GMD3 Change Review

File No(s).: 14285. DWR office: GC.

App filed to change: PD.

Is Landowner(s) correct in WRIS: Vaughn Nightengale.

If NO, is documentation included?

Is Water Use Correspondent correct in WRIS? __.

If NO, is documentation included?

Regulation(s) Reviewed: KAR 5-23-3

Point of diversion ID No(s) 06 being changed.

	ft. North	ft. West				
Authorized PD	1293	1346	Sect 27-25-36			
Proposed PD	2182	506				
Difference	-889 n	840 e				
a2 + b2 = c2	790321	705600	1223.078 foot move NE			

GPS for proposed PD: Lat: 37.848800 Long: -101.251331.

Is proposed PD stacking on existing WRs? No.

Is Proposed PU overlapping existing WRs? No change.

Land Owner(s) notified: __.

Name __. Name __.

Address __. Address __.

Zip __. Zip __.

Neighboring certified well(s) notified: __.

Name __. Name __.

Address __. Address __.

Zip __. Zip __.

Domestic well(s) notified: __.

Name __. Name __.

Address __. Address __.

Zip __. Zip __.

Base Acres: __.

Perfected Acres: __.

Irr. Return-Flow ___%

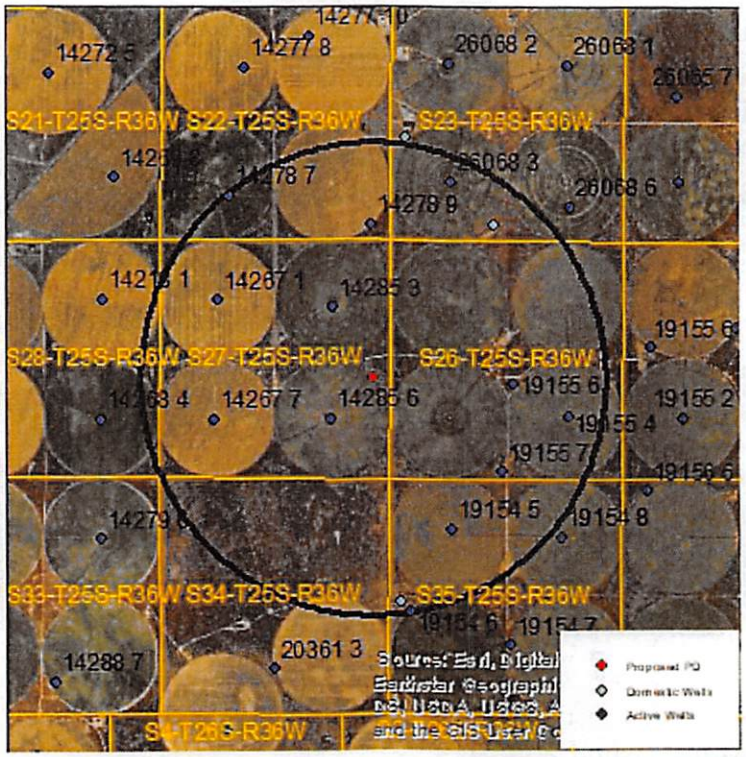
Saturated thickness I area around 290', so maximum added drawdown is 4' or less. All wells analyzed within a mile showed less than 2' effect, well within criteria.

Is a waiver needed: Distance moved is less than half mile. Minimum spacing requirements met to neighboring wells.

Recommendation: After review of all available information, it appears all current area rules are met. Well analysis show the proposed move to have <2' effect, well below the criteria of no more than 4' effect.

Well Evaluations of proposed move for Water Right No 14285 ID 6

Proposed: Move the well authorized under water right no. 14285 ID 6 1313 ft to the northeast.



Wells within 1 mile: 14285 ID 3, 14267 ID 1, 14267 ID 7, 14278 ID 9, 14278 ID 7, 26068 ID 3, 19155 ID 6, 19155 ID 4, 19155 ID 7, 19154 ID 5, a domestic well in section 35-25-36, and a domestic well in section 23-25-36.

The saturated thickness at the proposed well location is estimated to be 290 ft, based upon the driller's log at the proposed well location and water level information from a monitoring well located in section 35-25-36. For saturated thicknesses greater than 200 ft, the maximum allowable Theis drawdown to neighboring critical wells is 4.0 ft.

50 year Theis Analysis: The following values were used to run the analysis:

S = 0.07438, T = 10,909 ft^2/day, $tp_{current}$ = 96 days (based upon reported quantity and observed rate at 2014 inspection), $Q_{current}$ = 414 gpm (observed at 2014 inspection), $tp_{proposed}$ = 83 days, $Q_{proposed}$ = 795 gpm.

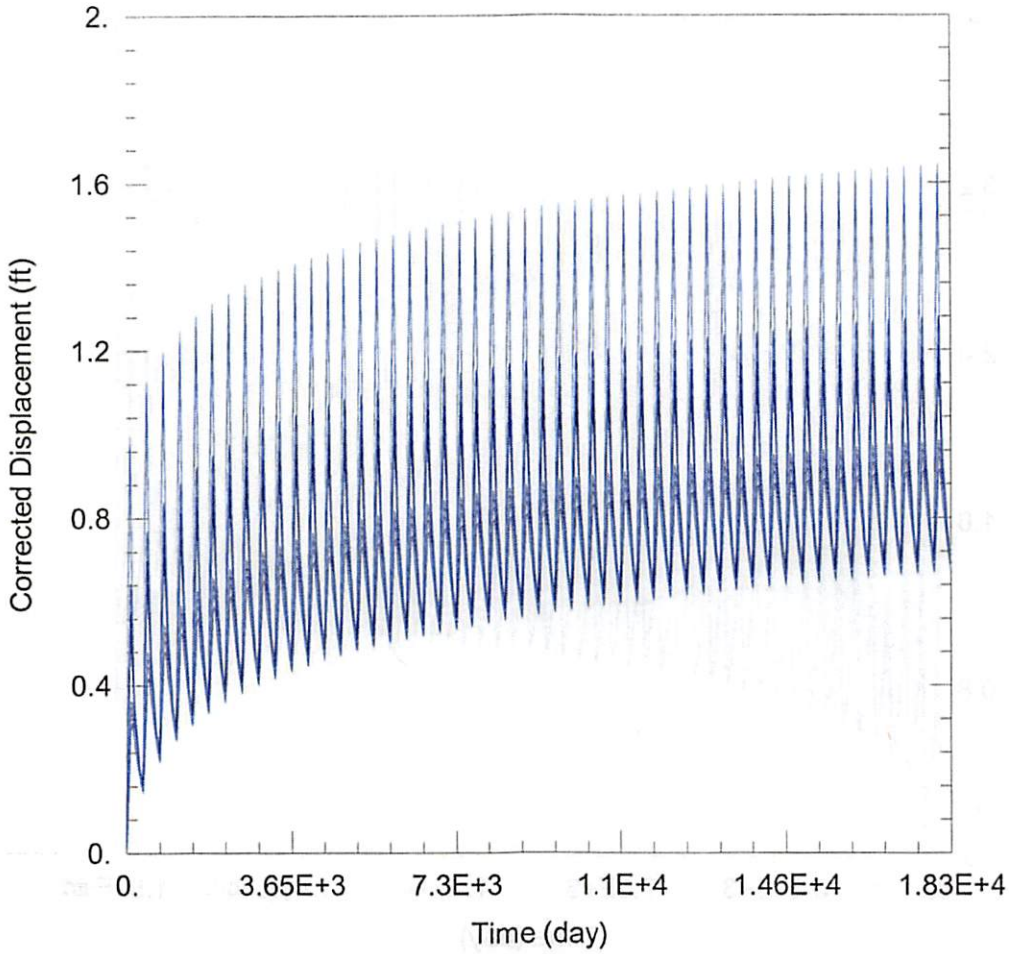
Theis drawdowns were calculated and results are as follows:

14285 ID 3:	Drawdown from current location = 1.64 ft
	Drawdown from proposed location = 3.51 ft
	Net drawdown = **1.9 ft**

14267 ID 1:	Drawdown from current location = 1.27 ft
	Drawdown from proposed location = 2.09 ft
	Net drawdown = **0.8 ft**
14267 ID 7:	Drawdown from current location = 1.58 ft
	Drawdown from proposed location = 2.09 ft
	Net drawdown = **0.6 ft**
14278 ID 9:	Drawdown from current location = 1.13 ft
	Drawdown from proposed location = 2.28 ft
	Net drawdown = **1.1 ft**
14278 ID 7:	Drawdown from current location = 0.97 ft
	Drawdown from proposed location = 1.7 ft
	Net drawdown = **0.7 ft**
26068 ID 3:	Drawdown from current location = 0.91 ft
	Drawdown from proposed location = 1.83 ft
	Net drawdown = **0.9 ft**
19155 ID 6:	Drawdown from current location = 1.18 ft
	Drawdown from proposed location = 2.42 ft
	Net drawdown = **1.2 ft**
19155 ID 4:	Drawdown from current location = 0.99 ft
	Drawdown from proposed location = 1.89 ft
	Net drawdown = **0.9 ft**
19155 ID 7:	Drawdown from current location = 1.21 ft
	Drawdown from proposed location = 2.21 ft
	Net drawdown = **1.0 ft**
19154 ID 5:	Drawdown from current location = 1.28 ft
	Drawdown from proposed location = 2.13 ft
	Net drawdown = **0.8 ft**

Domestic 35-25-36:	Drawdown from current location = 1.15 ft
	Drawdown from proposed location = 1.74 ft
	Net drawdown = **0.6 ft**
Domestic 23-25-36:	Drawdown from current location = 0.94 ft
	Drawdown from proposed location = 1.94 ft
	Net drawdown = **1.0 ft**

Net drawdown does not exceed 4.0 ft on any of the neighboring wells, so critical well evaluation is not necessary.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2019_moves\14285\14285 Current.aqt
Date: 03/04/19 Time: 16:14:11

PROJECT INFORMATION

Company: GMD 3
Project: 14285 ID6
Location: Kearney County
Test Well: 14285 ID6

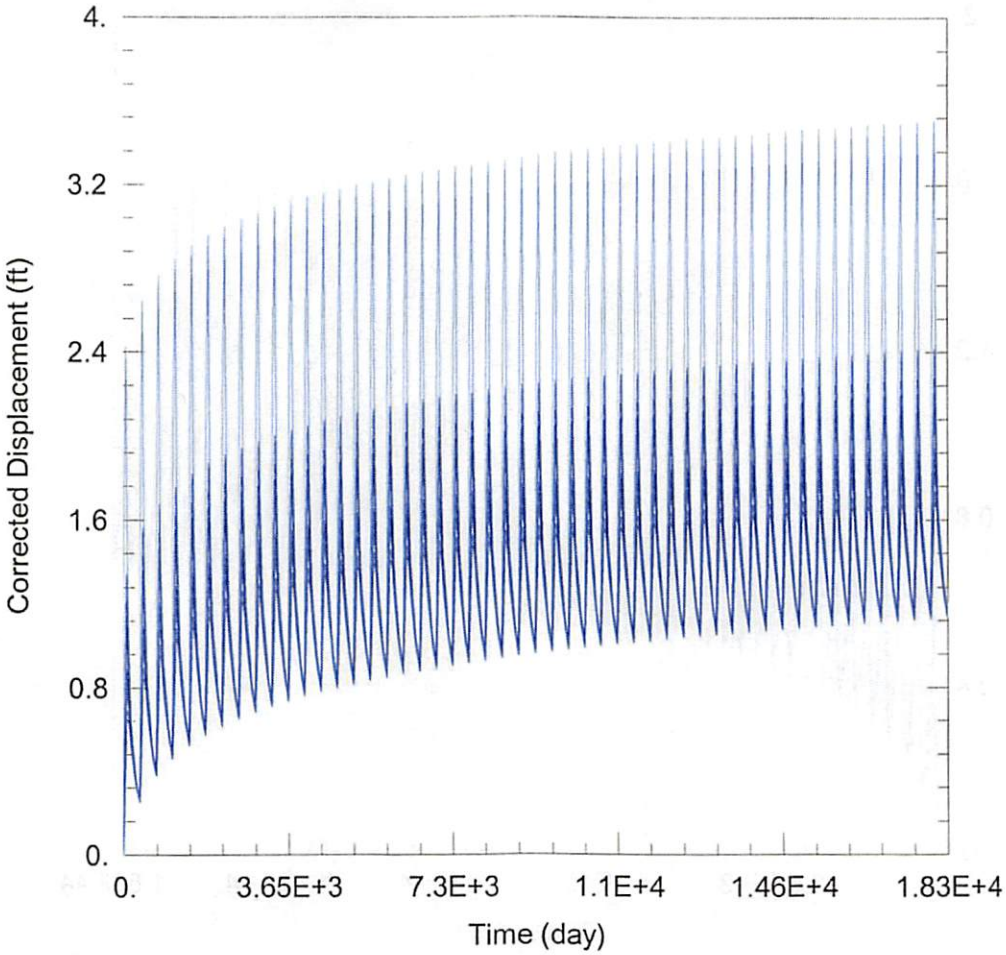
WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
14285 ID6	-131327	354008

Observation Wells

Well Name	X (ft)	Y (ft)
▫	-131327	354008
▫ 14285 ID3	-131280	356534
▫ 14267 ID1	-133903	356686
▫ 14267 ID7	-134014	354022
▫ 14278 ID9	-130424	358357
▫ 14278 ID7	-133626	359005
▫ 26068 ID3	-128613	359308
▫ 19155 ID6	-127231	354804
▫ 19155 ID4	-125961	354041
▫ 19155 ID7	-127480	352828
▫ 19154 ID5	-128601	351559
▫ Domestic 35-25-36	-129785	349949
▫ Domestic 23-25-36	-127675	358340



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2019_moves\14285\14285 Proposed.aqt
Date: 03/05/19 Time: 10:14:19

PROJECT INFORMATION

Company: GMD 3
Project: 14285 ID6
Location: Kearney County
Test Well: 14285 ID6

WELL DATA

Pumping Wells

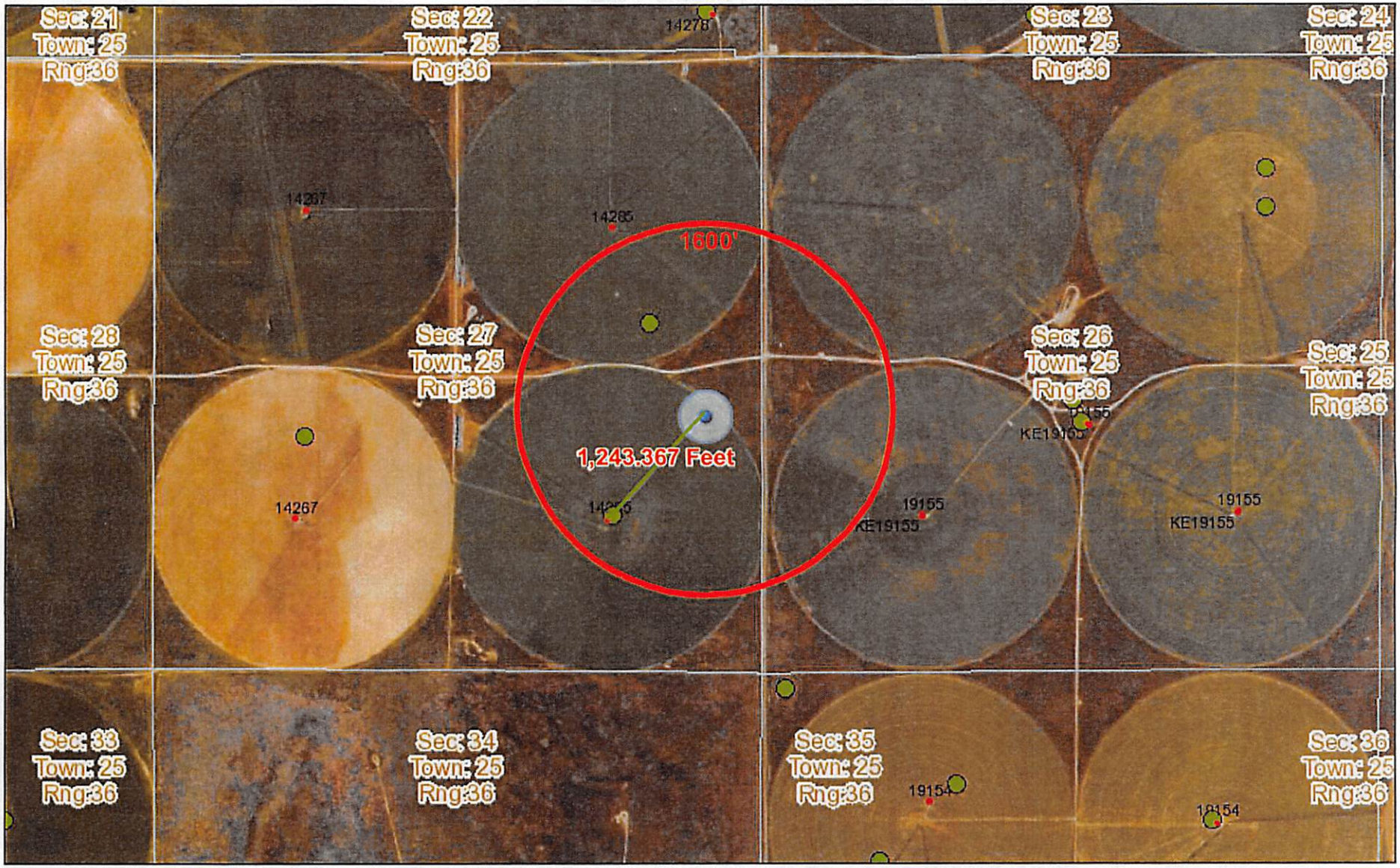
Well Name	X (ft)	Y (ft)
14285 ID6	-130385	354940

Observation Wells

Well Name	X (ft)	Y (ft)
	-130385	354940
14285 ID3	-131280	356534
14267 ID1	-133903	356686
14267 ID7	-134014	354022
14278 ID9	-130424	358357
14278 ID7	-133626	359005
26068 ID3	-128613	359308
19155 ID6	-127231	354804
19155 ID4	-125961	354041
19155 ID7	-127480	352828
19154 ID5	-128601	351559
Domestic 35-25-36	-129785	349949
Domestic 23-25-36	-127675	358340

gWorks

14285 Review



February 28, 2019
15:57 PM

DISCLAIMER: This map is not intended for conveyances, nor is it a legal survey. The information is presented on a best-efforts basis, and should not be relied upon for making financial, survey, legal or other commitments.

1:18,056

0 800 1,600 3,200 ft

0 250 500 1,000 m

GPS Position

Wells

		+	CON		FPR	▲	MUN		THX
?	Other	⊠	DEW		HYD		REC	?	Empty
•	IRR		DOM	★	IND		STK	●	WWC5 WELLS GMD3

jason
gWorks.

Report Date Thursday, February 28 2019

Water Rights and Points of Diversion Within 1.00 miles of point defined as:

2182 ft N and 506 ft W of the SE Corner of Section 27, T 25S, R 36W

Located at: 101.250882 West Longitude and 37.848781 North Latitude

GROUNDWATER ONLY

File Number	Use	ST	SR	Dist (ft)	Q4	Q3	Q2	Q1	FeetN	FeetW	Sec	Twp	Rng	ID	Batt	Auth_Quan	Add_Quan	Unit
A__ 14267 00	IRR	NK	G	3855	--	--	NC	NW	3959	3927	27	25	36W	1	1400	307.00	307.00	AF
Same				3625	--	--	NC	SW	1300	4022	27	25	36W	7	1600	278.00	278.00	AF
A__ 14278 00	IRR	NK	G	5175	--	NW	SE	SW	972	3650	22	25	36W	7		286.00	286.00	AF
Same				3469	--	SE	SE	SE	344	435	22	25	36W	9		299.00	299.00	AF
A__ 14285 00	IRR	NK	G*	1932	--	--	NC	NE	3937	1314	27	25	36W	3		294.00	294.00	AF
Same				1223	--	--	NC	SE	1293	1346	27	25	36W	6		291.00	291.00	AF
A__ 19154 00	IRR	NK	G	3829	--	SW	NE	NW	4141	3816	35	25	36W	5		272.00	272.00	AF
Same				5254	--	NW	NW	SW	2285	4840	35	25	36W	6		272.00	272.00	AF
A__ 19155 00	IRR	NK	G	4497	--	--	NC	SE	1320	1320	26	25	36W	4		272.00	272.00	AF
Same				3356	--	NW	NW	SE	2340	2380	26	25	36W	6		272.00	272.00	AF
Same				3644	--	SE	SE	SW	126	2719	26	25	36W	7		272.00	272.00	AF
A__ 26068 D1	IRR	NK	G	4801	--	--	NC	SW	1320	3960	23	25	36W	3		272.00	272.00	AF

Total Net Quantities Authorized:	Direct	Storage
Total Requested Amount (AF) =	.00	.00
Total Permitted Amount (AF) =	.00	.00
Total Inspected Amount (AF) =	.00	.00
Total Pro_Cert Amount (AF) =	.00	.00
Total Certified Amount (AF) =	3387.00	.00
Total Vested Amount (AF) =	.00	.00
TOTAL AMOUNT (AF) =	3387.00	.00

Minimum Spacing MET.

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

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

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

The number in the Batt column is the number of wells in the battery.

Water Rights and Points of Diversion Within 1.00 miles of point defined as:

101.250882 West Longitude and 37.848781 North Latitude

GROUNDWATER ONLY

WATER USE CORRESPONDENTS:

File Number Use ST SR

A__ 14267 00 IRR NK G

> YOST FARMS

>

> 1142 RD AA

> LAKIN KS 67860

>----------

A__ 14278 00 IRR NK G

> YOST FARMS

>

> 1142 RD AA

> LAKIN KS 67860

>----------

A__ 14285 00 IRR NK G

> YOST FARMS

>
> 1142 RD AA
> LAKIN KS 67860
>----------
A__ 19154 00 IRR NK G
> TFT ALFALFA FARMS LLC
>
> 1320 N COUNTY ROAD 11
> LEOTI KS 67861
>----------
> J CHARLES JAEGER
> 706 COUNTRY HEIGHTS
> PO BOX 347
> LAKIN KS 67860
>----------
A__ 19155 00 IRR NK G
> TFT ALFALFA FARMS LLC
>
> 1320 N COUNTY ROAD 11
> LEOTI KS 67861
>----------
A__ 26068 D1 IRR NK G
> RALPH & JERALDINE REIMER TRUSTS
> 510 INGALLS ST
> PO BOX 4
> LAKIN KS 67860
>----------
==========

INPUTS	
Target Section Definition	
Section	27
Township	25
Range	36
Range Direction	w
Target Point Coordinates (*NAD27* or *NAD83*)	
Target Longitude	-101.251331
Target Latitude	37.848800

Instructions

1. Enter values for section, township, range and range direction.
2. Enter *NAD27* or *NAD83* longitude and latitude of target point.
3. Click "Load Data and Compute" button.
4. Use feet distances corresponding to datum of target point.

Loaded Section Data
From LEOBASE using *NAD83*

Corner	Corner Latitudes	Corner Longitudes
SW	37.84292977	-101.26776785
NW	37.85740984	-101.26773667
NE	37.85738017	-101.24963980
SE	37.84280806	-101.24957895
Degrees Longitude per Foot		3.46312134E-06
Degrees Latitude per Foot		2.74616382E-06

Target Point Distances from Corners using NAD83

Corner	Feet North(+)/South(-)	Feet East(-)/West(+)
SW	2138	-4746
NW	-3135	-4737
NE	-3124	488
SE	2182	506

Target point is In Section

Loaded Section Data
From LEOBASE using *NAD27*

Corner	Corner Latitudes	Corner Longitudes
SW	37.84291100	-101.26731900
NW	37.85739100	-101.26728800
NE	37.85736100	-101.24919100
SE	37.84278900	-101.24913000
Degrees Longitude per Foot		3.46312045E-06
Degrees Latitude per Foot		2.74598553E-06

Target Point Distances from Corners using NAD27

Corner	Feet North(+)/South(-)	Feet East(-)/West(+)
SW	2145	-4617
NW	-3129	-4608
NE	-3118	618
SE	2189	636

Target point is In Section

Difference (NAD83 Minus NAD27)

Corner	Corner Latitudes	Corner Longitudes
SW	0.00001877	-0.00044885
NW	0.00001884	-0.00044867
NE	0.00001917	-0.00044880
SE	0.00001906	-0.00044895

Difference (NAD83 Minus NAD27)

Corner	Feet North(+)/South(-)	Feet East(-)/West(+)
SW	-6.97422378	-129.60732881
NW	-6.65736086	-129.55535487