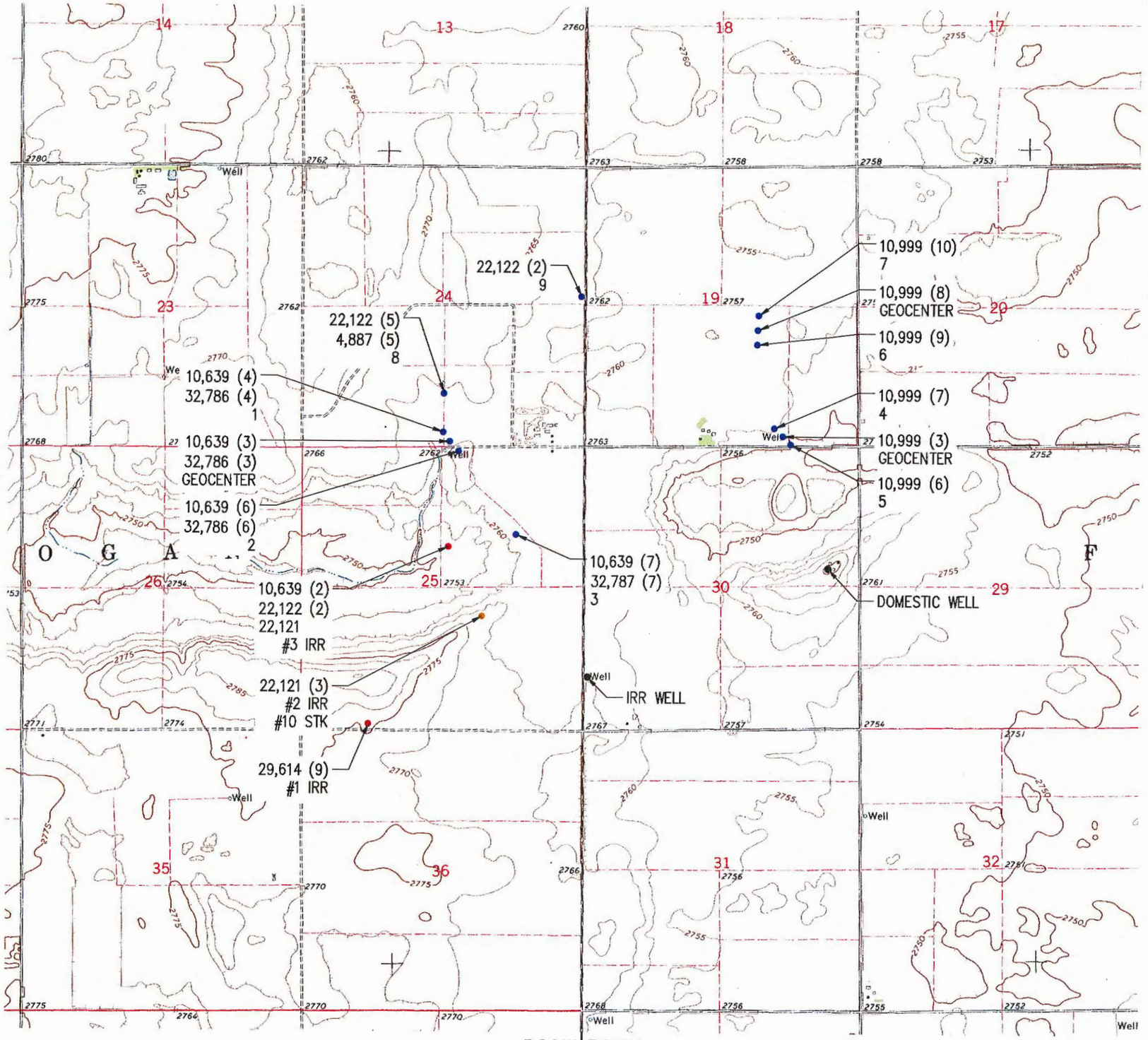

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KLA ENVIRONMENTAL SERVICES, INC.

CAD FILE NAME:
WATER RIGHTS.dwg

SHEET NO. 2 OF 2

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T24S

R29W | R28W

LEGEND

PLACE OF USE

N
W E
S

SCALE IN FEET
0 2000 4000

WATER CONSERVATION AREA PLACE OF USE MAP

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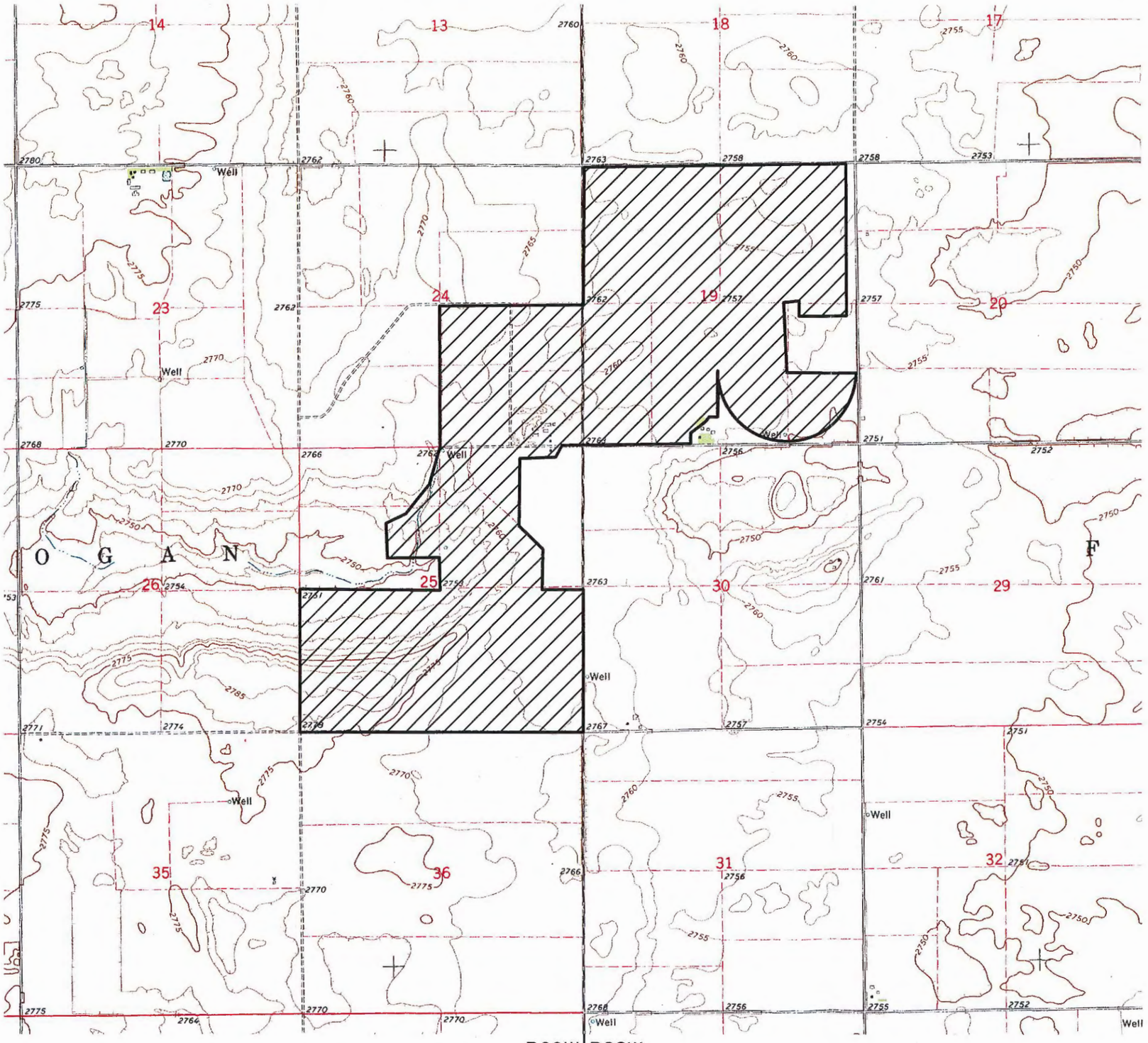

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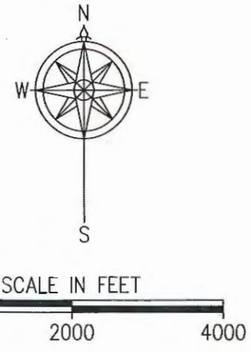

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[1] Associated with File No. 22,122

[2] Associated with File No. 4,887 /10,639

[3] Associated with File No. 10,999

Midwest Feeders IRR WCA Summary (pending partial conversion WR #22121)

"Legal Ave Water Use"- A historical average calculated only using water use reports of equal or less than the annual authorized quantity.

WR #	ID#	PDIV#	Location (Sect, Twn, Range)	Historical Period (20XX-20XX)	2018 Annual Auth Qty (AF)	Legal Ave WU (AF)
10639/22122	2	996	25-24S-29W	12-17	211.600	136.166
22121	3	50839	25-24S-29W	12-17	153.520	153.520
29614	9	69799	25-24S-29W	12-17	109.000	29.672

Addional Notes:

- Under WR #22121 the actual historical use is 157.933 AF/Yr but with the proposed partical conversion to stockwater the new total authorized quantity under this water right shall be reduced to 153.520 AF per year. Therefore, any historical use greater shall be reflected under STK use.

Historical Use Summary

2018 Annual Auth Qty (AF)	Legal Ave WU (AF)	Ave Irr Acres	Actual AI/Acre	% Use of Authorized
474	319.358	470.08	8.27	67%

Recent Water Use Reports

2015 Use	2016 Use	2017 Use	2017 Acres	
325.618	246.029	214.148	456.00	AF
69%	52%	45%	N/A	% of Auth

Annual WCA Allocation (10% Conservation)

	Annual WCA Allocation	Reduction from Ave Use	% of Authorized	Est. Acre-Inch (2017 Acres)
Totals	**287.422**	31.936	61%	7.56

WR:	10639/22122	ID:	2	Location:	25-24S-29W		Over-Pumping
2018 Auth Qty		211.6	PDIV #	996	Limitation:	Overlapping WR's	
Year	Acres	Beg Met Read	End Met Read	WU (AF)	Legal Use (AF)	AI/Acre	Notes:
2017	210	Meter	Repair	95.521	95.521	5.46	
2016	210	68.652	177.522	108.870	108.870	6.22	
2015	196	928.901	68.652	139.751	139.751	8.56	
2014	164	774.144	928.901	154.757	154.757	11.32	
2013	210	Meter	Repair	145.209	145.209	8.30	
2012	210	474.028	646.916	172.888	172.888	9.88	

WR:	22121	ID:	3	Location:	25-24S-29W		Over-Pumping
2018 Auth Qty		279	PDIV #	50839	Limitation:	None	
Year	Acres	Beg Met Read	End Met Read	WU (AF)	Legal Use (AF)	AI/Acre	Notes:
2017	246	95137300	126180500	95.27	95.268	4.65	
2016	212	56613800	95137300	118.22	118.224	6.69	
2015	206	8637400	56613800	147.23	147.234	8.58	
2014	246	52513600	108637400	172.24	172.238	8.40	
2013	246	91389200	152513600	187.58	187.584	9.15	
2012	211	17404300	91389200	227.05	227.051	12.91	

WR:	22121	ID:	3	Location:	25-24S-29W		Over-Pumping
2018 Auth Qty		279	PDIV #	50839	Limitation:	None	
Year	Acres	Beg Met Read	End Met Read	WU (AF)	Legal Use (AF)	AI/Acre	Notes:
2017	246	95137300	126180500	95.27	95.268	4.65	
2016	212	56613800	95137300	118.22	118.224	6.69	
2015	206	8637400	56613800	147.23	147.234	8.58	
2014	246	52513600	108637400	172.24	172.238	8.40	
2013	246	91389200	152513600	187.58	187.584	9.15	
2012	211	17404300	91389200	227.05	227.051	12.91	

WR:	29614	ID:	9	Location:	25-24S-29W		Over-Pumping
2018 Auth Qty		109	PDIV #	69799	Limitation:	None	
Year	Acres	Beg Met Read	End Met Read	WU (AF)	Legal Use (AF)	AI/Acre	Notes:
2017		15774400	23385900	23.36	23.359		No reported acres
2016	34	9604400	15774400	18.94	18.935	6.68	
2015	54	97016000	109604400	38.63	38.632	8.58	
2014	46	82796900	97016000	43.64	43.637	11.38	
2013		Meter	Repair	15.79	15.790		No reported acres
2012	35	67285800	79564100	37.68	37.681	12.92	

AVG = 29.672

APPENDIX 2

Groundwater Level Decline Data

General Well Site Information

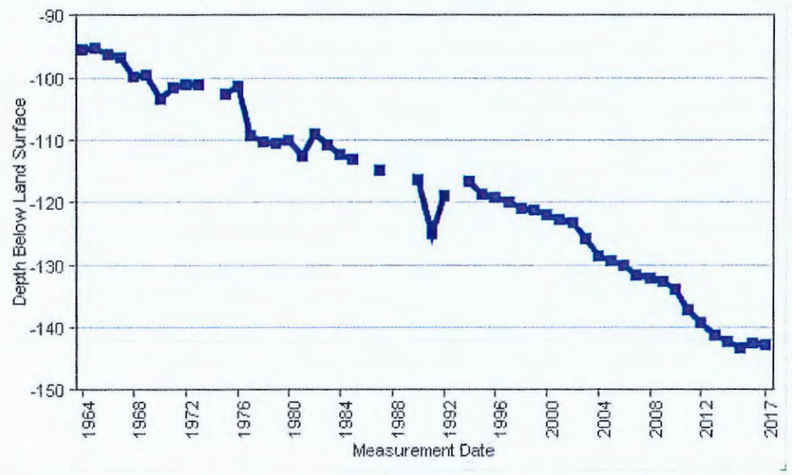
USGS ID:	375735100302001	**KGS Local Well ID:**	24S 29W 16DCA 01
County:	Gray	**PLSS Description:**	24S 29W 16 NESWSE
HUC 8 Code:	11030005	**GMD:**	Southwest Kansas GMD #3
Longitude:	-100.506226	**Lat/Long Source:**	GPS (within 50 feet)
Latitude:	37.960821	**Lat/Long Accuracy:**	5 seconds
Surface Elevation (ft):	2787	**Depth of Well (ft):**	222
Geological Unit Codes:	QU TO	**USGS Map Name:**	Pierceville NE
Use of Site:	Withdrawal of Water	**Use of Water:**	Irrigation
WWC5 Links:	None	**WIMAS Link:**	37508

Water Level Measurements

375735100302001

Note that depth to water is feet below land surface and all measurements for the well are included.

Hydrograph- Annual Average Depth to Water Below Land Surface



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Longitude:	-100.506226	**Lat/Long Source:**	GPS (within 50 feet)
Latitude:	37.960821	**Lat/Long Accuracy:**	5 seconds
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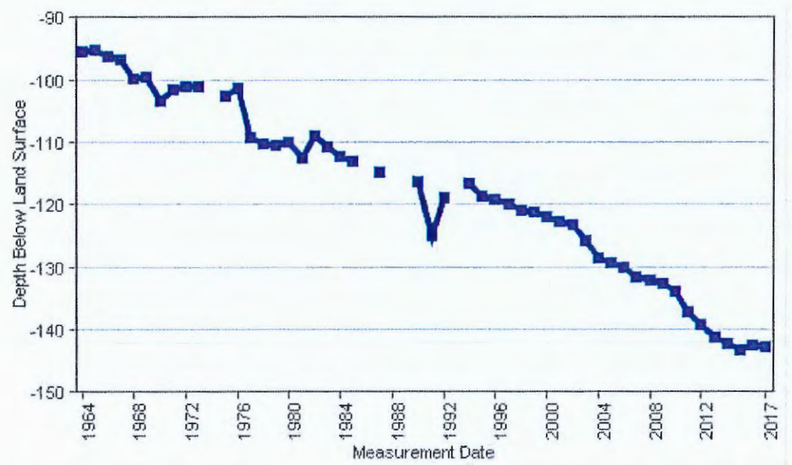
Geological Unit Codes:	QU TO	**USGS Map Name:**	Pierceville NE
Use of Site:	Withdrawal of Water	**Use of Water:**	Irrigation
WWC5 Links:	None	**WIMAS Link:**	37508

Water Level Measurements

375735100302001

Note that depth to water is feet below land surface and all measurements for the well are included.

Hydrograph- Annual Average Depth to Water Below Land Surface



Date	Depth to Water	Status	Agency	Method	WL Source	Tape Hold	Chalk Cut	Initials
JAN-01-1964	-95.4	-	-	Unknown	-	-	---	-
DEC-07-1964	-95.39	-	-	Steel Tape	-	-	---	-
JAN-28-1965	-95.2	-	-	Steel Tape	-	-	---	-
JAN-17-1966	-96.28	-	-	Steel Tape	-	-	---	-
JAN-24-1967	-96.77	-	-	Steel Tape	-	-	---	-
JAN-16-1968	-99.73	-	-	Steel Tape	-	-	---	-
JAN-20-1969	-99.57	-	-	Steel Tape	-	-	---	-
JAN-20-1970	-103.3	-	-	Steel Tape	-	-	---	-
JAN-21-1971	-101.68	-	-	Steel Tape	-	-	---	-
JAN-31-1972	-101.03	-	-	Steel Tape	-	-	---	-
JAN-31-1973	-101.03	-	-	Steel Tape	-	-	---	-
JAN-13-1975	-102.52	-	-	Steel Tape	-	-	---	-
JAN-23-1976	-101.35	-	-	Steel Tape	-	-	---	-
JAN-05-1977	-109.25	-	-	Steel Tape	-	-	---	-
JAN-18-1978	-110.21	-	-	Steel Tape	-	-	---	-
JAN-08-1979	-110.48	-	-	Steel Tape	-	-	---	-
JAN-12-1980	-109.95	-	-	Steel Tape	-	-	---	-
JAN-12-1981	-112.39	-	-	Steel Tape	-	-	---	-
JAN-14-1982	-108.98	-	-	Steel Tape	-	-	---	-

JAN-13-1983	-110.82	-	-	Steel Tape	-	-	---	-
JAN-30-1984	-112.17	-	-	Steel Tape	-	-	---	-
JAN-22-1985	-112.93	-	-	Steel Tape	-	-	---	-
JAN-14-1987	-115.04	-	-	Steel Tape	-	-	---	-
DEC-21-1987	-114.4	-	-	Steel Tape	-	-	---	-
JAN-17-1990	-116.38	-	-	Steel Tape	-	-	---	-
JAN-11-1991	-124.85	-	-	Steel Tape	-	-	---	-
JAN-16-1992	-118.97	-	-	Steel Tape	-	-	---	-
JAN-07-1994	-116.64	-	-	Steel Tape	-	-	---	-
JAN-13-1995	-118.69	-	-	Steel Tape	-	-	---	-
JAN-16-1996	-119.2	-	-	Steel Tape	-	-	---	-
JAN-06-1997	-119.97	-	KGS	Steel Tape	-	125	3.93	U B
JAN-07-1998	-120.89	-	KGS	Steel Tape	-	128	6.01	JMA
JAN-05-1999	-121.08	-	KGS	Steel Tape	-	128	5.82	RB
JAN-06-2000	-121.94	-	KGS	Steel Tape	-	127	3.96	RCB
JAN-06-2001	-122.71	-	KGS	Steel Tape	-	125	1.19	MWF
JAN-07-2002	-123.28	-	KGS	Steel Tape	-	128	3.62	JDM
JAN-10-2003	-125.78	-	KGS	Steel Tape	-	128	1.12	BBW
JAN-06-2004	-128.46	-	KGS	Steel Tape	-	133	3.44	RB
JAN-13-2005	-129.16	-	DWR	Steel Tape	-	135	4.74	MSP

JAN-03-2006	-129.99	-	DWR	Steel Tape	-	137	5.91	MSP
JAN-17-2007	-131.46	-	DWR	Steel Tape	-	140	7.44	MSP
JAN-08-2008	-132.14	-	DWR	Steel Tape	-	135	1.76	CLS
JAN-05-2009	-132.59	-	DWR	Steel Tape	-	141	7.31	CLS
JAN-04-2010	-133.82	-	DWR	Steel Tape	-	145	10.08	SV
JAN-03-2011	-137.16	-	DWR	Steel Tape	-	145	6.74	SV
JAN-04-2012	-139.16	-	DWR	Steel Tape	-	144	3.74	RD
JAN-08-2013	-141.29	-	DWR	Steel Tape	-	149	6.61	RD
JAN-07-2014	-142.17	-	DWR	Steel Tape	-	150	6.73	RD
JAN-05-2015	-143.36	-	DWR	Steel Tape	-	145	0.54	RD
JAN-04-2016	-142.58	-	DWR	Steel Tape	-	145	1.32	IEG
JAN-04-2017	-142.77	-	DWR	Steel Tape	-	145	1.13	TPM

General Well Site Information

USGS ID:	375626100241701	**KGS Local Well ID:**	24S 28W 28BBA 01
County:	Gray	**PLSS Description:**	24S 28W 28 NENWNW
HUC 8 Code:	11030006	**GMD:**	Southwest Kansas GMD #3
Longitude:	-100.406523	**Lat/Long Source:**	GPS (within 50 feet)
Latitude:	37.943051	**Lat/Long Accuracy:**	5 seconds
Surface Elevation (ft):	2750	**Depth of Well (ft):**	Unknown
Geological Unit Codes:	QU TO	**USGS Map Name:**	CIMARRON NW
Use of Site:	Withdrawal of Water	**Use of Water:**	Irrigation
WWC5 Links:	None	**WIMAS Link:**	48177

Water Level Measurements

375626100241701

Note that depth to water is feet below land surface and all measurements for the well are included.

Hydrograph- Annual Average Depth to Water Below Land Surface

Date	Depth to Water	Status	Agency	Method	WL Source	Tape Hold	Chalk Cut	Initials
JAN-22-1985	-108.1	-	-	Steel Tape	-	-	---	-
JAN-23-1986	-108.34	-	-	Steel Tape	-	-	---	-
JAN-06-1987	-109.65	-	-	Steel Tape	-	-	---	-
DEC-21-1987	-109.95	-	-	Steel Tape	-	-	---	-
JAN-09-1989	-111.98	-	-	Steel Tape	-	-	---	-
JAN-06-1990	-111.66	-	-	Steel Tape	-	-	---	-
JAN-11-1991	-111.81	-	-	Steel Tape	-	-	---	-
JAN-16-1992	-112.86	-	-	Steel Tape	-	-	---	-
FEB-04-1993	-112.7	-	-	Steel Tape	-	-	---	-
JAN-07-1994	-112.1	-	-	Steel Tape	-	-	---	-
JAN-12-1995	-113.82	-	-	Steel Tape	-	-	---	-
JAN-16-1996	-114.25	-	-	Steel Tape	-	-	---	-
JAN-06-1997	-116.41	-	KGS	Steel Tape	-	120	3.29	U B
JAN-07-1998	-116.86	-	KGS	Steel Tape	-	121	3.84	JDS
JAN-07-1999	-117.81	-	KGS	Steel Tape	-	120	1.89	DRL
JAN-08-2000	-118.6	-	KGS	Steel Tape	-	120	1.10	JLT
JAN-06-2001	-119.98	-	KGS	Steel Tape	-	122	1.72	JMA
JAN-07-2002	-121.16	-	KGS	Steel Tape	-	125	3.54	BBW
JAN-10-2003	-122.86	-	KGS	Steel Tape	-	130	6.84	JMH

WR:	29614	ID:	9	Location:	25-24S-29W		Over-Pumping
2018 Auth Qty		109	PDIV #	69799	Limitation:	None	
Year	Acres	Beg Met Read	End Met Read	WU (AF)	Legal Use (AF)	AI/Acre	Notes:
2017		15774400	23385900	23.36	23.359		No reported acres
2016	34	9604400	15774400	18.94	18.935	6.68	
2015	54	97016000	109604400	38.63	38.632	8.58	
2014	46	82796900	97016000	43.64	43.637	11.38	
2013		Meter	Repair	15.79	15.790		No reported acres
2012	35	67285800	79564100	37.68	37.681	12.92	

AVG = 29.672

APPENDIX 2

Groundwater Level Decline Data

General Well Site Information

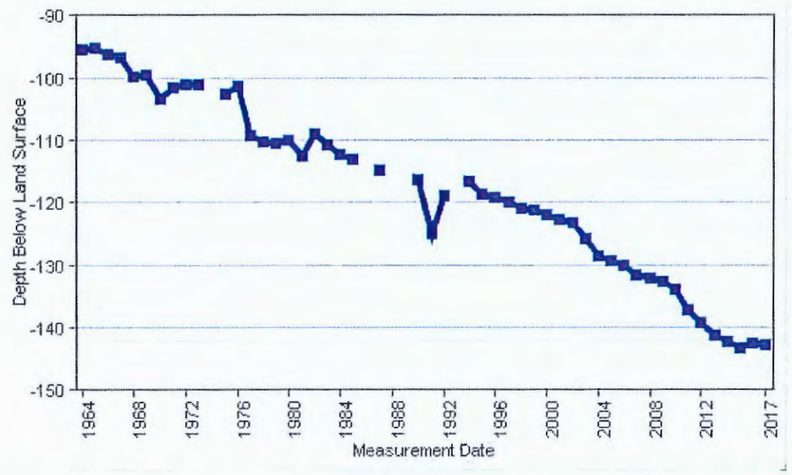
USGS ID:	375735100302001	**KGS Local Well ID:**	24S 29W 16DCA 01
County:	Gray	**PLSS Description:**	24S 29W 16 NESWSE
HUC 8 Code:	11030005	**GMD:**	Southwest Kansas GMD #3
Longitude:	-100.506226	**Lat/Long Source:**	GPS (within 50 feet)
Latitude:	37.960821	**Lat/Long Accuracy:**	5 seconds
Surface Elevation (ft):	2787	**Depth of Well (ft):**	222
Geological Unit Codes:	QU TO	**USGS Map Name:**	Pierceville NE
Use of Site:	Withdrawal of Water	**Use of Water:**	Irrigation
WWC5 Links:	None	**WIMAS Link:**	37508

Water Level Measurements

375735100302001

Note that depth to water is feet below land surface and all measurements for the well are included.

Hydrograph- Annual Average Depth to Water Below Land Surface



General Well Site Information

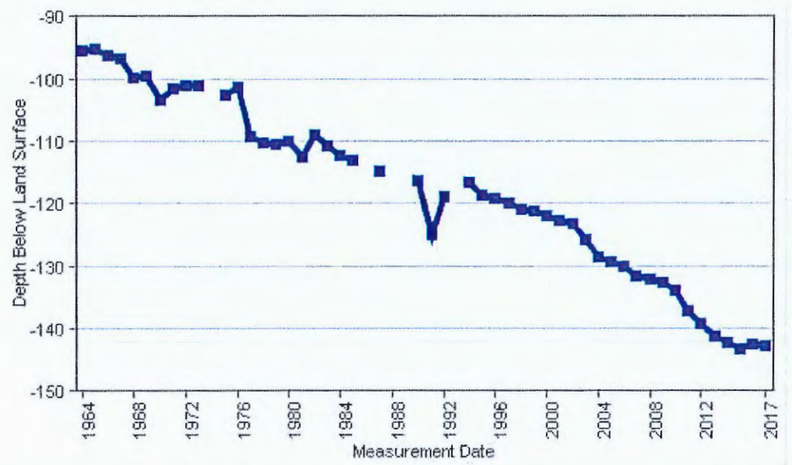
USGS ID:	375735100302001	**KGS Local Well ID:**	24S 29W 16DCA 01
County:	Gray	**PLSS Description:**	24S 29W 16 NESWSE
HUC 8 Code:	11030005	**GMD:**	Southwest Kansas GMD #3
Longitude:	-100.506226	**Lat/Long Source:**	GPS (within 50 feet)
Latitude:	37.960821	**Lat/Long Accuracy:**	5 seconds
Surface Elevation (ft):	2787	**Depth of Well (ft):**	222
Geological Unit Codes:	QU TO	**USGS Map Name:**	Pierceville NE
Use of Site:	Withdrawal of Water	**Use of Water:**	Irrigation
WWC5 Links:	None	**WIMAS Link:**	37508

Water Level Measurements

375735100302001

Note that depth to water is feet below land surface and all measurements for the well are included.

Hydrograph- Annual Average Depth to Water Below Land Surface



Date	Depth to Water	Status	Agency	Method	WL Source	Tape Hold	Chalk Cut	Initials
JAN-01-1964	-95.4	-	-	Unknown	-	-	---	-
DEC-07-1964	-95.39	-	-	Steel Tape	-	-	---	-
JAN-28-1965	-95.2	-	-	Steel Tape	-	-	---	-
JAN-17-1966	-96.28	-	-	Steel Tape	-	-	---	-
JAN-24-1967	-96.77	-	-	Steel Tape	-	-	---	-
JAN-16-1968	-99.73	-	-	Steel Tape	-	-	---	-
JAN-20-1969	-99.57	-	-	Steel Tape	-	-	---	-
JAN-20-1970	-103.3	-	-	Steel Tape	-	-	---	-
JAN-21-1971	-101.68	-	-	Steel Tape	-	-	---	-
JAN-31-1972	-101.03	-	-	Steel Tape	-	-	---	-
JAN-31-1973	-101.03	-	-	Steel Tape	-	-	---	-
JAN-13-1975	-102.52	-	-	Steel Tape	-	-	---	-
JAN-23-1976	-101.35	-	-	Steel Tape	-	-	---	-
JAN-05-1977	-109.25	-	-	Steel Tape	-	-	---	-
JAN-18-1978	-110.21	-	-	Steel Tape	-	-	---	-
JAN-08-1979	-110.48	-	-	Steel Tape	-	-	---	-
JAN-12-1980	-109.95	-	-	Steel Tape	-	-	---	-
JAN-12-1981	-112.39	-	-	Steel Tape	-	-	---	-
JAN-14-1982	-108.98	-	-	Steel Tape	-	-	---	-

JAN-13-1983	-110.82	-	-	Steel Tape	-	-	---	-
JAN-30-1984	-112.17	-	-	Steel Tape	-	-	---	-
JAN-22-1985	-112.93	-	-	Steel Tape	-	-	---	-
JAN-14-1987	-115.04	-	-	Steel Tape	-	-	---	-
DEC-21-1987	-114.4	-	-	Steel Tape	-	-	---	-
JAN-17-1990	-116.38	-	-	Steel Tape	-	-	---	-
JAN-11-1991	-124.85	-	-	Steel Tape	-	-	---	-
JAN-16-1992	-118.97	-	-	Steel Tape	-	-	---	-
JAN-07-1994	-116.64	-	-	Steel Tape	-	-	---	-
JAN-13-1995	-118.69	-	-	Steel Tape	-	-	---	-
JAN-16-1996	-119.2	-	-	Steel Tape	-	-	---	-
JAN-06-1997	-119.97	-	KGS	Steel Tape	-	125	3.93	U B
JAN-07-1998	-120.89	-	KGS	Steel Tape	-	128	6.01	JMA
JAN-05-1999	-121.08	-	KGS	Steel Tape	-	128	5.82	RB
JAN-06-2000	-121.94	-	KGS	Steel Tape	-	127	3.96	RCB
JAN-06-2001	-122.71	-	KGS	Steel Tape	-	125	1.19	MWF
JAN-07-2002	-123.28	-	KGS	Steel Tape	-	128	3.62	JDM
JAN-10-2003	-125.78	-	KGS	Steel Tape	-	128	1.12	BBW
JAN-06-2004	-128.46	-	KGS	Steel Tape	-	133	3.44	RB
JAN-13-2005	-129.16	-	DWR	Steel Tape	-	135	4.74	MSP

JAN-03-2006	-129.99	-	DWR	Steel Tape	-	137	5.91	MSP
JAN-17-2007	-131.46	-	DWR	Steel Tape	-	140	7.44	MSP
JAN-08-2008	-132.14	-	DWR	Steel Tape	-	135	1.76	CLS
JAN-05-2009	-132.59	-	DWR	Steel Tape	-	141	7.31	CLS
JAN-04-2010	-133.82	-	DWR	Steel Tape	-	145	10.08	SV
JAN-03-2011	-137.16	-	DWR	Steel Tape	-	145	6.74	SV
JAN-04-2012	-139.16	-	DWR	Steel Tape	-	144	3.74	RD
JAN-08-2013	-141.29	-	DWR	Steel Tape	-	149	6.61	RD
JAN-07-2014	-142.17	-	DWR	Steel Tape	-	150	6.73	RD
JAN-05-2015	-143.36	-	DWR	Steel Tape	-	145	0.54	RD
JAN-04-2016	-142.58	-	DWR	Steel Tape	-	145	1.32	IEG
JAN-04-2017	-142.77	-	DWR	Steel Tape	-	145	1.13	TPM

General Well Site Information

USGS ID:	375626100241701	**KGS Local Well ID:**	24S 28W 28BBA 01
County:	Gray	**PLSS Description:**	24S 28W 28 NENWNW
HUC 8 Code:	11030006	**GMD:**	Southwest Kansas GMD #3
Longitude:	-100.406523	**Lat/Long Source:**	GPS (within 50 feet)
Latitude:	37.943051	**Lat/Long Accuracy:**	5 seconds
Surface Elevation (ft):	2750	**Depth of Well (ft):**	Unknown
Geological Unit Codes:	QU TO	**USGS Map Name:**	CIMARRON NW
Use of Site:	Withdrawal of Water	**Use of Water:**	Irrigation
WWC5 Links:	None	**WIMAS Link:**	48177

Water Level Measurements

375626100241701

Note that depth to water is feet below land surface and all measurements for the well are included.

Hydrograph- Annual Average Depth to Water Below Land Surface

Date	Depth to Water	Status	Agency	Method	WL Source	Tape Hold	Chalk Cut	Initials
JAN-22-1985	-108.1	-	-	Steel Tape	-	-	---	-
JAN-23-1986	-108.34	-	-	Steel Tape	-	-	---	-
JAN-06-1987	-109.65	-	-	Steel Tape	-	-	---	-
DEC-21-1987	-109.95	-	-	Steel Tape	-	-	---	-
JAN-09-1989	-111.98	-	-	Steel Tape	-	-	---	-
JAN-06-1990	-111.66	-	-	Steel Tape	-	-	---	-
JAN-11-1991	-111.81	-	-	Steel Tape	-	-	---	-
JAN-16-1992	-112.86	-	-	Steel Tape	-	-	---	-
FEB-04-1993	-112.7	-	-	Steel Tape	-	-	---	-
JAN-07-1994	-112.1	-	-	Steel Tape	-	-	---	-
JAN-12-1995	-113.82	-	-	Steel Tape	-	-	---	-
JAN-16-1996	-114.25	-	-	Steel Tape	-	-	---	-
JAN-06-1997	-116.41	-	KGS	Steel Tape	-	120	3.29	U B
JAN-07-1998	-116.86	-	KGS	Steel Tape	-	121	3.84	JDS
JAN-07-1999	-117.81	-	KGS	Steel Tape	-	120	1.89	DRL
JAN-08-2000	-118.6	-	KGS	Steel Tape	-	120	1.10	JLT
JAN-06-2001	-119.98	-	KGS	Steel Tape	-	122	1.72	JMA
JAN-07-2002	-121.16	-	KGS	Steel Tape	-	125	3.54	BBW
JAN-10-2003	-122.86	-	KGS	Steel Tape	-	130	6.84	JMH

Date	Depth to Water	Status	Agency	Method	WL Source	Tape Hold	Chalk Cut	Initials
JAN-01-1964	-95.4	-	-	Unknown	-	-	---	-
DEC-07-1964	-95.39	-	-	Steel Tape	-	-	---	-
JAN-28-1965	-95.2	-	-	Steel Tape	-	-	---	-
JAN-17-1966	-96.28	-	-	Steel Tape	-	-	---	-
JAN-24-1967	-96.77	-	-	Steel Tape	-	-	---	-
JAN-16-1968	-99.73	-	-	Steel Tape	-	-	---	-
JAN-20-1969	-99.57	-	-	Steel Tape	-	-	---	-
JAN-20-1970	-103.3	-	-	Steel Tape	-	-	---	-
JAN-21-1971	-101.68	-	-	Steel Tape	-	-	---	-
JAN-31-1972	-101.03	-	-	Steel Tape	-	-	---	-
JAN-31-1973	-101.03	-	-	Steel Tape	-	-	---	-
JAN-13-1975	-102.52	-	-	Steel Tape	-	-	---	-
JAN-23-1976	-101.35	-	-	Steel Tape	-	-	---	-
JAN-05-1977	-109.25	-	-	Steel Tape	-	-	---	-
JAN-18-1978	-110.21	-	-	Steel Tape	-	-	---	-
JAN-08-1979	-110.48	-	-	Steel Tape	-	-	---	-
JAN-12-1980	-109.95	-	-	Steel Tape	-	-	---	-
JAN-12-1981	-112.39	-	-	Steel Tape	-	-	---	-
JAN-14-1982	-108.98	-	-	Steel Tape	-	-	---	-

JAN-13-1983	-110.82	-	-	Steel Tape	-	-	---	-
JAN-30-1984	-112.17	-	-	Steel Tape	-	-	---	-
JAN-22-1985	-112.93	-	-	Steel Tape	-	-	---	-
JAN-14-1987	-115.04	-	-	Steel Tape	-	-	---	-
DEC-21-1987	-114.4	-	-	Steel Tape	-	-	---	-
JAN-17-1990	-116.38	-	-	Steel Tape	-	-	---	-
JAN-11-1991	-124.85	-	-	Steel Tape	-	-	---	-
JAN-16-1992	-118.97	-	-	Steel Tape	-	-	---	-
JAN-07-1994	-116.64	-	-	Steel Tape	-	-	---	-
JAN-13-1995	-118.69	-	-	Steel Tape	-	-	---	-
JAN-16-1996	-119.2	-	-	Steel Tape	-	-	---	-
JAN-06-1997	-119.97	-	KGS	Steel Tape	-	125	3.93	U B
JAN-07-1998	-120.89	-	KGS	Steel Tape	-	128	6.01	JMA
JAN-05-1999	-121.08	-	KGS	Steel Tape	-	128	5.82	RB
JAN-06-2000	-121.94	-	KGS	Steel Tape	-	127	3.96	RCB
JAN-06-2001	-122.71	-	KGS	Steel Tape	-	125	1.19	MWF
JAN-07-2002	-123.28	-	KGS	Steel Tape	-	128	3.62	JDM
JAN-10-2003	-125.78	-	KGS	Steel Tape	-	128	1.12	BBW
JAN-06-2004	-128.46	-	KGS	Steel Tape	-	133	3.44	RB
JAN-13-2005	-129.16	-	DWR	Steel Tape	-	135	4.74	MSP

JAN-03-2006	-129.99	-	DWR	Steel Tape	-	137	5.91	MSP
JAN-17-2007	-131.46	-	DWR	Steel Tape	-	140	7.44	MSP
JAN-08-2008	-132.14	-	DWR	Steel Tape	-	135	1.76	CLS
JAN-05-2009	-132.59	-	DWR	Steel Tape	-	141	7.31	CLS
JAN-04-2010	-133.82	-	DWR	Steel Tape	-	145	10.08	SV
JAN-03-2011	-137.16	-	DWR	Steel Tape	-	145	6.74	SV
JAN-04-2012	-139.16	-	DWR	Steel Tape	-	144	3.74	RD
JAN-08-2013	-141.29	-	DWR	Steel Tape	-	149	6.61	RD
JAN-07-2014	-142.17	-	DWR	Steel Tape	-	150	6.73	RD
JAN-05-2015	-143.36	-	DWR	Steel Tape	-	145	0.54	RD
JAN-04-2016	-142.58	-	DWR	Steel Tape	-	145	1.32	IEG
JAN-04-2017	-142.77	-	DWR	Steel Tape	-	145	1.13	TPM

General Well Site Information

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Latitude:	37.943051	**Lat/Long Accuracy:**	5 seconds
Surface Elevation (ft):	2750	**Depth of Well (ft):**	Unknown
Geological Unit Codes:	QU TO	**USGS Map Name:**	CIMARRON NW
Use of Site:	Withdrawal of Water	**Use of Water:**	Irrigation
WWC5 Links:	None	**WIMAS Link:**	48177

Water Level Measurements

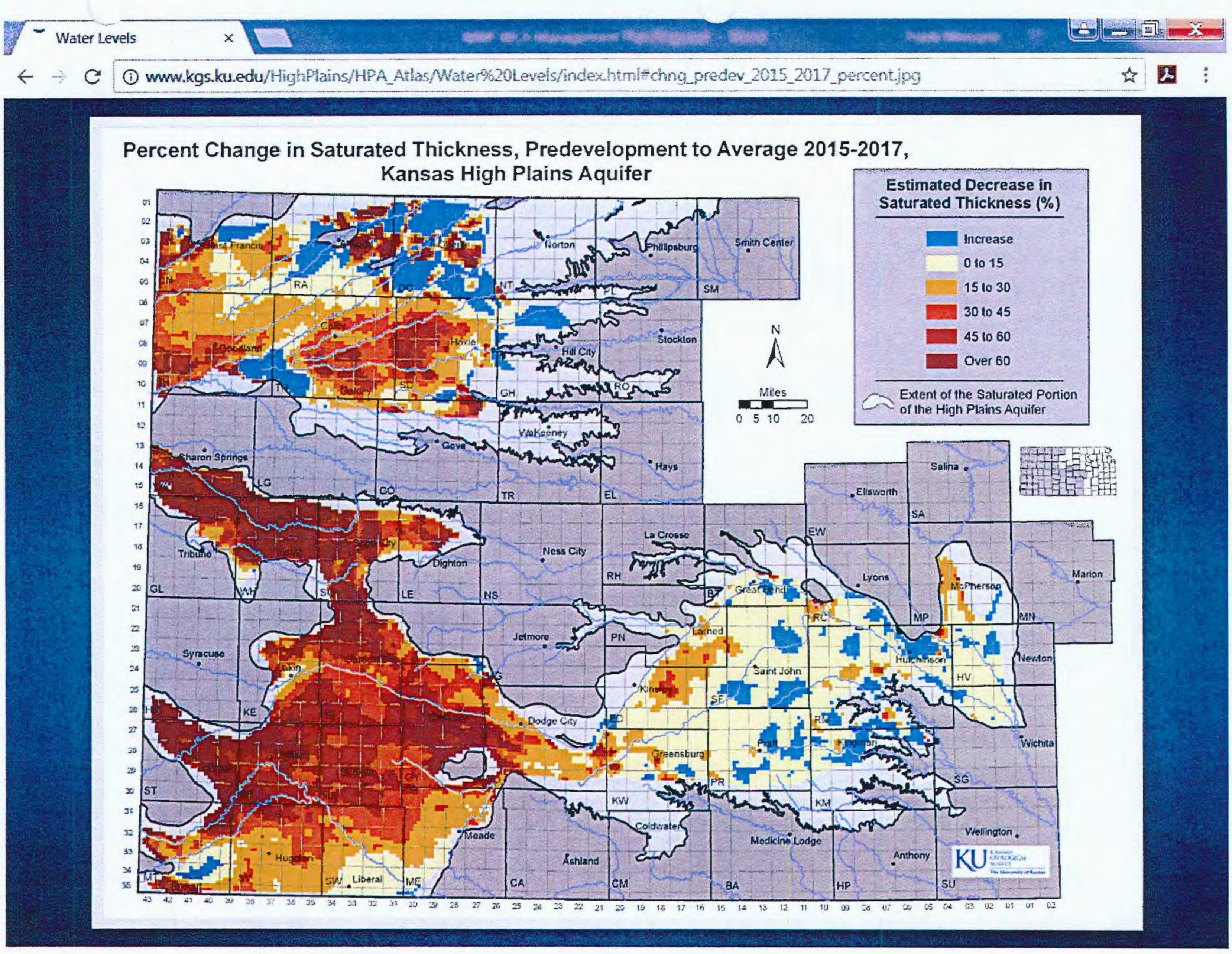
375626100241701

Note that depth to water is feet below land surface and all measurements for the well are included.

Hydrograph- Annual Average Depth to Water Below Land Surface

Date	Depth to Water	Status	Agency	Method	WL Source	Tape Hold	Chalk Cut	Initials
JAN-22-1985	-108.1	-	-	Steel Tape	-	-	---	-
JAN-23-1986	-108.34	-	-	Steel Tape	-	-	---	-
JAN-06-1987	-109.65	-	-	Steel Tape	-	-	---	-
DEC-21-1987	-109.95	-	-	Steel Tape	-	-	---	-
JAN-09-1989	-111.98	-	-	Steel Tape	-	-	---	-
JAN-06-1990	-111.66	-	-	Steel Tape	-	-	---	-
JAN-11-1991	-111.81	-	-	Steel Tape	-	-	---	-
JAN-16-1992	-112.86	-	-	Steel Tape	-	-	---	-
FEB-04-1993	-112.7	-	-	Steel Tape	-	-	---	-
JAN-07-1994	-112.1	-	-	Steel Tape	-	-	---	-
JAN-12-1995	-113.82	-	-	Steel Tape	-	-	---	-
JAN-16-1996	-114.25	-	-	Steel Tape	-	-	---	-
JAN-06-1997	-116.41	-	KGS	Steel Tape	-	120	3.29	U B
JAN-07-1998	-116.86	-	KGS	Steel Tape	-	121	3.84	JDS
JAN-07-1999	-117.81	-	KGS	Steel Tape	-	120	1.89	DRL
JAN-08-2000	-118.6	-	KGS	Steel Tape	-	120	1.10	JLT
JAN-06-2001	-119.98	-	KGS	Steel Tape	-	122	1.72	JMA
JAN-07-2002	-121.16	-	KGS	Steel Tape	-	125	3.54	BBW
JAN-10-2003	-122.86	-	KGS	Steel Tape	-	130	6.84	JMH

JAN-04-2004	-124.6	-	KGS	Steel Tape	-	127	2.10	RDM
JAN-06-2004	-125.02	-	KGS	Steel Tape	-	130	4.68	RB
JAN-03-2005	-125.37	-	DWR	Steel Tape	-	135	9.33	MSP
JAN-03-2006	-125.48	-	DWR	Steel Tape	-	130	4.22	MSP
JAN-17-2007	-133.28	-	DWR	Steel Tape	-	145	11.42	MSP
JAN-08-2008	-130.2	-	DWR	Steel Tape	-	135	4.50	CLS
JAN-05-2009	-131.4	-	DWR	Steel Tape	-	135	3.30	CLS
JAN-04-2010	-128.05	-	DWR	Steel Tape	-	143	14.65	SV
JAN-03-2011	-128.47	-	DWR	Steel Tape	-	145	16.23	SV
JAN-03-2012	-129.43	-	DWR	Steel Tape	-	132	2.27	RD
JAN-08-2013	-130.45	-	DWR	Steel Tape	-	135	4.25	RD
JAN-07-2014	-132.6	-	DWR	Steel Tape	-	135	2.10	RD
JAN-05-2015	-132.02	-	DWR	Steel Tape	-	141	8.68	RD
JAN-04-2016	-133.07	-	DWR	Steel Tape	-	135	1.63	IEG
JAN-04-2017	-133.23	-	DWR	Steel Tape	-	135	1.47	TPM


Water Levels
www.kgs.ku.edu/HighPlains/HPA_Atlas/Water%20Levels/index.html#chng_predev_2015_2017_percent.jpg
Percent Change in Saturated Thickness, Predevelopment to Average 2015-2017,
Kansas High Plains Aquifer
Estimated Decrease in Saturated Thickness (%)
Increase
0 to 15
15 to 30
30 to 45
45 to 60
Over 60
Extent of the Saturated Portion of the High Plains Aquifer
N
Miles
0 5 10 20
Norton
Phillipsburg
Smith Center
Stockton
Hill City
WaKeeney
Gove
Hays
Sharon Springs
Tribune
Dighton
Ness City
La Crosse
Ellsworth
Salina
Lyons
McPherson
Marion
Great Bend
Larned
Jetmore
Syracuse
Saint John
Hutchinson
Newton
Kinsley
Dodge City
Greensburg
Pratt
Wichita
Coldwater
Meade
Ashland
Medicine Lodge
Wellington
Anthony
Liberal

APPENDIX 3

Determination of Reasonable Stockwater Use
Summary of Wastewater (Effluent) Applied to Place of Use
for Irrigation Purposes

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Determination of Reasonable Stockwater Use
Summary of Wastewater (Effluent) Applied to Place of Use
for Irrigation Purposes

KLA ENVIRONMENTAL SERVICES, INC.

PROJECT: **MIDWEST FEEDERS, INC.**

LOCATION: SEC. 19 T24S R28W AND SEC. 24 & 25 T24S R29W, GRAY COUNTY, KANSAS

BY: FCM
DATE: 2/15/2018

CHECKED BY: CSG
DATE: 2/26/2018

ESTIMATED STOCKWATER USE QUANTITY
FOR CURRENT AND PLANNED FACILITY CAPACITY

CURRENT CAPACITY = 59,320 HEAD BASED ON CURRENT KDHE PERMIT

PLANNED CAPACITY = 74,000 HEAD BASED ON 2018 EXPANSION PROJECT

MAXIMUM REASONABLE USE: CURRENT AND PLANNED CAPACITIES

LIVESTOCK TYPE	USE	UNIT RATE (GAL/HD/DAY)	NO. OF HEAD	NO. OF DAYS	ANNUAL USE (GALLONS)	ANNUAL USE (ACRE-FFET)
BEEF CATTLE	DRINKING	15	59,320	365	324,777,000	996.70
BEEF CATTLE	DRINKING	15	74,000	365	405,150,000	1,243.36

PROPOSED USE FOR WCA PLAN: CURRENT AND PLANNED CAPACITIES

LIVESTOCK TYPE	USE	UNIT RATE (GAL/HD/DAY)	NO. OF HEAD	NO. OF DAYS	ANNUAL USE (GALLONS)	ANNUAL USE (ACRE-FFET)
BEEF CATTLE	DRINKING	9	59,320	365	194,866,200	598.02
BEEF CATTLE	DRINKING	9	74,000	365	243,090,000	746.02

NOTES: GAL/HD/DAY = GALLONS/HEAD/DAY
1.0 AF = 1.0 ACRE-FOOT = 325,851 GALLONS

ADDITIONAL STOCKWATER QUANTITY REQUIRED TO SUPPLY AVERAGE ANNUAL USE BASED ON PLANNED CAPACITY FOR WCA PLAN:

AVERAGE ANNUAL STOCKWATER USE = 746.02 AF (9 GAL/HD/DAY)
TOTAL AUTHORIZED STOCKWATERING QUANTITY = 634.10 AF (CURRENT)
DIFFERENCE = MINIMUM ADDITIONAL SUPPLY = 111.92 AF

→ **USE 112.00 AF**

→ ADDITIONAL SUPPLY WILL BE OBTAINED THROUGH CHANGE OF USE FROM IRRIGATION TO STOCKWATERING

634.10 AF
112.00 AF
→ **USE** **746.10 AF** FOR BASIS OF AVERAGE ANNUAL STOCKWATER USE FROM 2018 THROUGH END OF TERM OF WATER CONSERVATION AREA PLAN

→ TOTAL PERMISSIBLE QUANTITY OF WITHDRAWAL DURING TERM OF WCA
= (AVERAGE ANNUAL STOCKWATER USE) x (TERM) → TERM = **3 YEARS**
= (746.10 AF) x (3 YEARS) = **2,238.30 AF**

RECEIVED
AUG 08 2018
Garden City Field Office
DIVISION OF WATER RESOURCES

KLA ENVIRONMENTAL SERVICES, INC.

PROJECT: MIDWEST FEEDERS, INC.

LOCATION: GRAY COUNTY, KANSAS

BY: FCM
DATE: 1/19/2018

CHECKED BY: CSG
DATE: 2/26/2018

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AVERAGE	**37,319,838**	**114.53**	**90,329,440**	**277.21**

AVERAGE ANNUAL WASTEWATER APPLICATION QUANTITY = 114.53 AF
AVERAGE ANNUAL WASTEWATER EXPORT QUANTITY = 277.21 AF
TOTAL WASTEWATER QUANTITY APPLIED OVER LOCAL AQUIFER = 391.74 AF

Table KS6-1, Typical Efficiency for Irrigation Systems, in the NRCS National Engineering Handbook, Part 652, Irrigation Guide, indicates a system efficiency of 87% for center pivot sprinkler systems with nozzles near the ground. This is the type of irrigation system typically used by Midwest Feeders, Inc. and neighboring producers. This implies a potential recharge factor of 13% (100% - 87%).

→ **The average annual potential recharge from wastewater (effluent) irrigation = 13% of the average annual application = 50.93 acre-feet**

KS652.0605 State supplement - irrigation system design

(a) General information

This part contains additional technical information required for the design of the various types of irrigation systems. Section KS652.0605(b) addresses gravity irrigation systems. Section KS652.0605(c) addresses sprinkle irrigation systems. Section KS652.0605(d) addresses micro (drip) irrigation systems.

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Table KS6-1 Typical Efficiency for Irrigation Systems

Irrigation System Type	Efficiency (%)
Surface Irrigation - Basic (Earthen conveyance ditch and siphon tubes or cutouts)	50
Surface Irrigation - Basic (Earthen conveyance ditch, siphon tubes or cutouts, land leveled)	60
Surface Irrigation - Basic (Earthen conveyance ditch, gated pipe, land leveled, tailwater reuse)	70
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Surface Irrigation - Improved (Tailwater reuse, land leveled, delivery pipeline, gated pipe)	80
Center Pivot [1/ 2/] and Linear Move - Sprinklers on top of pipe	80
Center Pivot [1/ 2/] and Linear Move - Nozzles below lateral but > 6 feet height above ground	85
Center Pivot [1/ 2/] and Linear Move - Nozzles near ground (in canopy)	87
Center Pivot and Linear Move - Low Energy Precision Application (LEPA)	92
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[1/] When the center pivot system includes an end gun, reduce the efficiency by 5%.
[2/] When the center pivot system includes a corner system (sometimes referred to as a trailer section), reduce the efficiency by 3%.

APPENDIX 4

Local Geohydrologic Study

Ground Water Associates, Inc.

1999 N. Amidon Street, Ste. 218 • Wichita, KS 67203 • 316-262-3322
P.O. Box 3834 • Wichita, KS 67201

April 22, 2013

Frank C. Mercurio, P.E.
KLA Environmental Services, Inc.
1303 Yucca Street
Scott City, Kansas 67871

Subject: Ground Water Situation
Midwest Feeders, Inc.

Dear Mr. Mercurio:

This letter is written to describe the geology and hydrology in the area of interest (in and around Midwest Feeders), and to provide our recommendations concerning the moving of certain existing water rights and the partial changing of the use made of some of your water rights. It is understood that you will pass this information along to the Division of Water Resources (DWR) with your specific requests for changes to your water rights. We have modified and/or prepared Tables 1 and 2 and Figures 1 through 3, and they are included with this report along with your water use reports for 2012 and the available drilling logs for some of your wells.

Midwest Feeders and the wells associated with it (stockwater and irrigation) are located in Section 19, T24S, R28W, and in Sections 24 and 25, T24S, R29W, Gray County, Kansas as shown on Figure 3 (your fold out map), which we have modified by adding information concerning the individual well sites and showing the locations of two cross sections we have prepared (Figure 1) to show the similarity of the deposits present at the various well sites in this area. And, we have used only the drilling logs that you could positively identify as being at a specific site.

We added the following data to Figure 3;

(1) The Computer Identification Number (C.I.N.) to the well sites that the DWR shows on the yearly water use reports to help identify the individual wells in red, and we have shown a red T if there is a term permit existing on a well, and a red D to identify the site of a domestic well,
(2) The well sites that we have a drilling log on have been circled in green (see Drilling Logs and Well Designs Section),
(3) A green line shows the locations of the north to south and the west to east cross sections we have prepared (Figure 1).

All of the available drilling logs are included with this report, and you will note we have plotted the cross sections to show exactly what the driller has described. As an example note on the first log (DWR 4887 and 10639 – T – 5 -1) that the driller shows "brown clay fine sand" from 90' to 110', and we have listed this as clay and sand on the cross section. Normally the driller will list the most prominent of the drill cuttings first and then the others that are with it. The drilling logs are marked with a red C.I.N. number and a blue owner's number.

Initially, we prepared a summary (Table 1) of the drilling logs, and we have identified them by using the C.I.N. and the section number. Note also that we have included data on a domestic well in section 24 and an observation well near the southeast corner of Section 31, T24S, R28W (information from GMD-3) particularly for the static water level. We have estimated the land surface elevation at each well site by its location on the topographic map, and the SWL and their approximate elevations are as measured by the driller on the date listed.

Table 2 was prepared later after Mr. Doug Althouse, Assistant Feedlot Manager, measured the SWLs of nine of the stockwater wells on March 21, 2013 and three of the irrigation wells on March 25, 2013. On this table we have shown the DWR C.I.N. No. along with the legal description and file number(s) of each well. (These are followed by the Owner's numbers of the wells on two separate dates, and we suspect the differences are caused by two different numbering systems.) In any event, the C.I.N. numbers, legal descriptions and file numbers are correct. The SWL elevations have been figured using our estimates of the surface elevations.

The surface formation throughout this area is the High Plains Aquifer made up of unconsolidated Pleistocene deposits lying on the Ogallala Formation of the Pliocene and Upper Miocene series, both of which are primarily made up of sand, gravel, silt and clay deposits. The Pleistocene deposits tend to be looser and more productive than the below lying Ogallala, but it is difficult to pick the top of the Ogallala without having more information than is presented on the normal drilling log. The bedrock below the Ogallala is the Carlile Shale of the upper Cretaceous series. It is not an aquifer.

Figure 2 is a portion of Plate 1B from the Kansas Geological Survey's Technical Series 20 entitled Enhancement of the Bedrock-Surface-Elevation Map Beneath the Ogallala Portion of the High Plains Aquifer, Western Kansas by P. Allen Macfarlane and B. Brownie Wilson. The portion shown on Figure 2 is all of Gray County except for the southern part of the bottom tier of townships (T29S) in Gray County, with Finney County to the west and north, Hodgeman to the northeast, Ford to the east, and Haskell to the west. Note on Figure 2 that we have marked the south line of the north tier of townships (T24S) in Gray County, and that we have drawn the north-south line between R28W and R29W which runs through your property along the east side of Sections 24 and 25 and the west side of Section 19 (see Figure 3). Then back on Figure 2 note that this same north-south line runs through the middle of a low elevation bedrock area outlined by the 2500' contour line. This indicates that a channel was cut into the shale formation and then

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DIVISION OF WATER RESOURCES

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LOCATION: GRAY COUNTY, KANSAS

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Center Pivot [1/ 2/] and Linear Move - Sprinklers on top of pipe	80
Center Pivot [1/ 2/] and Linear Move - Nozzles below lateral but > 6 feet height above ground	85
Center Pivot [1/ 2/] and Linear Move - Nozzles near ground (in canopy)	87
Center Pivot and Linear Move - Low Energy Precision Application (LEPA)	92
Sprinkler - Solid set	75
Sprinkler Irrigation - Side roll	70
Subsurface Drip Irrigation (SDI)	92

[1/] When the center pivot system includes an end gun, reduce the efficiency by 5%.
[2/] When the center pivot system includes a corner system (sometimes referred to as a trailer section), reduce the efficiency by 3%.

APPENDIX 4

Local Geohydrologic Study

Ground Water Associates, Inc.

1999 N. Amidon Street, Ste. 218 • Wichita, KS 67203 • 316-262-3322
P.O. Box 3834 • Wichita, KS 67201

April 22, 2013

Frank C. Mercurio, P.E.
KLA Environmental Services, Inc.
1303 Yucca Street
Scott City, Kansas 67871

Subject: Ground Water Situation
Midwest Feeders, Inc.

Dear Mr. Mercurio:

This letter is written to describe the geology and hydrology in the area of interest (in and around Midwest Feeders), and to provide our recommendations concerning the moving of certain existing water rights and the partial changing of the use made of some of your water rights. It is understood that you will pass this information along to the Division of Water Resources (DWR) with your specific requests for changes to your water rights. We have modified and/or prepared Tables 1 and 2 and Figures 1 through 3, and they are included with this report along with your water use reports for 2012 and the available drilling logs for some of your wells.

Midwest Feeders and the wells associated with it (stockwater and irrigation) are located in Section 19, T24S, R28W, and in Sections 24 and 25, T24S, R29W, Gray County, Kansas as shown on Figure 3 (your fold out map), which we have modified by adding information concerning the individual well sites and showing the locations of two cross sections we have prepared (Figure 1) to show the similarity of the deposits present at the various well sites in this area. And, we have used only the drilling logs that you could positively identify as being at a specific site.

We added the following data to Figure 3;

(1) The Computer Identification Number (C.I.N.) to the well sites that the DWR shows on the yearly water use reports to help identify the individual wells in red, and we have shown a red T if there is a term permit existing on a well, and a red D to identify the site of a domestic well,
(2) The well sites that we have a drilling log on have been circled in green (see Drilling Logs and Well Designs Section),
(3) A green line shows the locations of the north to south and the west to east cross sections we have prepared (Figure 1).

All of the available drilling logs are included with this report, and you will note we have plotted the cross sections to show exactly what the driller has described. As an example note on the first log (DWR 4887 and 10639 – T – 5 -1) that the driller shows "brown clay fine sand" from 90' to 110', and we have listed this as clay and sand on the cross section. Normally the driller will list the most prominent of the drill cuttings first and then the others that are with it. The drilling logs are marked with a red C.I.N. number and a blue owner's number.

Initially, we prepared a summary (Table 1) of the drilling logs, and we have identified them by using the C.I.N. and the section number. Note also that we have included data on a domestic well in section 24 and an observation well near the southeast corner of Section 31, T24S, R28W (information from GMD-3) particularly for the static water level. We have estimated the land surface elevation at each well site by its location on the topographic map, and the SWL and their approximate elevations are as measured by the driller on the date listed.

Table 2 was prepared later after Mr. Doug Althouse, Assistant Feedlot Manager, measured the SWLs of nine of the stockwater wells on March 21, 2013 and three of the irrigation wells on March 25, 2013. On this table we have shown the DWR C.I.N. No. along with the legal description and file number(s) of each well. (These are followed by the Owner's numbers of the wells on two separate dates, and we suspect the differences are caused by two different numbering systems.) In any event, the C.I.N. numbers, legal descriptions and file numbers are correct. The SWL elevations have been figured using our estimates of the surface elevations.

The surface formation throughout this area is the High Plains Aquifer made up of unconsolidated Pleistocene deposits lying on the Ogallala Formation of the Pliocene and Upper Miocene series, both of which are primarily made up of sand, gravel, silt and clay deposits. The Pleistocene deposits tend to be looser and more productive than the below lying Ogallala, but it is difficult to pick the top of the Ogallala without having more information than is presented on the normal drilling log. The bedrock below the Ogallala is the Carlile Shale of the upper Cretaceous series. It is not an aquifer.

Figure 2 is a portion of Plate 1B from the Kansas Geological Survey's Technical Series 20 entitled Enhancement of the Bedrock-Surface-Elevation Map Beneath the Ogallala Portion of the High Plains Aquifer, Western Kansas by P. Allen Macfarlane and B. Brownie Wilson. The portion shown on Figure 2 is all of Gray County except for the southern part of the bottom tier of townships (T29S) in Gray County, with Finney County to the west and north, Hodgeman to the northeast, Ford to the east, and Haskell to the west. Note on Figure 2 that we have marked the south line of the north tier of townships (T24S) in Gray County, and that we have drawn the north-south line between R28W and R29W which runs through your property along the east side of Sections 24 and 25 and the west side of Section 19 (see Figure 3). Then back on Figure 2 note that this same north-south line runs through the middle of a low elevation bedrock area outlined by the 2500' contour line. This indicates that a channel was cut into the shale formation and then

filled in with the deposition of the Ogallala Formations. The channel continues to the south-southeast, and the northern point of the 2450 contour line is four miles to the south-southeast of the southeast corner of T24S, R29W.

The north-south cross section (Figure 1) shows a significant sand and clay bed that bottoms at an elevation of 2544' in 5-24, at 2536' in 3-24, at 2517' in 7-25 and 2502' in 9-25, and the SWLs in these same four wells on March 21 or 25, 2013 were 2605, 2627, 2626 and 2614. (We suspect that the 2605 elevation at site 5-24 was due to very recent pumping of that well because on that same date well T in section 24 (File No. 22,122) had a SWL of 2627.) In any event, the bottom elevation of the aquifer and the SWL would cause the water to move to the south-southeast. And, the observation well near the SE corner of Section 31 showed a SWL elevation of 2579'.

It is our understanding that for the sake of Midwest Feeder's cattle feeding and irrigation operations they need to move a portion of their existing water rights from two wells in Section 24, T24S, and R29W to a well in Section 25, T24S, R29W, along with making changes to the use made of the water. The first well in Section 24 is identified as T and 5 on Figure 3 and Table 2, and it is covered by File Nos. 4887 and 10,639, along with a term permit. It is located 900' north and 2630' west of the southeast corner of Section 24. Based on our discussions, you would like to retain 30 acre-feet of water from this well for stockwater use, and the remainder of the available water needs to be transferred to Well No. 2 (see Figure 3) in Section 25 for irrigation use. This well is covered by File No. 10639, and it is located 3440' north and 2525' west of the southeast corner of Section 25. By my calculations this is a move of 2690' to the south.

The second well that needs to have changes made to its point of diversion and the use made of its water right is marked with a T (for term permit) on Figure 3 and Table 2, and it is covered by File No. 22,122 along with the term permit. It is located 2800' north and 100' west of the southeast corner of Section 24. Again based on our discussions, you would like to retain 70 acre-feet of water from this well for stockwater use, and the remainder of the available water from this water right transferred to Well No. 2 (on Figure 3) in Section 25 for irrigation use. This is the same well as listed in the previous paragraph so that puts it 3440' north and 2525' west of the southeast corner of Section 25. By my calculations this is a move of 5200' to the south-southeast.

We are aware that both distances quoted (2690' and 5200') exceed the rules and regulations of the Southwest Kansas Groundwater Management District #3 (GMD3) and the DWR. However, we suggest that you request a waiver from the distance regulation from the regulatory agencies based on the physical characteristics of the aquifer, which are

(1) The primary aquifer at all three well sites where changes are requested to be made is the Ogallala, and the significant sand penetrated near the bottom of the wells appears to be the same bed at all six well sites in the cross sections,
(2) The water in this area is basically flowing to the south-southeast following the filled in bedrock channel,

(3) The requested water diversion point keeps the water pumping site near the center of Midwest Feeder's property, and,
(4) No additional water is being requested, and in fact the change from irrigation to stock use for some of the water will probably result in the existing water rights being slightly reduced.

The flow and direction of flow of the water should not change in this area due to the reasons listed above. And due to the continuous use of water in the feeding operations, it would be very difficult (and expensive) to conduct certified pumping tests on the wells to provide more proof of our opinion. I do not believe it is necessary.

Please advise us if you have comments or questions concerning this letter.

Very truly yours,

Robert L. Vincent

Robert L. Vincent, C.P.G., P.Hg.
Ground Water Associates, Inc.

RLV/kf

ROBERT LEE VINCENT
LICENSED
65
KANSAS
GEOLOGIST

Midwest Feeders, Inc.
Summary of Well Construction in Sec. 24 & 25, T 24S, R 29W, Gray Co.
and in Sec. 19, T 24S, R 28W " "

Well No. & Sec. No.	DWR Nos.	Sur. Elev. & Casing Dia.	Sh. Depth & Elev.	Bs. of Sd. & Elev.	Screen Setting	SWL & Elev	Test Cap. & DD	Sp. Cap. & Date
5 24	4887-IR 10639-IR	2765 8"	261' 2504'	256' 2509'	160'-220'	150' 2615	135 gpm @ 52' DD	2,60 gpm/Ft 12 Dec 11
3 24	10639-St 32786-St	2761 8	270 2491	267 2494	127-147 167-187 207-227 247-267	120 2641	Est. 250 gpm	14 Aug 98
7 25	10639-St 32787-St	2761 8	277 2484	272 2489	165-185 199-235	120 2641		9 Apr 79
5 25	29614-IR	2776 16	279 2497	271 2505	185-205 215-241 251-271	144 2632	677 gpm @ 101' DD	6.70 gpm/ft 11 May 77
9 25 Redrill of 5	29614-IR	2776 12	282 2494	274 2502	178-218 233-253 269-289	156 2620	300 gpm @ 35' DD	8.57 gpm/ft 27 Dec 03
Domestic 24		2760 6	253 2507	250 2510	202-222 232-252	120 2640		21 May 93
3 19	10999-St	2750 16	245 2505	245 2505	178-138	138 2612	160 gpm @ 102' DD	1.57 gpm/ft 8 Jul 97
Obs. Well in T24S R28W 31 DD		2754	265 2489			175 2579	RECEIVED	Jan 13
8 19	10999-St	2756 8"	240 2516	235 2521	145-245	115 2641	AUG 08 2018 Garden City Field Office DIVISION OF WATER RESOURCES	14 Aug 98

Table 1

GWA Ground Water Associates, Inc.

Subject Midwest Feeders, Inc. Date 18 Feb 13

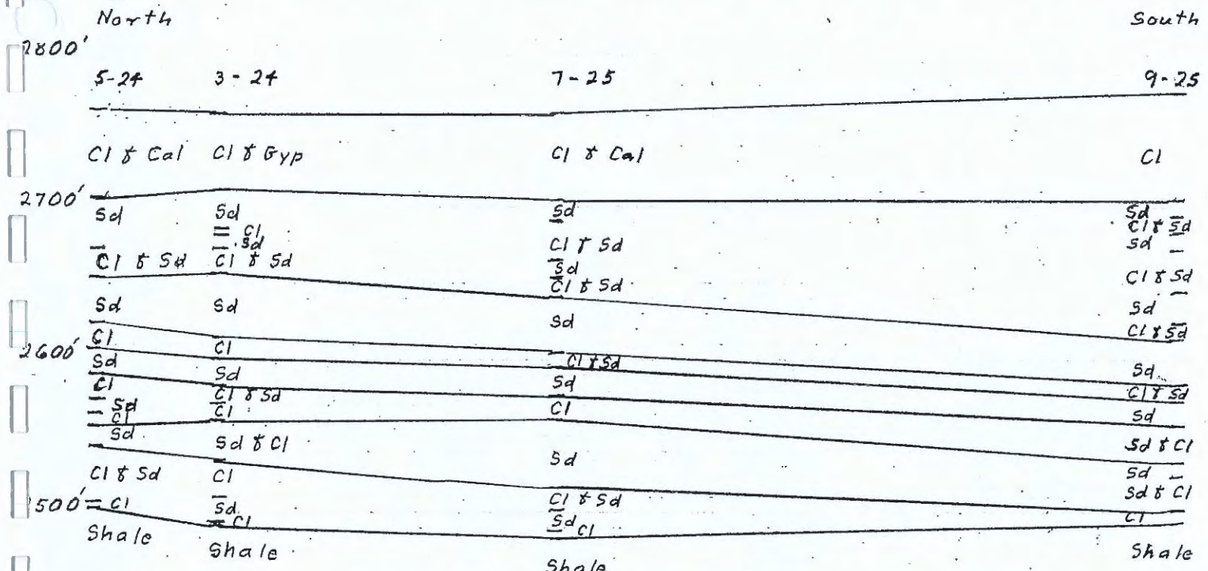
GWA **Ground Water Associates, Inc.**

Subject Midwest Feeders, Inc. Date 25 Mar 13

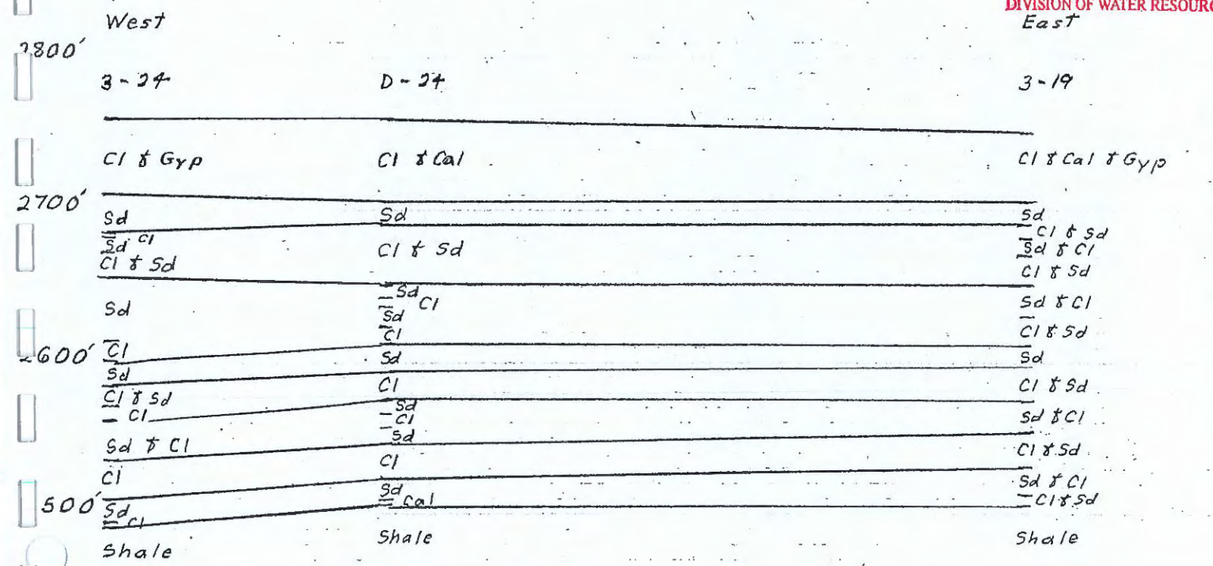
DWR C.I.N. No.	Legal Description	File Nos.	Owner's No. 29 Jan 13	Owner's No. 21 Mar 13	Surface Elev	21 Mar 13 SWL & Elev
	Stockwater Wells					
5 & T	900'N & 2630W of SE cor Sec 24,	4887 10639	1	8	2765'	160' 2605
T	2800'N & 100'W of SE cor Sec 24	22122	2	9	2762	135 2627
7	3667 N & 1248W of SE cor Sec. 25	10639 32786	7	3	2761	135 2626
7	325 N & 1700W of SE cor Sec 19	10999	7	4	2755	153 2602
6	25 N & 1400 W of SE cor Sec 19	10999	6	5	2750	136 2614
3	102 N & 2514 W of SE cor Sec 24	10639	3	1	2761	134 2627
6	5213N & 2388 W of SE cor Sec 25	10639	6	2	2765	149 2616
8	2098N & 1844W of SE cor Sec 19	10999	8	6	2757	152 2605
10	2393N & 1847W of SE cor Sec 19	10999	10	7	2757	140 2617
	T - Indicates Term Permit					
	Irrigation Wells			25 Mar 13		25 Mar 13
2	3440 N & 2525 W of SE cor Sec 25	10639	2	3	2753	132 2621
3	2220 N & 1990 W of SE cor Sec 25	22121	3	2	2765	154 2611
9	170 N & 4030W of SE cor Sec 25	29614	9	1	2776	162 2614
	Observation Well					Jan 13
Obs. Well	SE of SE Sec 31 Sec 31, T24S, R 28W			Jan 13	2754	175 2579

Table 2

Cross Sections on Midwest Feeders' property in Sec. 24 & 25, T24S, R29W and Sec 19, T24S, R28W, Gray Co. (See Figure 3)



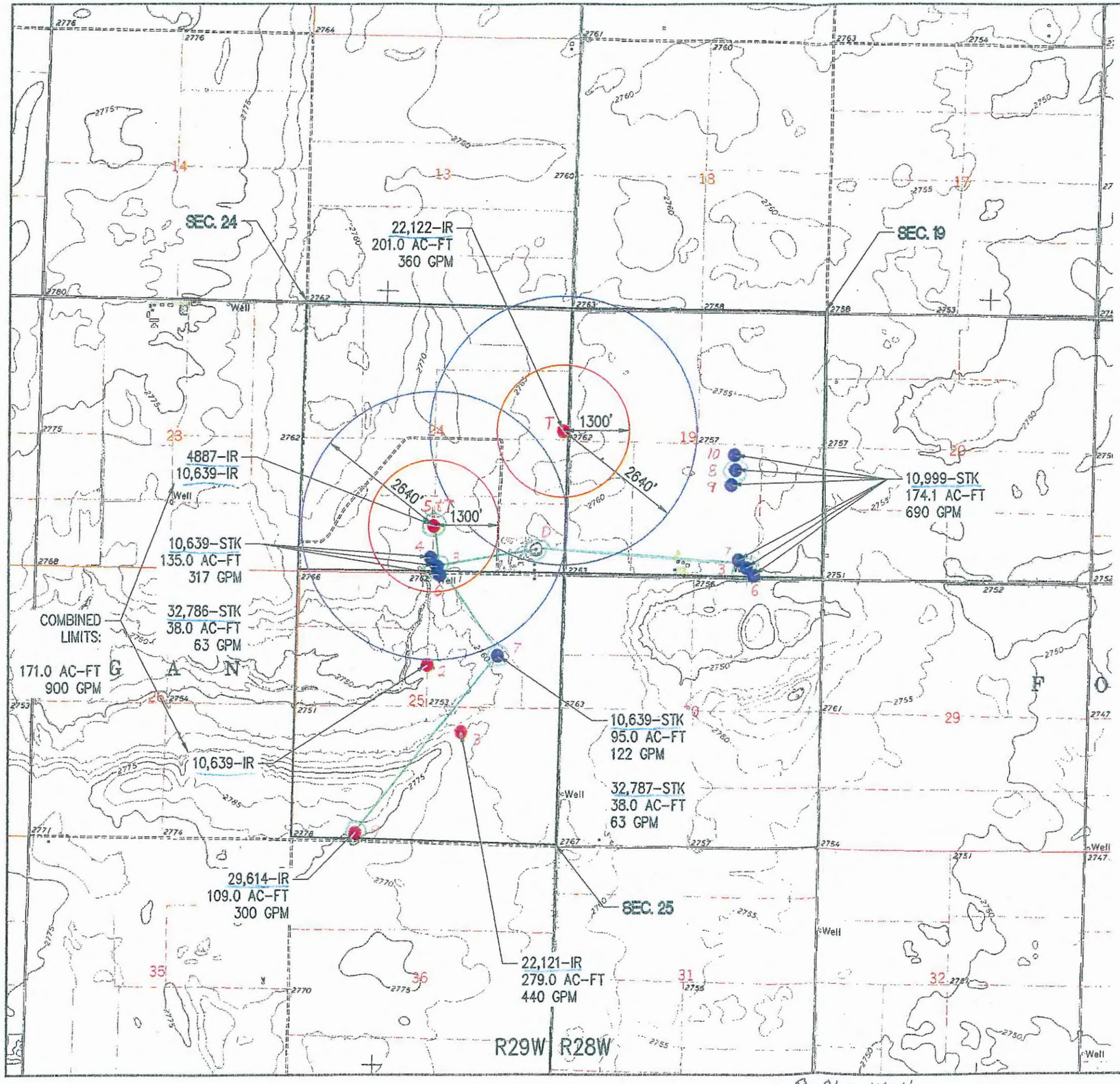
SWL in Well at 5-24 was 150' (Elev. 2615) as measured by the driller on 12 Dec. 2011



Cl - Clay
Sd - Sand
Cal - Caliche
Gyp - Gypsum

D - Domestic Well
5-24 - Indicates Well No. 5 in Sec 24 (See Figure 3)

Figure 1



LEGEND

- SECTION BOUNDARY
- STOCKWATER WELL
- IRRIGATION WELL

O Drilling Log Available
Red No. by Wellsite - DWR Computer Identification No. (Shown on Water Use Reports)
T - Term Permit
⊙-D - Domestic Well
Line of N-S and W-E cross sections (See Figure 1)
⊗ Obs. Well

DRAWN	SLF	12/12 DATE
CHECKED	FCM	12/12 DATE
APPROVED	FCM	12/12 DATE

MIDWEST FEEDERS, INC.
SE 1/4 SECTION 24 AND N 1/2 & SE 1/4 SECTION 25 T24S R29W
AND SECTION 19 T24S R28W
GRAY COUNTY, KANSAS

RECEIVED
AUG 08 2018
Garden City Field Office
DIVISION OF WATER RESOURCES

N
W E
S

SCALE IN FEET
0 2000 4000
1" = 2050'

1700 EAST IRON
SALINA, KANSAS 67401
1303 YUCCA STREET
SCOTT CITY, KANSAS 67871
(785) 823–0097
KLA ENVIRONMENTAL SERVICES, INC.

CAD FILE NAME: WATER RIGHTS.DWG

SHEET NO. 1 OF 1

WATER WELL LOCATION MAP

⊗ Obs. Well

Figure 3

Water Use Reports

for

2012

2012 IRRIGATION WATER USE REPORT

This is the Water Use Report required to be filed for all Vested or Appropriation Rights. IMPORTANT: K Law requires this completed report to be filed by March 1. Failure to do so will subject the owner to a ...e not to exceed $250 per file number. If any point of diversion shown below is permanently inoperable, please circle it. IF YOU DID NOT USE WATER, YOU MUST REPORT THE REASON FOR NON-USE TO HELP PROTECT YOUR WATER RIGHT. Infomation on each point of diversion must be completed. Please begin by reading the attached instructions and definitions.

FILE NUMBER	LEGAL DESCRIPTION OF POINT(S) OF DIVERSION: QUALIFIERS	SEC TWP RNG	CIN	CHM		ACRES IRR.	INCLUDE MULTIPLICATION FACTOR: BEGINNING WATER METER READING	ENDING WATER METER READING	METERED QUANTITY OF WATER	UNIT	HOURS PUMPED	PUMP RATE (GPM)	CROP CODE	TYPE OF SYSTEM	TYPE OF ENERGY	WELL DATA: DEPTH TO WATER	WELL DATA: DATE MEASURED
4887-00	990N 2630W	24-24S-29W	5														
	AKA: 230' S OF PREVIOUS POINT OF DIVERSION																
10639-00	990N 2630W	24-24S-29W	5				Report Under 4887-00										
	AKA: 230' S OF PREVIOUS POINT OF DIVERSION																
10639-00	3440N 2525W	25-24S-29W	2	Y	(D)	216	474,028	646,916	172.88	AF			2,5	3	N		
22121-00	2220N 1990W	25-24S-29W	3	Y		246	174043 00	913584200	739841900 GAL	G	Pump		2,5	3	N		
29614-00	170N 4030W	25-24S-29W	9	Y			67285800	79564100	12278300	G	together		2,5	3	N		
	AKA: 70'N & 70'W OF PREVIOUS WELL																
#8 4887 + 10639 IR	To be reported as stockwater use under term permit 20129486						0	23,060,900	23,060,900	G							
#9 22122	To be reported as stockwater use under term permit 20129485						0	24,287,600	24,287,600	G							

CALENDAR YEAR: 12 | OFFICE USE: 37213 1 | FIELD OFFICE: 1 - IRR GC | CO GMD: GY 03 72 230

456 Total acres irrigated.

I submit the report as the best information available. I understand that knowingly falsifying the report is a violation of state law.

[signature] 1-31-13
SIGNATURE DATE

CIRCLE ONE: OWNER AGENT (TENANT)

MIDWEST FEEDERS INC
5013 13 RD
INGALLS KS 67853-9023

TELEPHONE NO. (620) 257-0113
CIRCLE ONE: CELL WORK HOME

C.I.N. - Computer Identification No.

RECEIVED
AUG 08 2018
Garden City Field Office
DIVISION OF WATER RESOURCES

WATER USE REPORT
STOCKWATER USE

IMPORTANT: YOU MUST REPORT ANNUAL USAGE OR THE REASON FOR NON-USAGE, IN ORDER TO PROTECT YOUR RIGHT TO USE WATER

This is the annual Water Use Report required to retain all Vested or Appropriation Rights. Please begin by reading the instructions for Part A on the reverse side of this page. Also present are instructions for name and address changes, which include information needed if you have disposed of your interest in any one or more of the water right file numbers listed below. If you have any questions on how to complete this form, please contact the Water Use Coordinator at (785) 296-1054. Please make a copy of the entire Water Use Report for your records, and return the original report to:

Water Use Coordinator
Kansas Department of Agriculture
Division of Water Resources
109 SW 9th, Second Floor
Topeka, Kansas 66612 1283

COMPLETE AND RETURN BY MARCH 1, 2013

PART A: POINTS OF DIVERSION

Water Right File Number	Legal Descriptions Point(s) of Diversion	Water Meter Data: Beginning Water Meter Reading	Water Meter Data: Ending Water Meter Reading	Water Meter Data: Metered Quantity Of Water	UNIT	Hours	Pump Rate (gpm)	Well Data: Well Depth	Well Data: Depth to Water	Well Data: Date
. 10639-00	102N 2514W 24-24S-29W 3 AKA: GEO CTR-290'N OF PREVIOUS WELL									
. 10639-00	270N 2640W 24-24S-29W 4 AKA: BATT 1 OF 2 WELLS	99,099,100	14,204,300 ①	15,105,100	G	#2				
. 10639-00	5213N 2388W 25-24S-29W 6 AKA: OLDWUSE-BATT 1 OF 2 WELLS	8,373,590	1,903,200 ①	23,529,580	G	#1				
. 10639-00	3667N 1248W 25-24S-29W 7	28,469,400	53,223,400	24,754,000	G	#3				
. 10999-00	175N 1550W 19-24S-28W 3 AKA: GEO CTR									
. 10999-00	25N 1400W 19-24S-28W 6 AKA: BATT 1 OF 2 WELLS	62,768,400	79,232,000	16,463,600	G	#4				
. 10999-00	325N 1700W 19-24S-28W 7 AKA: BATT 1 OF 2 WELLS	43,841,800	350,700 ①	3,738,000	G	#5				
. 10999-00	2098N 1844W 19-24S-28W 8 AKA: GEO CTR - 948' N & 506' E OF PREVIOUS WELL									

Estimate the average head count for the year. 50,326 Cattle _____ Hogs 83,590,280 Sub-Total

Estimate the maximum head count at one time during the year. 52,664 Cattle _____ Hogs

① Meter rolled over.

② meter replaced 9-3-12 meter reading when removed 47,229,100.

Date: _____ Telephone: (___) _____

I submit this report as the best information available. I understand that knowingly falsifying the report is a violation of state law.

12 37213 1 1 - STK GC GY 03 75 1005
Office Use FO CO GMD

_____
Name (Printed or Typed)

_____
Name (Signature)

MIDWEST FEEDERS INC

5013 13 RD
INGALLS, KS 67853 9023

_____ Owner _____ Tenant _____ Agent

DWR 1-511 (Revised 10/19/2010) STOCKWATER USE REPORT

RECEIVED
AUG 08 2018
Garden City Field Office
DIVISION OF WATER RESOURCES

WATER USE REPORT
STOCKWATER USE

IMPORTANT: YOU MUST REPORT ANNUAL USAGE OR THE REASON FOR NON-USAGE, IN ORDER TO PROTECT YOUR RIGHT TO USE WATER

This is the annual Water Use Report required to retain all Vested or Appropriation Rights. Please begin by reading the instructions for Part A on the reverse side of this page. Also present are instructions for name and address changes, which include information needed if you have disposed of your interest in any one or more of the water right file numbers listed below. If you have any questions on how to complete this form, please contact the Water Use Coordinator at (785) 296-1054. Please make a copy of the entire Water Use Report for your records, and return the original report to:

Water Use Coordinator
Kansas Department of Agriculture
Division of Water Resources
109 SW 9th, Second Floor
Topeka, Kansas 66612 1283

COMPLETE AND RETURN BY MARCH 1, 2013

PART A: POINTS OF DIVERSION

Water Right File Number	Legal Description Point(s) of Diversion	Water Meter Data: Beginning Water Meter Reading	Water Meter Data: Ending Water Meter Reading	Water Meter Data: Metered Quantity Of Water	UNIT	Hours	Pump Rate (gpm)	Well Data: Well Depth	Well Data: Depth to Water	Well Data: Date
. 10999-00	1803N 1844W 19-24S-28W 9 AKA: BATT 1 OF 2 WELLS	16,102,000	38,578,000	22,476,000	G	#6				
. 10999-00	2393N 1844W 19-24S-28W 10 AKA: BATT 1 OF 2 WELLS	133,223,000	150,437,000	17,214,000	G	#7				
. 32786-00	102N 2514W 24-24S-29W 3 AKA: GRO CTR-290'S OF PREVIOUS WELL	Report Under	10639-00							
. 32786-00	270N 2640W 24-24S-29W 4 AKA: BATT 1 OF 2 WELLS	Report Under	10639-00							
. 32786-00	5213N 2388W 25-24S-29W 6 AKA: OLDWUSE-BATT 1 OF 2 WELLS	Report Under	10639-00							
. 32787-00	3667N 1248W 25-24S-29W 7	Report Under	10639-00.							

125,280,280 Total

Estimate the average head count for the year. _____ Cattle _____ Hogs

Estimate the maximum head count at one time during the year. _____ Cattle _____ Hogs

Date: _____ Telephone: (___) _____

I submit this report as the best information available. I understand that knowingly falsifying the report is a violation of state law.

12 37213 1 2 - STK GC GY 03 75 1005
Office Use FO CO GMD

_____
Name (Printed or Typed)

MIDWEST FEEDERS INC

5013 13 RD
INGALLS, KS 67853 9023

_____
Name (Signature)

_____ Owner _____ Tenant _____ Agent

DWR 1-511 (Revised 10/19/2010) STOCKWATER USE REPORT

RECEIVED
AUG 08 2018
Garden City Field Office
DIVISION OF WATER RESOURCES

Drilling Logs

and

Well Designs

NEW WELL

WATER WELL RECORD Form WWC-5

Division of Water Resources App. No. 4887 & 10639

1 LOCATION OF WATER WELL: County: Gray | Fraction: ¼ NW ¼ SW ¼ SE ¼ | Section Number: 24 | Township No.: T 24 S | Range Number: R 29 ☐E ☑W

Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here ☐.
Approx. 9 miles North of Ingalls Kansas

Global Positioning System (GPS) information:
Latitude: 37.94584 N (in decimal degrees)
Longitude: 100.45521 W (in decimal degrees)
Elevation:
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: Midwest Feeders Inc
RR#, Street Address, Box #: 05013 13 RD
City, State, ZIP Code : Ingalls, Ks 67853

3 LOCATE WELL WITH AN "X" IN SECTION BOX:

4 DEPTH OF COMPLETED WELL 240 ft.
Depth(s) Groundwater Encountered (1) ft. (2) ft. (3) ft.
WELL'S STATIC WATER LEVEL 150 ft. below land surface measured on mo/day/yr 12-27-11
Pump test data: Well water was 202 ft. after 2 hours pumping 135 gpm
EST. YIELD gpm. Well water was ft. after hours pumping gpm
Bore Hole Diameter 17 1/2 in. to 240 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 8 in. to 240 ft., Diameter in. to ft., Diameter in. to ft.
Casing height above land surface 12 in., Weight 6.99 lbs./ft., Wall thickness or gauge No. 410
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 160 ft. to 220 ft., From ft. to ft.
From ft. to ft., From ft. to ft.
GRAVEL PACK INTERVALS: From 25 ft. to 240 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 North Distance from well 230'

FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	2	SURFACE	188	197	SAND FINE
2	40	BROWN CLAY CALICHE	197	205	BROWN CLAY
40	56	WHITE GREY CLAY , CALICHE	205	220	SAND FINE TO SMALL FEW CLAY
56	79	SAND, FINE MED COURSE, FEW LEDG	220	256	BROWN CLAY FEW SAND
79	90	SAND FINE	256	261	YELLOW CLAY
90	110	BROWN CLAY FINE SAND	261	280	SHALE
110	140	SAND FINE TO MED			
140	155	BROWN CLAY FEW LIMEROCK			
155	173	SAND FINE TO MED COURSE SM GRV			
173	188	BROWN CLAY FEW LIMEROCK			

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Garden City Field Office
DIVISION OF WATER RESOURCES

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) and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 145 This Water Well Record was completed on (mo/day/year) 11/5/12 under the business name of HYDRO RESOURCES by (signature)

INSTRUCTIONS: Use typewriter or ball point pen. *PLEASE PRESS FIRMLY* and *PRINT* clearly. Please fill in blanks and check the correct answers. Send three copies (white, blue, pink) to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. 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.

KSA 82a-1212 Check: ☐ White Copy ☐ Blue Copy ☐ Pink Copy

10,639-STK & 32,786

(3) (2)

WATER WELL RECORD Form WWC-5 KSA 82a-1212

LOCATION OF WATER WELL:	Fraction	Section Number	Township Number	Range Number
COUNTY: 035 GRAY	SW 1/4 SW 1/4 SE 1/4	24	T 24 S	R 29 W

Distance and direction from nearest town or city street address of well if located within city?
APPROX. 7 3/4 MILES NORTH & 1/2 MILE WEST OF INGALLS

2 WATER WELL OWNER: MIDWEST FEEDERS
RR#, St. Address, Box # : 05013 13 RD
Board of Agriculture, Division of Water Resources

City, State, ZIP code : INGALLS, KS 67853-9023
Application Number: 10,639 & 32,786

3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX:

4 DEPTH OF COMPLETED WELL 277 ELEVATION: 0
Depth(s) Groundwater Encountered 1. 0 ft. 2. 0 ft. 3. 0 ft.

WELL'S STATIC WATER LEVEL 120 ft. below land surface measured on mo/day/yr
Pump testdata: Well water was 0 ft. after 0 hours pumping 0 gpm

Estimated Yield 250 gpm: Well water was 0 ft. after 0 hours pumping 0 gpm

Bore Hole Diameter 17.5 in. to 277 ft., and in. to 0 ft.

WELL WATER TO BE USED AS: 03 FEEDLOT

Was a chemical/bacteriological sample submitted to department? No ;
If yes, mo/day/yr sample was submitted Water well disinfected? Yes

TYPE OF BLANK CASING USED: 02 PVC CASING JOINTS: GLUED
Blank casing diameter 8 5/8 in. to 277 ft., Dia in. to 0 ft., Dia in. to 0 ft.
Casing height above land surface 12 in., weight 7 lbs/ft. Wall thickness or gauge No. .410
TYPE OF SCREEN OR PERFORATION MATERIAL: 07 PVC
SCREEN OR PERFORATION OPENINGS ARE: 03 MILL SLOT

SCREEN PERFORATED INTERVALS:	From 127 ft. to 147 ft.,	From 207 ft. to 227 ft.		
	From 167 ft. to 187 ft.,	From 247 ft. to 267 ft.		
GRAVEL PACK INTERVALS:	From 25 ft. to 277 ft.,	From 0 ft. to 0 ft.		
	From 0 ft. to 0 ft.,	From 0 ft. to 0 ft.		

6 GROUT MATERIAL 03 BENTONITE
Grout Intervals: From 5 ft. to 25 ft., From 0 ft. to 0 ft., From 0 ft. to 0 ft.
What is the nearest source of possible contamination: 14 ABAND. WELL
Direction from well? SOUTH
How many feet? 290

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	2	02 SILT			
2	28	01 CLAY			
28	50	36 GYP ROCK 01 CLAY			
50	59	05 SAND 13 FINE GRAVEL			
59	75	05 SAND 11 GRAVEL			
75	79	01 CLAY			
79	88	07 FINE SAND 08 MEDIUM SAND 09 COARSE SAND			
88	103	01 CLAY 04 SANDY CLAY 05 SAND			
103	112	07 FINE SAND 08 MEDIUM SAND 04 SANDY CLAY			
112	147	05 SAND 11 GRAVEL			

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DIVISION OF WATER RESOURCES

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was ~~constructed~~ under my jurisdiction and was completed on (mo/day/year) 07/28/98 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 145 This Water Well Record was completed on (mo/day/yr) 08/14/98 under the business name of HENKLE DRILLING & SUPPLY by (signature)

(3) & (3) conti.

(Continued) WATER WELL RECORD Form WWC-5 KSA 82a-1212

1 LOCATION OF WATER WELL:	Fraction	Section Number	Township Number	Range Number
COUNTY: 035 GRAY	SW 1/4 SW 1/4 SE 1/4	24	T 24 S	R 29 W

2 WATER WELL OWNER: MIDWEST FEEDERS
RR#, St. Address, Box # : 05013 13 RD
Board of Agriculture, Division of Water Resources

City, State, ZIP code : INGALLS, KS 67853-9023
Application Number: 10,639 & 32,786

FROM	TO	LITHOLOGIC LOG
147	160	01 CLAY 20 LIMESTONE
160	167	05 SAND 28 ROCK
167	178	05 SAND 13 FINE GRAVEL 28 ROCK
178	190	04 SANDY CLAY 07 FINE SAND
190	200	01 CLAY
200	226	05 SAND 28 ROCK 01 CLAY
226	251	01 CLAY 04 SANDY CLAY 20 LIMESTONE
251	258	07 FINE SAND 08 MEDIUM SAND 04 SANDY CLAY
258	267	07 FINE SAND 08 MEDIUM SAND 28 ROCK
267	270	01 CLAY
270	275	19 SHALE

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Garden City Field Office
DIVISION OF WATER RESOURCES

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was Constructed under my jurisdiction and was completed on (mo/day/year) 07/28/98 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 145 This Water Well Record was completed on (mo/day/yr) 08/14/98 under the business name of HENKLE DRILLING & SUPPLY by (signature) Bruce J Reichmuth

10,639-STK
¼ 32,787

USE TYPEWRITER OR BALL POINT PEN-PRESS FIRMLY, PRINT CLEARLY.

WATER WELL RECORD
KSA 82a-1201-1215

Kansas Department of Health and Environment-Division of Environment
(Water well Contractors)
Topeka, Kansas 66620

1. Location of well:	County	Fraction	Section number	Township number	Range number
	Gray	W½ 1/4 SE 1/4 NE 1/4	25	T 24 S	R 29 E (W)

2. Distance and direction from nearest town or city: Approximately 7⅛ miles North of Ingalls, Kansas.
Street address of well location if in city:

3. Owner of well: Loewen Feeders
R.R. or street: C/O Rudy Loewen
City, state, zip code: Ingalls, Kansas 67853

4. Locate with "X" in section below:

Sketch map:

6. Bore hole dia. 17½ in. Completion date
Well depth 275 ft. 4/9/79

7. __ Cable tool __ Rotary __ Driven __ Dug
__ Hollow rod __ Jetted __ Bored X Reverse rotary

8. Use: __ Domestic __ Public supply __ Industry
__ Irrigation __ Air conditioning X Stock
__ Lawn __ Oil field water __ Other

9. Casing: Material Steel Height (Above) or below
Threaded ___ Welded X Surface 12 in.
RMP ___ PVC ___ Weight 16.94 lbs./ft.
Dia. 8 5/8 in. to 275 ft. depth Wall Thickness: inches or
Dia. ___ in. to ___ ft. depth gage No. .188

5. Type and color of material	From	To
See Attachment		
(Use a second sheet if needed)		

10. Screen: Manufacturer's name Doerr Screen
Type Louvered Dia. 8 5/8"
Slot/gauze .060 Length 56'
Set between 165 ft. and 185 ft.
199 ft. and 235 ft.
Gravel pack? Yes Size range of material #1 Fine

11. Static water level: mo./day/yr.
120 ft. below land surface Date 4/9/79

12. Pumping level below land surfaces: Not Pumped
___ ft. after ___ hrs. pumping ___ g.p.m.
___ ft. after ___ hrs. pumping ___ g.p.m.
Estimated maximum yield ___ g.p.m.

13. Water sample submitted: mo./day/yr.
___ Yes X No Date

14. Well head completion:
___ Pitless adapter 12 Inches above grade

15. Well grouted? Yes
With: X Neat cement ___ Bentonite ___ Concrete
Depth: From 0 ft. to 10 ft.

16. Nearest source of possible contamination:
ft. 75 Direction West Type Feed Lot
Well disinfected upon completion? ___ Yes X No

17. Pump: X Not installed
Manufacturer's name
Model number HP Volts
Length of drop pipe ft. capacity g.p.m.
Type:
___ Submersible ___ Turbine
___ Jet ___ Reciprocating
___ Centrifugal ___ Other

T ___ R ___ W
Sec ___
¼ ¼ ¼

18. Elevation:

Topography:
___ Hill
X Slope
___ Upland
___ Valley

19. Remarks:

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Garden City Field Office
DIVISION OF WATER RESOURCES

20. Water well contractor's certification:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Henkle Drilling&Sply 145
Business name License No.
Address Box 639, GardenCity, Ks
Signed Bruce J Reichenbach Date 4/19/79
Authorized representative

Forward the white, blue and pink copies to the Department of Health and Environment

Form WWC-5

MI-1023

(7) & (7) cont'.

DRILLERS TEST LOG

CUSTOMERS NAME Loewen Feeders DATE 3/8/79
STREET ADDRESS _____ TEST # 1 E. LOG Yes
CITY & STATE Ingalls, Kansas DRILLER Rector
COUNTY Gray QUARTER NE SECTION 25 TOWNSHIP 24 RANGE 29

LOCATION At the SE corner of the Feed Lot.

Feed Lot Well Location
Static Water Level _____
Proposed Well Depth _____

%	FOOTAGE From	Pay	To	DESCRIPTION OF STRATA
	0		3	Top Soil
	3		20	Brown clay
	20		57	Brown clay, caliche and cemented sand.
	57		70	Sand fine to med coarse and small gravel.
	70		80	Brown clay, caliche and cemented sand.
	80		95	Brown clay and sand. Fairly loose.
	95		107	Sand fine to med coarse and small gravel.
	107		120	Brown clay and sand med coarse. Used water.
55	120	37	157	Sand fine to med coarse and small gravel. Loose - used water.
	157		165	Brown clay with small sand sts.
60	165	19	184	Sand fine to med coarse, small gravel with small white rock. Loose - used water.
	184		200	Brown clay - sticky.
65	200	44	244	Sand fine to med coarse with a few small to med gravel, some tiny white rock with very fine clay sts. Loose - used water.
20	244	16	260	Brown clay, sand with sts of broken white rock.
70	260	12	272	Sand fine to med coarse with a few small to med gravel, also small white rock. Loose - used water.
	272		277	Brown clay
	277		280	Shale

TOTAL DEPTH OF WELL 275'
Set up facing North
Dig pit on the East

Drilling Logs

and

Well Designs

NEW WELL

4887 & 10639

WATER WELL RECORD Form WWC-5

Division of Water Resources App. No.

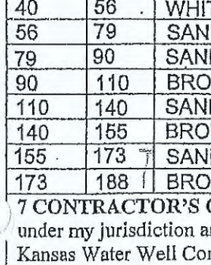
1 LOCATION OF WATER WELL: County: Gray | Fraction: ¼ NW ¼ SW ¼ SE ¼ | Section Number: 24 | Township No.: T 24 S | Range Number: R 29 ☐E ☑W

Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here ☐.
Approx. 9 miles North of Ingalls Kansas

Global Positioning System (GPS) information:
Latitude: 37.94584 N (in decimal degrees)
Longitude: 100.45521 W (in decimal degrees)
Elevation:
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: Midwest Feeders Inc
RR#, Street Address, Box #: 05013 13 RD
City, State, ZIP Code : Ingalls, Ks 67853

3 LOCATE WELL WITH AN "X" IN SECTION BOX:



4 DEPTH OF COMPLETED WELL 240 ft.
Depth(s) Groundwater Encountered (1) ft. (2) ft. (3) ft.
WELL'S STATIC WATER LEVEL 150 ft. below land surface measured on mo/day/yr 12-27-11
Pump test data: Well water was 202 ft. after 2 hours pumping 135 gpm
EST. YIELD gpm. Well water was ft. after hours pumping gpm
Bore Hole Diameter 17 1/2 in. to 240 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 8 in. to 240 ft., Diameter in. to ft., Diameter in. to ft.
Casing height above land surface 12 in., Weight 6.99 lbs./ft., Wall thickness or gauge No. 410
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 160 ft. to 220 ft., From ft. to ft.
From ft. to ft., From ft. to ft.
GRAVEL PACK INTERVALS: From 25 ft. to 240 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 North Distance from well 230'

FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	2	SURFACE	188	197	SAND FINE
2	40	BROWN CLAY CALICHE	197	205	BROWN CLAY
40	56	WHITE GREY CLAY , CALICHE	205	220	SAND FINE TO SMALL FEW CLAY
56	79	SAND, FINE MED COURSE, FEW LEDG	220	256	BROWN CLAY FEW SAND
79	90	SAND FINE	256	261	YELLOW CLAY
90	110	BROWN CLAY FINE SAND	261	280	SHALE
110	140	SAND FINE TO MED			
140	155	BROWN CLAY FEW LIMEROCK			
155	173	SAND FINE TO MED COURSE SM GRV			
173	188	BROWN CLAY FEW LIMEROCK			

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Garden City Field Office
DIVISION OF WATER RESOURCES

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) and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 145 This Water Well Record was completed on (mo/day/year) 11/5/12 under the business name of HYDRO RESOURCES by (signature)

INSTRUCTIONS: Use typewriter or ball point pen. *PLEASE PRESS FIRMLY* and *PRINT* clearly. Please fill in blanks and check the correct answers. Send three copies (white, blue, pink) to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. 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.

KSA 82a-1212 Check: ☐ White Copy ☐ Blue Copy ☐ Pink Copy

10,639-STK & 32,786

(3) (2)

WATER WELL RECORD Form WWC-5 KSA 82a-1212

LOCATION OF WATER WELL:	Fraction	Section Number	Township Number	Range Number
COUNTY: 035 GRAY	SW 1/4 SW 1/4 SE 1/4	24	T 24 S	R 29 W

Distance and direction from nearest town or city street address of well if located within city?
APPROX. 7 3/4 MILES NORTH & 1/2 MILE WEST OF INGALLS

2 WATER WELL OWNER: MIDWEST FEEDERS
RR#, St. Address, Box # : 05013 13 RD
Board of Agriculture, Division of Water Resources

City, State, ZIP code : INGALLS, KS 67853-9023
Application Number: 10,639 & 32,786

3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX:

4 DEPTH OF COMPLETED WELL 277 ELEVATION: 0
Depth(s) Groundwater Encountered 1. 0 ft. 2. 0 ft. 3. 0 ft.

WELL'S STATIC WATER LEVEL 120 ft. below land surface measured on mo/day/yr
Pump testdata: Well water was 0 ft. after 0 hours pumping 0 gpm

Estimated Yield 250 gpm: Well water was 0 ft. after 0 hours pumping 0 gpm

Bore Hole Diameter 17.5 in. to 277 ft., and in. to 0 ft.

WELL WATER TO BE USED AS: 03 FEEDLOT

Was a chemical/bacteriological sample submitted to department? No ;
If yes, mo/day/yr sample was submitted Water well disinfected? Yes

TYPE OF BLANK CASING USED: 02 PVC CASING JOINTS: GLUED
Blank casing diameter 8 5/8 in. to 277 ft., Dia in. to 0 ft., Dia in. to 0 ft.
Casing height above land surface 12 in., weight 7 lbs/ft. Wall thickness or gauge No. .410
TYPE OF SCREEN OR PERFORATION MATERIAL: 07 PVC
SCREEN OR PERFORATION OPENINGS ARE: 03 MILL SLOT

SCREEN PERFORATED INTERVALS:	From 127 ft. to 147 ft.,	From 207 ft. to 227 ft.		
	From 167 ft. to 187 ft.,	From 247 ft. to 267 ft.		
GRAVEL PACK INTERVALS:	From 25 ft. to 277 ft.,	From 0 ft. to 0 ft.		
	From 0 ft. to 0 ft.,	From 0 ft. to 0 ft.		

6 GROUT MATERIAL 03 BENTONITE
Grout Intervals: From 5 ft. to 25 ft., From 0 ft. to 0 ft., From 0 ft. to 0 ft.
What is the nearest source of possible contamination: 14 ABAND. WELL
Direction from well? SOUTH
How many feet? 290

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	2	02 SILT			
2	28	01 CLAY			
28	50	36 GYP ROCK 01 CLAY			
50	59	05 SAND 13 FINE GRAVEL			
59	75	05 SAND 11 GRAVEL			
75	79	01 CLAY			
79	88	07 FINE SAND 08 MEDIUM SAND 09 COARSE SAND			
88	103	01 CLAY 04 SANDY CLAY 05 SAND			
103	112	07 FINE SAND 08 MEDIUM SAND 04 SANDY CLAY			
112	147	05 SAND 11 GRAVEL			

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(3) & (3) conti.

(Continued) WATER WELL RECORD Form WWC-5 KSA 82a-1212

1 LOCATION OF WATER WELL:	Fraction	Section Number	Township Number	Range Number
COUNTY: 035 GRAY	SW 1/4 SW 1/4 SE 1/4	24	T 24 S	R 29 W

2 WATER WELL OWNER: MIDWEST FEEDERS
RR#, St. Address, Box # : 05013 13 RD
Board of Agriculture, Division of Water Resources

City, State, ZIP code : INGALLS, KS 67853-9023
Application Number: 10,639 & 32,786

FROM	TO	LITHOLOGIC LOG
147	160	01 CLAY 20 LIMESTONE
160	167	05 SAND 28 ROCK
167	178	05 SAND 13 FINE GRAVEL 28 ROCK
178	190	04 SANDY CLAY 07 FINE SAND
190	200	01 CLAY
200	226	05 SAND 28 ROCK 01 CLAY
226	251	01 CLAY 04 SANDY CLAY 20 LIMESTONE
251	258	07 FINE SAND 08 MEDIUM SAND 04 SANDY CLAY
258	267	07 FINE SAND 08 MEDIUM SAND 28 ROCK
267	270	01 CLAY
270	275	19 SHALE

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10,639-STK
¼ 32,787

USE TYPEWRITER OR BALL POINT PEN-PRESS FIRMLY, PRINT CLEARLY.

WATER WELL RECORD
KSA 82a-1201-1215

Kansas Department of Health and Environment-Division of Environment
(Water well Contractors)
Topeka, Kansas 66620

1. Location of well:	County	Fraction	Section number	Township number	Range number
	Gray	W½ 1/4 SE 1/4 NE 1/4	25	T 24 S	R 29 E (W)

2. Distance and direction from nearest town or city: Approximately 7¼ miles North of Ingalls, Kansas.
Street address of well location if in city:

3. Owner of well: Loewen Feeders
R.R. or street: C/O Rudy Loewen
City, state, zip code: Ingalls, Kansas 67853

4. Locate with "X" in section below:

Sketch map:

6. Bore hole dia. 17½ in. Completion date
Well depth 275 ft. 4/9/79

7. __ Cable tool __ Rotary __ Driven __ Dug
__ Hollow rod __ Jetted __ Bored X Reverse rotary

8. Use: __ Domestic __ Public supply __ Industry
__ Irrigation __ Air conditioning X Stock
__ Lawn __ Oil field water __ Other

9. Casing: Material Steel Height (Above) or below
Threaded ___ Welded X Surface 12 in.
RMP ___ PVC ___ Weight 16.94 lbs./ft.
Dia. 8 5/8 in. to 275 ft. depth Wall Thickness: inches or
Dia. ___ in. to ___ ft. depth gage No. .188

5. Type and color of material	From	To
See Attachment		
(Use a second sheet if needed)		

10. Screen: Manufacturer's name Doerr Screen
Type Louvered Dia. 8 5/8"
(Slot) Gauze No. 060 Length 56'
Set between 165 ft. and 185 ft.
199 ft. and 235 ft.
Gravel pack? Yes Size range of material #1 Fine

11. Static water level: mo./day/yr.
120 ft. below land surface Date 4/9/79

12. Pumping level below land surfaces: Not Pumped
___ ft. after ___ hrs. pumping ___ g.p.m.
___ ft. after ___ hrs. pumping ___ g.p.m.
Estimated maximum yield ___ g.p.m.

13. Water sample submitted: mo./day/yr.
___ Yes X No Date

14. Well head completion:
___ Pitless adapter 12 Inches above grade

15. Well grouted? Yes
With: X Neat cement ___ Bentonite ___ Concrete
Depth: From 0 ft. to 10 ft.

16. Nearest source of possible contamination:
ft. 75 Direction West Type Feed Lot
Well disinfected upon completion? ___ Yes X No

17. Pump: X Not installed
Manufacturer's name
Model number HP Volts
Length of drop pipe ft. capacity g.p.m.
Type:
___ Submersible ___ Turbine
___ Jet ___ Reciprocating
___ Centrifugal ___ Other

T ___ R ___ W
Sec ___
¼ ¼ ¼

18. Elevation:

Topography:
___ Hill
X Slope
___ Upland
___ Valley

19. Remarks:

RECEIVED
AUG 08 2018
Garden City Field Office
DIVISION OF WATER RESOURCES

20. Water well contractor's certification:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Henkle Drilling&Sply 145
Business name License No.
Address Box 639, GardenCity, Ks
Signed Bruce J Reichenbach Date 4/19/79
Authorized representative

Forward the white, blue and pink copies to the Department of Health and Environment

Form WWC-5

MI-1023

(7) & (7) cont'.

DRILLERS TEST LOG

CUSTOMERS NAME Loewen Feeders DATE 3/8/79
STREET ADDRESS _____ TEST # 1 E. LOG Yes
CITY & STATE Ingalls, Kansas DRILLER Rector
COUNTY Gray QUARTER NE SECTION 25 TOWNSHIP 24 RANGE 29

LOCATION At the SE corner of the Feed Lot.

Feed Lot Well Location
Static Water Level _____
Proposed Well Depth _____

%	FOOTAGE From	Pay	To	DESCRIPTION OF STRATA
	0		3	Top Soil
	3		20	Brown clay
	20		57	Brown clay, caliche and cemented sand.
	57		70	Sand fine to med coarse and small gravel.
	70		80	Brown clay, caliche and cemented sand.
	80		95	Brown clay and sand. Fairly loose.
	95		107	Sand fine to med coarse and small gravel.
	107		120	Brown clay and sand med coarse. Used water.
55	120	37	157	Sand fine to med coarse and small gravel. Loose - used water.
	157		165	Brown clay with small sand sts.
60	165	19	184	Sand fine to med coarse, small gravel with small white rock. Loose - used water.
	184		200	Brown clay - sticky.
65	200	44	244	Sand fine to med coarse with a few small to med gravel, some tiny white rock with very fine clay sts. Loose - used water.
20	244	16	260	Brown clay, sand with sts of broken white rock.
70	260	12	272	Sand fine to med coarse with a few small to med gravel, also small white rock. Loose - used water.
	272		277	Brown clay
	277		280	Shale

TOTAL DEPTH OF WELL 275'
Set up facing North
Dig pit on the East

29,614 (5)
Redrilled in 2003

USE TYPEWRITER OR BALL POINT PEN-PRESS FIRMLY, PRINT CLEARLY.

WATER WELL RECORD
KSA 82a-1201-1215

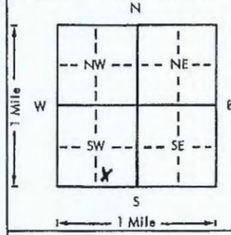
Kansas Department of Health and Environment-Division of Environment
(Water well Contractors)
Topeka, Kansas 66620

1. Location of well:	County	Fraction	Section number	Township number	Range number
	Gray	SW 1/4 SE1/4 SW 1/4	25	T 24 S	R 29 E (W)

2. Distance and direction from nearest town or city: 7 N & 3/4 W of Ingalls
Street address of well location if in city:

3. Owner of well: Loewen Farms
R.R. or street: c/o Rudy Loewen
City, state, zip code: Ingalls, KS 67853

4. Locate with "X" in section below: Sketch map:



6. Bore hole dia. 26 in. Completion date
Well depth 273 ft. 3-10-77

7. __ Cable tool __ Rotary __ Driven __ Dug
__ Hollow rod __ Jetted __ Bored X Reverse rotary

8. Use: __ Domestic __ Public supply __ Industry
X Irrigation __ Air conditioning __ Stock
__ Lawn __ Oil field water __ Other

9. Casing: Material Steel Height: (Above) or below
Threaded ___ Welded X Surface 12 in.
RMP ___ PVC ___ Weight 31 lbs./ft.
Dia. 16 in. to 273 ft. depth Wall Thickness: inches or
Dia. ___ in. to ___ ft. depth gage No. .188

10. Screen: Manufacturer's name Brown
Type Louvered Dia. 16"
Slot/gauze .125 Length 66
Set between 251-271 ft. and 215-241 ft.
185-205 ft. and ___ ft.
Gravel pack? Yes Size range of material 1/4 x 1/8

11. Static water level: mo./day/yr.
144 ft. below land surface Date 3-11-77

12. Pumping level below land surfaces:
245 ft. after ___ hrs. pumping 677 g.p.m.
___ ft. after ___ hrs. pumping ___ g.p.m.
Estimated maximum yield ___ g.p.m.

13. Water sample submitted: mo./day/yr.
__ Yes X No Date

14. Well head completion:
__ Pitless adapter 12 Inches above grade

15. Well grouted? Yes
With: __ Neat cement X Bentonite __ Concrete
Depth: From 0 ft. to 10 ft.

16. Nearest source of possible contamination: None observed
ft. ___ Direction ___ Type
Well disinfected upon completion? ___ Yes X No

17. Pump: X Not installed
Manufacturer's name
Model number ___ HP ___ Volts
Length of drop pipe ___ ft. capacity ___ g.p.m.
Type:
__ Submersible __ Turbine
__ Jet __ Reciprocating
__ Centrifugal __ Other

5. Type and color of material	From	To
See attachment		

(Use a second sheet if needed)

18. Elevation: Flat
Topography:
___ Hill
___ Slope
___ Upland
___ Valley

19. Remarks:

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Garden City Field Office
DIVISION OF WATER RESOURCES

20. Water well contractor's certification:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Henkle Drlg. & Supply 145
Business name License No.
Address Box 639 Garden City, Ks
Signed [signature] Date 3-17-77
Authorized representative

Forward the white, blue and pink copies to the Department of Health and Environment

Farm WWC-5

MI-1023

T 24 R 29 Sec 25 SW 1/4 SE 1/4 SW 1/4

29614 (3) conti.

DRILLER'S TEST HOLE

CUSTOMERS NAME Loewen Farms #2 DATE 2-7-77
STREET ADDRESS _____ TEST # 8 E. LOG 280'
CITY & STATE Ingalls, KS DRILLER Rector
COUNTY Gray QUARTER SW SECTION 25 TOWNSHIP 24 RANGE 29

LOCATION 25' SE of well or Test #1

WELL LOCATION

Static Water Level _____
Proposed Well Depth _____

%	FOOTAGE From	Pay	To	DESCRIPTION OF STRATA
	0		3	Top soil
	3		40	Brown clay
	40		63	Caliche and lime rock, hard, used pull down
	63		100	Sand and gravel, cemented in places, very small
				clay sts., used lots of water
	100		117	Brown clay and caliche
35	117	25	150	Sand fine med. coarse, small gravel
	150		160	Brown clay and sand
50	160	20	180	Sand fine med. coarse, med. small and very few tiny
				white rock and small clay sts., used lots of water
65	180	10	190	Sand fine med. coarse, small gravel and small white
				rock, loose, used lots of water
	190		197	Brown clay
55	197	43	240	Sand fine med. coarse, med. small gravel, med. small
				white rock and very fine clay sts., used water
70	240	11	251	Sand fine med. coarse, small brown gravel and small
				white rock, loose, used lots of water (good)
	251		265	Brown clay and small sand sts.
45	265	6	271	Sand fine med. coarse, small white and tan rock,
				used lots of water
	271		279	Yellow clay and soapstone
	279		280	Shale
		115		
				TOTAL DEPTH OF WELL 273 FT.
				Set up north
				Pit on east

KGS Hydrology | Water Well Database Query

Scan of WWC5 Form

29,614 (9)
RE-DRILL of Well - (5)

WATER WELL RECORD Form WWC-5 KSA 82a-1212

1 LOCATION OF WATER WELL: COUNTY: 035 GRAY | Fraction: SE 1/4 SW 1/4 SW 1/4 | Section Number: 25 | Township Number: T 24 S | Range Number: R 29 W

Distance and direction from nearest town or city street address of well if located within city?
FROM CHARLESTON; APPX 4 MILES NORTH & 5 MILES EAST

2 WATER WELL OWNER: STEVE KLIEWER
RR#, St. Address, Box # : PO BOX 103
City, State, ZIP code : CIMARRON, KS 67835-0103
Board of Agriculture, Division of Water Resources
Application Number: 29614

3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX:

4 DEPTH OF COMPLETED WELL 312 ELEVATION: 0
Depth(s) Groundwater Encountered 1. 0 ft. 2. 0 ft. 3. 0 ft.
WELL'S STATIC WATER LEVEL 156 ft. below land surface measured on mo/day/yr 12/27/03
Pump test data: Well water was 191 ft. after 4 hours pumping 300 gpm
Estimated Yield 0 gpm: Well water was 0 ft. after 0 hours pumping 0 gpm
Bore Hole Diameter 20 in. to 312 ft., and in. to 0 ft.
WELL WATER TO BE USED AS: 02 IRRIGATION
Was a chemical/bacteriological sample submitted to department? No ;
If yes, mo/day/yr sample was submitted Water well disinfected? Yes

5 TYPE OF BLANK CASING USED: 01 STEEL CASING JOINTS: WELDED
Blank casing diameter 12.75 in. to 312 ft., Dia in. to 0 ft., Dia in. to 0 ft.
Casing height above land surface 12 in., weight 33 lbs/ft. Wall thickness or gauge No. .250
TYPE OF SCREEN OR PERFORATION MATERIAL: 01 STEEL
SCREEN OR PERFORATION OPENINGS ARE: 01 CONT. SLOT

SCREEN PERFORATED INTERVALS:	From 178 ft. to 218 ft.,	From 269 ft. to 289 ft.			
	From 233 ft. to 253 ft.,	From 0 ft. to 0 ft.			
GRAVEL PACK INTERVALS:	From 20 ft. to 312 ft.,	From 0 ft. to 0 ft.			
	From 0 ft. to 0 ft.,	From 0 ft. to 0 ft.			

6 GROUT MATERIAL 03 BENTONITE
Grout Intervals: From 0 ft. to 20 ft., From 0 ft. to 0 ft., From 0 ft. to 0 ft.
What is the nearest source of possible contamination: 14 ABAND. WELL
Direction from well? SOUTHEAST How many feet? 95

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	1	02 SILT			
1	21	04 SANDY CLAY			
21	37	01 CLAY			
37	70	01 CLAY			
70	80	05 SAND 11 GRAVEL 01 CLAY			
80	93	04 SANDY CLAY 05 SAND			
93	104	05 SAND 11 GRAVEL			
104	132	04 SANDY CLAY 05 SAND			
132	150	05 SAND 11 GRAVEL			
150	163	04 SANDY CLAY 05 SAND			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was Constructed under my jurisdiction and was completed on (mo/day/year) 12/23/03 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 145 This Water Well Record was completed on (mo/day/yr) 01/27/04 under the business name of ERNIE DRILLING & SUPPLY by (signature)

⑦ & ⑤ conti

(Continued) WATER WELL RECORD Form WWC-5 KSA 82a-1212

1 LOCATION OF WATER WELL: COUNTY: 035 GRAY	Fraction SE 1/4 SW 1/4 SW 1/4	Section Number 25	Township Number T 24 S	Range Number R 29 W

2 WATER WELL OWNER: STEVE KLIEWER
RR#, St. Address, Box # : PO BOX 103 Board of Agriculture, Division of Water Resources
City, State, ZIP code : CIMARRON, KS 67835-0103 Application Number: 29614

FROM	TO	LITHOLOGIC LOG
163	173	05 SAND 13 FINE GRAVEL 01 CLAY
173	193	05 SAND 13 FINE GRAVEL 28 ROCK
193	203	04 SANDY CLAY
203	218	05 SAND 13 FINE GRAVEL 28 ROCK
218	225	04 SANDY CLAY
225	243	05 SAND 01 CLAY
243	253	05 SAND 11 GRAVEL 28 ROCK
253	269	04 SANDY CLAY 05 SAND
269	274	05 SAND 01 CLAY 28 ROCK
274	282	36 GYP ROCK 28 ROCK 01 CLAY
282	300	19 SHALE

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was Constructed under my jurisdiction and was completed on (mo/day/year) 12/23/03 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 145 This Water Well Record was completed on (mo/day/yr) 01/27/04 under the business name of HEALS DRILLING & SUPPLY by (signature) Brian J. Heals

Kansas Geological Survey
Comments to webadmin@kgs.ku.edu
URL=http://www.kgs.ku.edu/Magellan/WaterWell/index.html
Display Programs Updated July 29, 2004
Data added continuously.

SE OF 4,887' & 10,639'
(D) Elev 2760

WATER WELL RECORD Form WWC-5 KSA 82a-1212

1 LOCATION OF WATER WELL: | Fraction: SE 1/4 SE 1/4 SE 1/4 | Section Number: 24 | Township Number: T 24 S | Range Number: R 29 W
COUNTY: 035 GRAY

Distance and direction from nearest town or city street address of well if located within city?
APPROX. 8 MILES NORTH OF INGALLS

2 WATER WELL OWNER: MIDWEST FEEDERS
RR#, St. Address, Box # : R.R. 1, BOX 29
City, State, ZIP code : INGALLS, KS 67853-

Board of Agriculture, Division of Water Resources
Application Number:

3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX:

4 DEPTH OF COMPLETED WELL 252 ELEVATION: 0
Depth(s) Groundwater Encountered 1. 0 ft. 2. 0 ft. 3. 0 ft.

WELL'S STATIC WATER LEVEL 120 ft. below land surface measured on mo/day/yr 05/21/93
Pump testdata: Well water was 0 ft. after 0 hours pumping 0 gpm

Estimated Yield 0 gpm: Well water was 0 ft. after 0 hours pumping 0 gpm

Bore Hole Diameter 11 in. to 252 ft., and in. to 0 ft.

WELL WATER TO BE USED AS: 01 DOMESTIC

Was a chemical/bacteriological sample submitted to department? No ;
If yes, mo/day/yr sample was submitted Water well disinfected? Yes

5 TYPE OF BLANK CASING USED: 02 PVC CASING JOINTS: GLUED
Blank casing diameter 6 in. to 252 ft., Dia in. to 0 ft., Dia in. to 0 ft.
Casing height above land surface 12 in., weight 4 lbs/ft. Wall thickness or gauge No. .316
TYPE OF SCREEN OR PERFORATION MATERIAL: 07 PVC
SCREEN OR PERFORATION OPENINGS ARE: 03 MILL SLOT

SCREEN PERFORATED INTERVALS: From 202 ft. to 222 ft., From 0 ft. to 0 ft.
From 232 ft. to 252 ft., From 0 ft. to 0 ft.
GRAVEL PACK INTERVALS: From 25 ft. to 252 ft., From 0 ft. to 0 ft.
From 0 ft. to 0 ft., From 0 ft. to 0 ft.

6 GROUT MATERIAL 03 BENTONITE
Grout Intervals: From 5 ft. to 25 ft., From 0 ft. to 0 ft., From 0 ft. to 0 ft.
What is the nearest source of possible contamination: 14 ABAND. WELL
Direction from well? SOUTHWEST How many feet? 25

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	3	02 SILT			
3	54	04 SANDY CLAY 31 CALICHE			
54	69	07 FINE SAND 09 COARSE SAND 04 SANDY CLAY			
69	109	04 SANDY CLAY 07 FINE SAND			
109	117	07 FINE SAND 08 MEDIUM SAND 09 COARSE SAND			
117	122	04 SANDY CLAY 20 LIMESTONE			
122	135	07 FINE SAND 08 MEDIUM SAND 09 COARSE SAND			
135	147	04 SANDY CLAY			
147	167	07 FINE SAND 09 COARSE SAND 13 FINE GRAVEL			
167	185	04 SANDY CLAY			

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Garden City Field Office
DIVISION OF WATER RESOURCES

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was Constructed under my jurisdiction and was completed on (mo/day/year) and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 145 This Water Well Record was completed on (mo/day/yr) 05/29/93 under the business name of HENKLE DRILLING & SUPPLY by (signature)

(D) cont'

(Continued) WATER WELL RECORD Form WWC-5 KSA 82a-1212

1 LOCATION OF WATER WELL:	Fraction	Section Number	Township Number	Range Number
COUNTY: 035 GRAY	SE 1/4 SE 1/4 SE 1/4	24	T 24 S	R 29 W

2 WATER WELL OWNER: MIDWEST FEEDERS
RR#, St. Address, Box # : R.R. 1, BOX 29
City, State, ZIP code : INGALLS, KS 67853-

Board of Agriculture, Division of Water Resources
Application Number:

FROM	TO	LITHOLOGIC LOG
185	193	07 FINE SAND 08 MEDIUM SAND
193	201	04 SANDY CLAY
201	212	07 FINE SAND 09 COARSE SAND 29 ROCK & SAND
212	236	04 SANDY CLAY
236	250	07 FINE SAND 09 COARSE SAND 29 ROCK & SAND
250	253	31 CALICHE
253	260	19 SHALE

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Garden City Field Office
DIVISION OF WATER RESOURCES

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was Constructed under my jurisdiction and was completed on (mo/day/year) and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 145 This Water Well Record was completed on (mo/day/yr) 05/29/93 under the business name of HENKLE DRILLING & SUPPLY by (signature) Bruce J Reichenstein

(3) (3) (SOUTH)

WATER WELL RECORD Form WWC-5 KSA 82a-1212

1 LOCATION OF WATER WELL: | Fraction: SE 1/4 SW 1/4 SE 1/4 | Section Number: 19 | Township Number: T 24 S | Range Number: R 28 W

COUNTY: 035 GRAY

Distance and direction from nearest town or city street address of well if located within city?
APPROX. 8 MILES NORTH & 3/4 EAST OF INGALLS

2 WATER WELL OWNER: MIDWEST FEEDERS
RR#, St. Address, Box # : 05013 "13" ROAD

Board of Agriculture, Division of Water Resources

City, State, ZIP code : INGALLS, KS 67853-

Application Number: 10,999

3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX:

4 DEPTH OF COMPLETED WELL 248 ELEVATION: 0
Depth(s) Groundwater Encountered 1. 0 ft. 2. 0 ft. 3. 0 ft.

WELL'S STATIC WATER LEVEL 138 ft. below land surface measured on mo/day/yr 07/08/97
Pump testdata: Well water was 240 ft. after 4 hours pumping 160 gpm

Estimated Yield 160 gpm: Well water was 0 ft. after 0 hours pumping 0 gpm

Bore Hole Diameter 24 in. to 248 ft., and in. to 0 ft.

WELL WATER TO BE USED AS: 03 FEEDLOT

Was a chemical/bacteriological sample submitted to department? No ;
If yes, mo/day/yr sample was submitted Water well disinfected? Yes

5 TYPE OF BLANK CASING USED: 01 STEEL CASING JOINTS: WELDED
Blank casing diameter 16 in. to 248 ft., Dia in. to 0 ft., Dia in. to 0 ft.
Casing height above land surface 12 in., weight 39 lbs/ft. Wall thickness or gauge No. .225
TYPE OF SCREEN OR PERFORATION MATERIAL: 01 STEEL
SCREEN OR PERFORATION OPENINGS ARE: 01 CONT. SLOT

SCREEN PERFORATED INTERVALS:	From 178 ft. to 238 ft.,	From 0 ft. to 0 ft.			
	From 0 ft. to 0 ft.,	From 0 ft. to 0 ft.			
GRAVEL PACK INTERVALS:	From 20 ft. to 248 ft.,	From 0 ft. to 0 ft.			
	From 0 ft. to 0 ft.,	From 0 ft. to 0 ft.			

6 GROUT MATERIAL 03 BENTONITE
Grout Intervals: From 0 ft. to 20 ft., From 0 ft. to 0 ft., From 0 ft. to 0 ft.
What is the nearest source of possible contamination: 14 ABAND. WELL
Direction from well? NORTHEAST How many feet? 240

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	2	02 SILT			
2	22	04 SANDY CLAY 31 CALICHE			
22	45	01 CLAY 36 GYP ROCK			
45	60	07 FINE SAND 08 MEDIUM SAND 09 COARSE SAND			
60	69	04 SANDY CLAY 05 SAND			
69	81	05 SAND 01 CLAY			
81	100	04 SANDY CLAY 05 SAND			
100	121	05 SAND 01 CLAY			
121	140	04 SANDY CLAY 05 SAND 20 LIMESTONE			
140	153	07 FINE SAND 08 MEDIUM SAND			

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Garden City Field Office
DIVISION OF WATER RESOURCES

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was Constructed under my jurisdiction and was completed on (mo/day/year) 07/03/97 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 145 This Water Well Record was completed on (mo/day/yr) 07/17/97 under the business name of HENKLE DRILLING & SUPPLY by (signature)

(3) conti

(Continued) WATER WELL RECORD Form WWC-5 KSA 82a-1212

1 LOCATION OF WATER WELL:	Fraction	Section Number	Township Number	Range Number
COUNTY: 035 GRAY	SE 1/4 SW 1/4 SE 1/4	19	T 24 S	R 28 W

2 WATER WELL OWNER: MIDWEST FEEDERS
RR#, St. Address, Box # : 05013 "13" ROAD
City, State, ZIP code : INGALLS, KS 67853-

Board of Agriculture, Division of Water Resources

Application Number: 10,999

FROM	TO	LITHOLOGIC LOG
153	176	04 SANDY CLAY 20 LIMESTONE 05 SAND
176	197	05 SAND 01 CLAY
197	220	04 SANDY CLAY 05 SAND
220	238	05 SAND 01 CLAY 28 ROCK
238	245	04 SANDY CLAY 05 SAND
245	260	19 SHALE 20 LIMESTONE

RECEIVED
AUG 08 2018
Garden City Field Office
DIVISION OF WATER RESOURCES

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was Constructed under my jurisdiction and was completed on (mo/day/year) 07/03/97 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 145 This Water Well Record was completed on (mo/day/yr) 07/17/97 under the business name of HENKLE DRILLING & SUPPLY by (signature) Barry J Richnott

(NORTH)

WATER WELL RECORD Form WWC-5 KSA 82a-1212

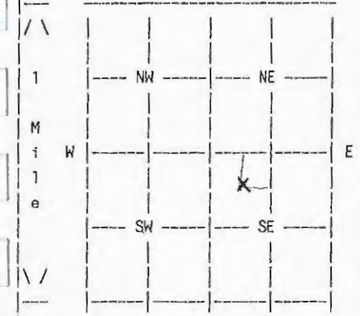
LOCATION OF WATER WELL:	Fraction	Section Number	Township Number	Range Number
COUNTY: 035 GRAY	NE 1/4 NW 1/4 SE 1/4	19	T 24 S	R 28 W

Distance and direction from nearest town or city street address of well if located within city?
APPROX. 7 3/4 MILES NORTH, 2/3 EAST & 1/3 NORTH OF INGALLS

2 WATER WELL OWNER: MIDWEST FEEDERS INC.
RR#, St. Address, Box # : 05013 13 RD
Board of Agriculture, Division of Water Resources

City, State, ZIP code : INGALLS, KS 67853-9023
Application Number: 10,999

3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX:



4 DEPTH OF COMPLETED WELL 245 ELEVATION: 0
Depth(s) Groundwater Encountered 1. 0 ft. 2. 0 ft. 3. 0 ft.

WELL'S STATIC WATER LEVEL 115 ft. below land surface measured on mo/day/yr
Pump testdata: Well water was 0 ft. after 0 hours pumping 0 gpm

Estimated Yield 250 gpm: Well water was 0 ft. after 0 hours pumping 0 gpm

Bore Hole Diameter 17.5 in. to 245 ft., and in. to 0 ft.

WELL WATER TO BE USED AS: 03 FEEDLOT

Was a chemical/bacteriological sample submitted to department? No ;
If yes, mo/day/yr sample was submitted Water well disinfected? Yes

TYPE OF BLANK CASING USED: 02 PVC CASING JOINTS: GLUED
Blank casing diameter 8 5/8 in. to 245 ft., Dia in. to 0 ft., Dia in. to 0 ft.
Casing height above land surface 12 in., weight 7 lbs/ft. Wall thickness or gauge No. .410
TYPE OF SCREEN OR PERFORATION MATERIAL: 07 PVC
SCREEN OR PERFORATION OPENINGS ARE: 03 MILL SLOT

SCREEN PERFORATED INTERVALS:	From 145 ft. to 285 ft.,	From 0 ft. to 0 ft.		
	From 205 ft. to 245 ft.,	From 0 ft. to 0 ft.		
GRAVEL PACK INTERVALS:	From 25 ft. to 245 ft.,	From 0 ft. to 0 ft.		
	From 0 ft. to 0 ft.,	From 0 ft. to 0 ft.		

6 GROUT MATERIAL 03 BENTONITE
Grout Intervals: From 5 ft. to 25 ft., From 0 ft. to 0 ft., From 0 ft. to 0 ft.
What is the nearest source of possible contamination: 14 ABAND. WELL
Direction from well? SOUTH
How many feet? 570

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	2	02 SILT			
2	16	01 CLAY			
16	38	01 CLAY 31 CALICHE			
38	50	01 CLAY			
50	70	05 SAND 11 GRAVEL			
70	88	04 SANDY CLAY			
88	93	07 FINE SAND 08 MEDIUM SAND 09 COARSE SAND			
93	102	04 SANDY CLAY			
102	124	05 SAND 11 GRAVEL			
124	149	04 SANDY CLAY 20 LIMESTONE			

RECEIVED
AUG 08 2018
Garden City Field Office
DIVISION OF WATER RESOURCES

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was Constructed under my jurisdiction and was completed on (mo/day/year) 07/29/98 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 145 This Water Well Record was completed on (mo/day/yr) 08/14/98 under the business name of HENKLE DRILLING & SUPPLY by (signature)