CHECK SHEET Short Change

(To be completed and attached to each application)

F	ile No. <u>3</u>	7476			Fiel	d Office	No. <u>2</u>		GN	/ID No	
2.	ls Lando	wner correc	t obtained for	ly shown	in WRIS?	? Ye	es 🛛	Non Applic		Address	Change? <u>NO</u>
			pondent co		-						Change? NO
		t of diversion							point(s) o	f diversion:	
	Action	PDIV ID	Geo Ctr?	Sec	Twp	Rng	'N	·W	Coun	nty	Qualifiers
	DEL	28307	NO	5	27S	9W	3960	3950	Kingm	nan	NC NW
	ENT		NO	5	27S	9W	3965	3939	Kingm	nan	NC NW
	 			gpm/cfs gpm/cfs gpm/cfs		gp gp	m/cfs _ m/cfs _ m/cfs _		af/mgy af/mgy af/mgy		nal Quantity af/mgy af/mgy af/mgy ⊠ Yes □ No
			& No. Undif		/Nebraska		_ •				
			original p/d:			50		'S	0	, \	N
	<u>WATER</u> 12/26/20		ION TRAIL C	OMMEN		Annlica	tion Rece	eived (date a	accented for	r priority)	
		6,17			Change	Approv		·	accepted for	priority	
	/_				Comple	tion Rec	uirement	t Removed (Change No	. C)	
7.		26,17 	AIL COMME	NTS	Anti-Re	verse M	eter Requ	<u>12/31/2018</u> uired by			
^	/_	/		V-				/			
8.	Base Aci	es <u></u>		Ye	ar <u></u>		Mir	nimum Reas	sonable Qua	intity <u></u>	

Date Created **12/26/17** by **TJS**Date Entered by

CHECK SHEET ATTACHMENT

	€.	Changes	to	the	place	of	use	Will	be
--	----	---------	----	-----	-------	----	-----	------	----

File	Num	ber	37476

	Owner	Place Use						NE	1/4			NV	11/4			SV	11/4			SE	1/4		TOTAL
Action	Person ID	ID#		Twp.	Range		NE1/4	NW1/4	SW1/4	SE1/4	NE1/4	NW1/4	SW1/4	SE1/4	NE⅓	NW1/4	SW1/4	SE1/4	NE1/4	NW1/4	SW1/4	SE1/4	TOTAL ACRES
O CHG	5466	26174		 27S	9W	Acres Authorized																	
Cru	3466	20174	5	2/3	900	New Acres																	
						Acres Authorized											-	_					
						New Acres																	
						Acres Authorized																	
						New Acres																	
						Acres Authorized											<u> </u>						
						New Acres											_						

Names	and	Add	ress:
-------	-----	-----	-------

1.	Person ID # <u>5466</u>	2.	Person ID #	3.	Person ID #
NEAL D & JUDITH	A FOSTER				
2813 CORTINA LN					
EVERGREEN CO	80439-9451				

- 1. Give to Applicant:
 - a. Original application/approval
 - b. Original receipt (one for each application)
 - c. Information packet containing:
 - Notice and Proof form
 - Water Meter Specifications
 - · Acceptable Meter list
 - Water level measurement tube specifications
 - Check Valve specifications
 - Pink Sheet K.S.A. 82a-728 letter
 - Form stating to record in Register of Deeds Office (OPTIONAL AS NEEDED)

GENERAL INSTRUCTIONS

- 2. Send to headquarters:
 - a. Good, <u>scannable</u> copy of application and/or approval and this check sheet
 - b. Original check and copy of receipt
 - c. Test hole log
 - d. GMD recommendation, if any
 - e. Map or aerial photograph, if any
- 3. Send to KDHE: Letter (KDHE.LT) advising of location of abandoned well.

 ☐

CONDITIONS

- Insert notice and proof date.
- Type or print applicant's/owner's name on line.
- 3. Complete notary statement.

- 4. Date stamp received and approved.
- 5. Complete ownership and WUC change information.

ADDITIONAL PHOTOCOPIES

HQ		
Driller's Copy		
		
		

Submit completed application to: Kansas Department of Agriculture Division of Water Resources Field Office for your area. Call for address:

Topeka -- (785) 296-5733 Stafford -- (620) 234-5311 Stockton -- (785) 425-6787 Garden City -- (620) 276-2901 http://agriculture.ks.gov/dwr

DWR FIELD OFFICE APPLICATION FOR APPROVAL TO CHANGE THE PLACE OF USE AND/OR THE POINT OF DIVERSION WATER METER REQUIRED



Filing Fee Must Accompany the Application, K.S.A. 82a-708b(b), as amended. Fee Schedule is on the third page of this application form.

Paragraph Nos. 1, 2, 3 & 5 must be completed. Complete all other applicable portions. If change in point of diversion is greater than 100 feet, or if place of use will be changed, include a topographic map or detailed plat showing the authorized and proposed point(s) of diversion and/or place of use.

RECEIVED

						F	-ile No	3747	· ·6		_						[// <i>:2</i> DEC 2	5∕O 6 2017
1.	Applica	tion is he	ereby n	nade f	or app	roval c		Chief E			-	the (ch		ne or b	oth):	ļ	Sta Divisio	ifford F n of Wa	ield Office Iter Resource
	under tl	ne water	right w	hich is	s the s	ubject	of this	applic	ation i	n acco	rdance	e with t	the co	ndition	s desc	ribed l	below.		
	The sou	urce of su	apply is	s:		X 0	Ground	water			Surfa	ce wat	er						
2.		and addre					lm, HF	Opera	ations							* <u>.</u> , •	•		
		Number:				000_			Fmail	addre	ss.								
		and addre				orresr	 onden												
		ortina LN				•													
		Number:							Email	addre	ss:			_					
3.		sently a				se is:													
	•	of Land -		•			dith A F	oster											
		,	ADDRI	ESS:	2813 (Cortina	LN, E	vergre	en CC	8043	9-945	1							
	(If there	is more th	an one	landov	vner, at	tach su	ippleme	ental sh	eets as	neces	sary.)								
				NE	=1/4			N/	N1/4			SV	V1/4			SI	E1⁄4		TOTAL
Se	ec. Twp.	Range	NE¼	NW1/4		SE1/4	NE1/4	NW¼	SW1/4	SE1/4	NE1/4	NW1/4	SW1/4	SE1/4	NE¼	NW1/4	SW1/4	SE1/4	ACRES
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4.	Owner	pplication of Land - / is more th	NA ADDRI	AME: ESS:	N) CI	nang	re*				ace of							
				NE	Ξ1/4			N\	N1/4			SV	N1/4		Ĭ .	 SI	E1/4		TOTAL
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															1/				

5.	Presently author	rized point of d	iversion:						
٦.			Quarter of the		Q	uarter of the	e N	C NW	Quarter
Ì	of Section	5	, Township	27	S	outh Range	·	9	W.
-	in Kingman	Cour	nty, Kansas, <u>3960</u>	feet Nor	th 3960	feet Wes	st of South	east corner o	of section.
			Authorized Quantity						
- 1			lo. <u>1</u> GF						3
	This point will n	ot he changed	☐This point will be chang	ed as follow	s: No cha	nge noint be	etter descri	ed with GPS	s follows:
-			Complete only if chan						
- 1			Quarter of the						
	of Costion		, Township	27	&	outh Range	<u> </u>	9	Quarto:
	or Section		nty, Kansas, <u>3965</u>	foot Nor	+h 3030	foot Mo	et of South	east corner (of section
- 1			Proposed Quantity _						
- 1									
L	This point is: 📋	Additional vveil	☐ Geo Center List	other water	rights that v	viii use tilis	point <u>ivone</u>	-	<u> </u>
6. Г	Presently author	rized point of d	iversion:						
۱.			Quarter of the		0	uarter of the)		Quarter
-	of Section		, Township			outh Range	<u> </u>		(F/W)
	in Section	Cour	nty, Kansas,	feet No	th	feet We	st of South	neast corner	of section
	Authorized Date	Coul	Authorized Quantity	1666 1401	 Der	tool viol	ot or oouti	(feet)	31 000110111
	Authorized Rate	Computer ID I	Additionized Quantity		for	t North		feet West	+}
			This point will be chang						
			Complete only if chan						
ı	One in the		Quarter of the		Q	uarter of the	₹		Quarter
	of Section		, Township		S	outh, Range			(E/VV),
	in	Cou	nty, Kansas,	feet Noi	th	feet We	st of South	neast corner	of section.
			_ Proposed Quantity _						
L	This point is:	Additional Well	☐ Geo Center List	other wate	rights that v	will use this	point		 :_
7.	•		for the following reaso		feet of the entire the diagram (PLEASE N	existing poin below in rela NOTE: The	t of diversi ation to the "X" in o	will be relocat on, indicate it existing poin enter of dia point of dive	s location on t of diversion. gram below
					100	50	0	50 100)
			- Calabra	-	F		11]111		
8.	If a well, is the tes	st hole log attache	ed? 🗌 Yes 🛮 No			- -	<u> </u>	· 🖠	
					₂₀ E		_	ᆠᅠᅼ	50
9.	The change(s) (w	as)(will be) comp	leted by?		50		_		DU
	<u>ASAP</u>			-		- -	_	3	
					West 0	- 	X	1 11 4) East
10.	If the point of dive	ersion is a well:			7700. 0	!	· · - · · ·	∵'`∵'∃`	
	(a) What are you	u going to do with	the old well?		F	_	=		
	Diver it				50	_ +	⊸	+ 1:	50
	Plug it			-		-	_		
					<u> </u>			🖠	
	(b) When will thi	s be done? ASAF	,	-					
					100	50	0	50 100)
11.			District recommenda	tion		So	South ale: 1 " = 1	100'	
	attached?	Yes 🛭 No		13h	If the propo			will be relocat	ed more thar
4.0	A	0550		105.	100 feet b	ut within 13	320 feet f	rom the exis	ting point o
12.	Assisted by TJS-			-	diversion, a	attach a top	ographic r	nap or aeria I wells (includ	l photograph
	RECEIVE)			within one-h	nalf mile of th	ne propose	d point of dive	ersion and the
					water sour	ces. show	the name	the owners. s and addre	esses of the
	DEC 26 201	7			landowner(s	s) one-half om your prop	mile down	stream and	one-half mile

Page 2

Stafford Field Office 2017) BWR:1-121 Revised 011692017) BWR:0-121 Revised Office 2017)

File No. _____37476_

14. If the proposed groundwater point of diversion is 300 or fewer fee	et from existing point of diversion, complete the following:
(a) Does the undersigned represent all owners of the currently a ⊠ Yes □ No (If no, all owners must sign this a	authorized place(s) of use identified in this application?
 (b) Will the ownership interest of any owner of the currently at affected if this application is approved as requested? ☐ Yes ☑ No (If yes, all owners must sign this 	uthorized place(s) of use identified in this application be adversely application.)
(c) If this application is not approved expeditiously, will there be ⊠ Yes ☐ No (If no, all owners must sign this a	substantial damage to property, public health or safety?
If the application proposes a surface water change in point of diversion or a change in place of use, the application must be signed by all own agent (attach notarized statement authorizing representation).	on, a groundwater change in point of diversion greater than 300 fee ners of the currently authorized place of use, or their duly authorize
I hereby verify, being first duly sworn upon my oath or aff age and the owner, the spouse of the owner, or a duly aut their behalf, in regards to the water right(s) to which this contained in this application are true, correct and complet	horized agent of the owner(s) to make this application o application pertains. I further verify that the statement
	this 26th day of December, 2017
C.3 Helm HF Operations	(Spouse)
(Please Print)	(Please Print)
(Owner)	(0,,,,,,,)
(Owner)	(Spouse)
(Please Print)	(Please Print)
(Owner)	(Spouse)
(Please Print)	(Please Print)
State of Kansas County of HAFord SS	
I hereby certify that the foregoing application was signed in	my presence and sworn to before me this 20th day of
NOTARY JESSICA ENGELBRECHT My Appointment Expires	Jesus Charles ruht
My Commission Expires August 11, 2021	Notary Public
ONLY COMPLETE APPLICATIONS WILL BE PROCESSED. To be complete	e, all of the applicable portions of the application form must be completed with
accurate information; maps, if necessary, must be included; signatures of all the appropriate fee must be paid.	ne appropriate owners' must be affixed to the application and notarized; and
FEE SCHI	
(2) Application to change a point of diversion more than 300	rtment of Agriculture s
DEC 2 6 2017	

Shatora meta Office DWR34420(RissibedR8660/2013)

SUMMARY ORDER APPROVING APPLICATION FOR CHANGE AND IMPOSING CONDITIONS

This Summary Order is issued under authority of K.S.A. 82a-708b, as amended, and K.A.R. 5-5-1, et seq. and other applicable provisions of the Kansas Water Appropriation Law, K.S.A. 82a-701 et. seq., and rules and regulations promulgated thereunder, With the exception of those conditions expressly contained herein, this Summary Order does not change the terms, conditions and limitations of File No. 37476 requesting that the place of use and / or point of A change application was received on 12/26/2017 diversion authorized under the above-referenced file number be changed as described in the application. On and after the effective date of this summary order, the authorized place(s) of use shall be located substantially as shown 2. on the topographic map accompanying the application to change the place of use.

Applicable Not Applicable The change in point of diversion shall not impair existing rights and shall be limited to the same source or sources of water as previously authorized. The point of diversion authorized by this summary order shall be located within a 50 ☐ Not Ápplicable radius of the authorized point(s) of diversion.

Applicable feet from the previously The point(s) of diversion authorized herein shall not actually be located more than 100 authorized point(s) of diversion.

Applicable ☐ Not Applicable As required by K.A.R. 5-3-5d, if the works for diversion is a well with a diversion rate of 100 gallons per minute or more, a tube or other device suitable for making water level measurements shall be installed, operated and maintained in accordance with K.A.R. 5-6-13. The owner of the authorized place(s) of use shall properly install an acceptable water flow meter on or before December 31, 2018, or before the first use of water, whichever occurs first. The water flow meter shall be installed, operated and maintained in accordance with K.A.R. 5-1-4 through 5-1-12. As required by K.S.A. 82a-732, as amended, and K.A.R. 5-3-5e, the owner shall maintain records and report the reading of the water flow meter and the total quantity of water diverted annually to the Chief Engineer by March 1 following the end of each calendar year. ☐ Not Applicable Installation of the works for diversion of water shall be completed on or before December 31, 2018, or within any authorized extension of time. By March 1, 2019 the applicant shall notify the Chief Engineer that construction of the works for diversion has been completed, on the form provided by the Chief Engineer, as required by K.A.R. 5-8-4e. ☐ Not Applicable Applicable The completed well log shall be submitted with the required notice. Applicable ☐ Not Applicable All diversion works into which any type of chemical or other foreign substance will be injected into the water shall be equipped with an in-line, automatic, quick-closing check valve capable of preventing pollution of the source of the water supply. The check valve(s) shall be installed, operated and maintained in accordance with K.A.R. 5-3-5c. Applicable Not Applicable Additional Conditions are attached. ☐ Yes ⊠ No 11. In accordance with K.S.A. 82a-708a, as amended, and K.A.R. 5-5-14, all of the owners of the authorized place(s) of use of water appropriated under the above-referenced file number are responsible for compliance with its terms, conditions and limitations, as amended and/or supplemented by this Summary Order, and with applicable provisions of the *Kansas Water Appropriation Law* and the *Rules and Regulations* promulgated thereunder. Failure to comply with these provisions may result in civil penalties pursuant to K.S.A. 82a-737, as amended, and/or the suspension or revocation and dismissal of the water or appropriation right or any other enforcement actions authorized by law. FOR OFFICE USE ONLY Administrative Appeal and Effective Date of Order APPLICATION APPROVED AND If you are aggrieved by this order, pursuant to K.S.A. 82a-1901, SUMMARY ORDER ISSUED you may request an evidentiary hearing before the Chief Engineer or request administrative review by the Secretary of Agriculture. A request for hearing by the Chief Engineer must be filed within 15 days of service of this Order and a request for administrative review by the Secretary must be filed within 30 days pursuant to K.S.A. 77-531. Any request for administrative Duly Authorized Designee of the Chief Engineer R. Concut ameron review must state a basis for review pursuant to K.S.A. 77-527. File any request with Kansas Department of Agriculture, Legal Division, 1320 Research Park Drive, Manhattan, KS Division of Water Resources - Kansas Department of Agriculture Date of Issuance: 66502. Failure to timely request a hearing or review may preclude review under the Kansas Judicial Review Act. State of Kansas For Use by Register of Deeds SS County of Acknowledged before me on Signature: ATE O ICA ENGELBRECHT RECEIVED My Appointment Expires August 11, 2021

DEC **26** 2017 DWR 1-121 (Revised 07/10/2017)

(Notary Seal) File No. _

37476

My commission expires

Page 4

CERTIFICATE OF SERVICE

On this **26**th day of **December, 2017**, I hereby certify that the attached Change in Point of Diversion for Water Right, File No. **37476**, dated **December 26, 2017** was hand delivered to the following:

Cris Helm, HF Operations

Stoff

			WATE	R WELL RECORD	Form WWC					
1 LOCATI	ON OF WAT	TER WELL:	Fraction		Se	ection Number	Township N	umber	Range N	lumber
	Kingman		C 1/4	NW 1/4	1/4	<u>5</u>	т 27	s	R 9W	E/W
Distance a	and direction	from nearest tov	vn or city street ac	ddress of well if loca	ted within city?	•				
_ 1	$N_{\bullet} 3/4 N$	of Penalo	sa, Kansas							
2 WATE	R WELL OW	NER: Lee S	tillwell							
BB# St	Address Bo	x # · Route	. 1				Board of A	ariculture, l	Division of Wate	er Resources
City State	ZIP Code	Penal	osa, Kansas	67121			Application	Number:	3747	, 1
3 LOCAT	E WELL'S L	OCATION WITH	A DEPTH OF C	OMBLETED MELL	147	4 ELEVA	Unkno	wn		
AN "X"	IN SECTIO	N BOX:	DEPTH OF C	67121 OMPLETED WELL. water Encountered	49 1	II. ELEVA	110N: ५.५	4.0		
		' 	Depth(s) Ground	water Encountered WATER LEVEL	1.40			π. 3) <u> /</u> 17	785 ft.
•	- 1	! ! ! !	WELL'S STATIC	WATER LEVEL	Η., π.	below land sur	face measured or	mo/day/yr	1.00	0
-	- NW	NE		test data: Well wa						
1	î			gpm: Well wa						
.≝ w F			Bore Hole Diame	ter3.0in. t	o . ‡4:7		and	in.	. to	
\[\frac{1}{2} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ı		WELL WATER T	O BE USED AS:	5 Public wa	ter supply	8 Air conditioning	11	Injection well	below)
7	6	1	1 Domestic	3 Feedlot	6 Oil field w	ater supply	9 Dewatering	12	Other (Specify	below)
-	SW!	SE	2 Irrigation	4 Industrial	7 Lawn and	garden only	0 Observation we	ell		
1 1	- ¦			pacteriological sample		-				1
1			mitted				ter Well Disinfecte		No	
5 TYPE	DE BLANK (ASING USED:	THREE	5 Wrought iron	8 Cond	rete tile			d Clam	ped
			D)	6 Asbestos-Cemen					ed	
1 St		3 RMP (SI	n)			r (specify belov				
2 P\	/C	4 ABS 16	. 107	7 Fiberglass				inrea		
Blank casi	ng diameter		.in. to÷۲۱ 10	ft., Dia in., weight	አለት	0	t., Dia		In. to	} π.
Casing he	ight above la	and surface	· · · · · · · · · · · · · · · · · · ·	tin., weight		lbs./ [.]	ft. Wall thickness	or gauge N	o	
TYPE OF	SCREEN O	R PERFORATIO	N MATERIAL:			XX		estos-ceme		1
1 St	eel	3 Stainless	s steel	5 Fiberglass	8 R	MP (SR)	11 Oth	er (specify)		
2 Br	ass	4 Galvaniz	red steel	6 Concrete tile	* 9 A	BS	12 No	ne used (op	en hole)	
SCREEN	OR PERFOR	RATION OPENIN	IGS ARE:	5 Gau	uzed wrapped		8 Saw cut		11 None (ope	en hole)
1 Cc	ontinuous slo	t 3 M	lill slot	6 Wir	e wrapped		9 Drilled holes			
2 Lo	uvered shutt	ter 4 K	ey punched	7 Tor	ch cut		10 Other (specify	<i>(</i>)		
		ED INTERVALS:		107ft. to		ft From				
00,122,1	LIN OIDAN	LD HATERIANCO.		ft. to						4
,	DAVEL DA	CK INTERVALS:		10 . ft. to						
'	JAVEL PA	OK INTERVALS:								
2 222			From	ft. to			m		:0	
	MATERIAL			2 Cement grout			Other			
				ft., From	, , π.					i
		ource of possible	•				tock pens		bandoned water	Į.
1	eptic tank		al lines	7 Pit privy		11 Fuel	•		il well/Gas well	1
2 Se	ewer lines	5 Cess	pool	8 Sewage la	agoon		zer storage	16 C	Other (specify be	elow)
3 W	atertight sew	er lines 6 Seep	age pit	9 Feedyard		13 Insec	ticide storage			
Direction	from well?					How ma	ny feet?			
FROM	TO		LITHOLOGIC	LOG	FROM	то		LITHOLOG	IC LOG	
0	25	Clay								
25	75		with clay a	streaks						
75	147	Sand and g	gravel							
	-									
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	Ì						Staf	ford Field	A#:	
	{						———Division	oru i igiu	Resources	
							- LIVISION	or water	nesources	
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L.T	l			O					<u></u>	:au a-d
				ON: This water well						
		/year)4/17.,							P 1 L	elief. Kansas
Water We	ii Contractor	's License No	1 86	This Water	Weil Record v				٠٠٠٠٠ ٠ - ١ ٠٠٠٠	/85
1							V	Λ	1	
INSTRUC	TIONS: Use	typewriter or ball	point pen, PLEAS	ell Service E PRESS FIRMLY	and <i>PRINT</i> clea	arly. Please fill i	n blanks, underline	or circle th	e correct answe	ers. Send top
three copi	es to Kansas	typewriter or ball Department of Hone for your record	ealth and Environn	E PRESS FIRMLY nent, Division of Envir	and <i>PRINT</i> clear conment, Enviro	arly. Please fill i onmental Geolog	n blanks, underline gy Section, Topeka	e of circle th , KS 66620	e correct answe . Send one to W	ers. Send top ATER WELL

QuaternaryLower Pleistocene Grand Island and Sappa FormationKansan and Yarmouthian Stages Silt, sandy, light brown 2 2 Silt, sandy, clayey, gray brown 4 6 Sand, fine to coarse, and fine to medium gravel, very silty 4 10 Sand, fine to coarse, and fine to medium gravel 5 15 Gravel, fine to coarse, and some fine to coarse sand 8 23 Holdrege and Fullerton FormationsNebraskan and Aftonian Stages Clay, silty, sandy, calcareous, light gray tan 10 33 Silt, very sandy, gray tan, lime cemented 6 39 Clay, silty, sandy, calcareous, tan 1 40 Silt, very sandy, calcareous, tan to gray tan; contains lime-cemented streaks 50 Silt, sandy, clayey, calcareous, gray tan; contains calichendules 13 63 Sand, fine to coarse, and fine gravel, very silty 5 68 Silt, very sandy, calcareous, tan; contains some calichendules 12 80 Silt, very sandy, calcareous, tan; contains thin sand streaks 5 85 Sand, fine to coarse, and fine gravel, silty 10 95 Sand, fine to coarse, and fine gravel; contains thin streaks of silt and silty clay 185 PermianLeonardian Salt Plain(?) Siltstone 2 187	S., roa 195	d. Drilled by Federal and State Geological Surveys October 2, 5. Surface altitude, 1,700.8 feet.	Thickness, feet	Depth, feet
Silt, sandy, light brown 2 2 2 Silt, sandy, clayey, gray brown 4 6 Sand, fine to coarse, and fine to medium gravel, very silty 4 10 Sand, fine to coarse, and fine to medium gravel 5 15 Gravel, fine to coarse, and some fine to coarse sand 8 23 Holdrege and Fullerton FormationsNebraskan and Aftonian Stages Clay, silty, sandy, calcareous, light gray tan 10 33 Silt, very sandy, gray tan, lime cemented 6 39 Clay, silty, sandy, calcareous, tan 1 40 Silt, very sandy, calcareous, tan to gray tan; contains lime-cemented streaks 10 50 Silt, sandy, clayey, calcareous, gray tan; contains calichenodules 13 63 Sand, fine to coarse, and fine gravel, very silty 5 68 Silt, very sandy, calcareous, tan; contains some calichenodules 12 80 Silt, very sandy, calcareous, tan; contains thin sand streaks 5 85 Sand, fine to coarse, and fine gravel, silty 10 95 Sand, fine to coarse, and fine gravel; contains thin streaks of silt and silty clay 90 185 PermianLeonardian Salt Plain(?) Siltstone	Qu	ternaryLower Pleistocene		
Silt, sandy, clayey, gray brown 4 6 Sand, fine to coarse, and fine to medium gravel, very silty 4 10 Sand, fine to coarse, and fine to medium gravel 5 15 Gravel, fine to coarse, and some fine to coarse sand 8 23 Holdrege and Fullerton FormationsNebraskan and Aftonian Stages Clay, silty, sandy, calcareous, light gray tan 10 33 Silt, very sandy, gray tan, lime cemented 6 39 Clay, silty, sandy, calcareous, tan 1 40 Silt, very sandy, calcareous, tan to gray tan; contains lime-cemented streaks 10 50 Silt, sandy, clayey, calcareous, gray tan; contains caliche nodules 13 63 Sand, fine to coarse, and fine gravel, very silty 5 68 Silt, very sandy, calcareous, tan; contains some caliche nodules 12 80 Silt, very sandy, calcareous, tan; contains thin sand streaks 5 85 Sand, fine to coarse, and fine gravel, silty 10 95 Sand, fine to coarse, and fine gravel; contains thin streaks of silt and silty clay 70 185 PermianLeonardian Salt Plain(?) Siltstone	Gra	nd Island and Sappa FormationKansan and Yarmouthian Sta	ges	
Sand, fine to coarse, and fine to medium gravel, very silty Sand, fine to coarse, and fine to medium gravel 5 15		Silt, sandy, light brown	2	2
Sand, fine to coarse, and fine to medium gravel Gravel, fine to coarse, and some fine to coarse sand Holdrege and Fullerton FormationsNebraskan and Aftonian Stages Clay, silty, sandy, calcareous, light gray tan Silt, very sandy, gray tan, lime cemented Clay, silty, sandy, calcareous, tan Clay, silty, sandy, calcareous, tan Silt, very sandy, calcareous, tan to gray tan; contains lime-cemented streaks Silt, sandy, clayey, calcareous, gray tan; contains caliche nodules Sand, fine to coarse, and fine gravel, very silty Silt, very sandy, calcareous, tan; contains some caliche nodules Silt, very sandy, calcareous, tan; contains some caliche nodules Silt, very sandy, calcareous, tan; contains thin sand streaks Silt, very sandy, calcareous, tan; contains thin sand streaks Sand, fine to coarse, and fine gravel, silty Sand, fine to coarse, and fine gravel; contains thin streaks of silt and silty clay PermianLeonardian Salt Plain(?) Siltstone		Silt, sandy, clayey, gray brown	4	6
Gravel, fine to coarse, and some fine to coarse sand Holdrege and Fullerton FormationsNebraskan and Aftonian Stages Clay, silty, sandy, calcareous, light gray tan Silt, very sandy, gray tan, lime cemented Clay, silty, sandy, calcareous, tan Clay, silty, sandy, calcareous, tan Silt, very sandy, calcareous, tan to gray tan; contains lime-cemented streaks Silt, sandy, clayey, calcareous, gray tan; contains caliche nodules Sand, fine to coarse, and fine gravel, very silty Silt, very sandy, calcareous, tan; contains some caliche nodules Silt, very sandy, calcareous, tan; contains some caliche nodules Silt, very sandy, calcareous, tan; contains thin sand streaks Salt, very sandy, calcareous, tan; contains thin sand streaks Sand, fine to coarse, and fine gravel; silty Sand, fine to coarse, and fine gravel; contains thin streaks of silt and silty clay PermianLeonardian Salt Plain(?) Siltstone		Sand, fine to coarse, and fine to medium gravel, very silty	4	10
Holdrege and Fullerton FormationsNebraskan and Aftonian Stages Clay, silty, sandy, calcareous, light gray tan 10 33 Silt, very sandy, gray tan, lime cemented 6 39 Clay, silty, sandy, calcareous, tan 1 40 Silt, very sandy, calcareous, tan to gray tan; contains lime-cemented streaks 10 50 Silt, sandy, clayey, calcareous, gray tan; contains caliche nodules 13 63 Sand, fine to coarse, and fine gravel, very silty 5 68 Silt, very sandy, calcareous, tan; contains some caliche nodules 12 80 Silt, very sandy, calcareous, tan; contains thin sand streaks 5 85 Sand, fine to coarse, and fine gravel, silty 10 95 Sand, fine to coarse, and fine gravel; contains thin streaks of silt and silty clay PermianLeonardian Salt Plain(?) Siltstone		Sand, fine to coarse, and fine to medium gravel	5	15
Clay, silty, sandy, calcareous, light gray tan Silt, very sandy, gray tan, lime cemented Clay, silty, sandy, calcareous, tan Clay, silty, sandy, calcareous, tan Silt, very sandy, calcareous, tan to gray tan; contains lime-cemented streaks Silt, sandy, clayey, calcareous, gray tan; contains caliche nodules Sand, fine to coarse, and fine gravel, very silty Silt, very sandy, calcareous, tan; contains some caliche nodules Silt, very sandy, calcareous, tan; contains some caliche nodules Silt, very sandy, calcareous, tan; contains thin sand streaks Sand, fine to coarse, and fine gravel, silty Sand, fine to coarse, and fine gravel; contains thin streaks of silt and silty clay PermianLeonardian Salt Plain(?) Siltstone		Gravel, fine to coarse, and some fine to coarse sand	8	23
Silt, very sandy, gray tan, lime cemented Clay, silty, sandy, calcareous, tan Silt, very sandy, calcareous, tan to gray tan; contains lime-cemented streaks Silt, sandy, clayey, calcareous, gray tan; contains caliche nodules Sand, fine to coarse, and fine gravel, very silty Silt, very sandy, calcareous, tan; contains some caliche nodules Silt, very sandy, calcareous, tan; contains some caliche nodules Silt, very sandy, calcareous, tan; contains thin sand streaks Silt, very sandy, calcareous, tan; contains thin sand streaks Sand, fine to coarse, and fine gravel, silty Sand, fine to coarse, and fine gravel; contains thin streaks of silt and silty clay PermianLeonardian Salt Plain(?) Siltstone		Holdrege and Fullerton FormationsNebraskan and Aftonian S	Stages	
Clay, silty, sandy, calcareous, tan 1 40 Silt, very sandy, calcareous, tan to gray tan; contains lime-cemented streaks Silt, sandy, clayey, calcareous, gray tan; contains caliche nodules Sand, fine to coarse, and fine gravel, very silty Silt, very sandy, calcareous, tan; contains some caliche nodules Silt, very sandy, calcareous, tan; contains some caliche nodules Silt, very sandy, calcareous, tan; contains thin sand streaks Sand, fine to coarse, and fine gravel, silty Sand, fine to coarse, and fine gravel; contains thin streaks of silt and silty clay PermianLeonardian Salt Plain(?) Siltstone		Clay, silty, sandy, calcareous, light gray tan	10	33
Silt, very sandy, calcareous, tan to gray tan; contains lime-cemented streaks Silt, sandy, clayey, calcareous, gray tan; contains caliche nodules Sand, fine to coarse, and fine gravel, very silty Silt, very sandy, calcareous, tan; contains some caliche nodules Silt, very sandy, calcareous, tan; contains thin sand streaks Silt, very sandy, calcareous, tan; contains thin sand streaks Sand, fine to coarse, and fine gravel, silty Sand, fine to coarse, and fine gravel; contains thin streaks of silt and silty clay PermianLeonardian Salt Plain(?) Siltstone		Silt, very sandy, gray tan, lime cemented	6	39
Cemented streaks		Clay, silty, sandy, calcareous, tan	1	40
Sand, fine to coarse, and fine gravel, very silty 5 68 Silt, very sandy, calcareous, tan; contains some caliche nodules 12 80 Silt, very sandy, calcareous, tan; contains thin sand streaks 5 85 Sand, fine to coarse, and fine gravel, silty 10 95 Sand, fine to coarse, and fine gravel; contains thin streaks of silt and silty clay 90 185 PermianLeonardian Salt Plain(?) Siltstone			10	50
Silt, very sandy, calcareous, tan; contains some caliche nodules Silt, very sandy, calcareous, tan; contains thin sand streaks Sand, fine to coarse, and fine gravel, silty Sand, fine to coarse, and fine gravel; contains thin streaks of silt and silty clay PermianLeonardian Salt Plain(?) Siltstone			13	63
nodules Silt, very sandy, calcareous, tan; contains thin sand streaks Sand, fine to coarse, and fine gravel, silty Sand, fine to coarse, and fine gravel; contains thin streaks of silt and silty clay PermianLeonardian Salt Plain(?) Siltstone		Sand, fine to coarse, and fine gravel, very silty	5	68
Sand, fine to coarse, and fine gravel, silty Sand, fine to coarse, and fine gravel; contains thin streaks of silt and silty clay PermianLeonardian Salt Plain(?) Siltstone			12	80
Sand, fine to coarse, and fine gravel; contains thin streaks of silt and silty clay PermianLeonardian Salt Plain(?) Siltstone		Silt, very sandy, calcareous, tan; contains thin sand streaks	5	85
of silt and silty clay PermianLeonardian Salt Plain(?) Siltstone		Sand, fine to coarse, and fine gravel, silty	10	95
Salt Plain(?) Siltstone			90	185
	Per	mianLeonardian		
Siltstone, red 2 187		Salt Plain(?) Siltstone		
		Siltstone, red	2	187

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